

Context and Choice: A Pluralistic Approach to Consumer Behaviour

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by

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Abstract

Context has surfaced as a significant issue in the new behavioural economics through the focus on heuristics and biases. This paper, however, explores a much wider view of the significance of context for decision making. Consumers' purchasing decisions involve three levels of choice: choice of context, of strategies for dealing with a selected context, and the choices of what to buy that emerge from the combination of decision strategies and contingent factors. Two approaches to this are explored: a mainstream 'find the tradeoffs/rational expectations' approach and an evolutionary/institutionalist rule-based approach to choice. The paper then examines eight major dimensions of the context of choice, along with their economic underpinnings and plausible consumer responses to them. This is followed by two case studies of strongly contrasting contexts of choice and some comments on how a context-based approach to the consumer can be taught successfully.

1. INTRODUCTION

The analysis of consumer behaviour presented in mainstream microeconomics courses is essentially a 'one size fits all' perspective rather than a pluralistic one. Students are trained to consider applying it to any problem of consumer choice, regardless of the nature of the particular choice context. They are encouraged to think 'as if' the process involved in choosing a house is essentially the same as choosing, say, a holiday or what to put in one's shopping trolley on a weekly trip to the supermarket.

The limitations of what economists normally have to offer students in this area are likely to become all the more apparent in the years following graduation. As they set up homes and have families, former students of economics will enjoy a much wider range of experience as consumers. If they reflect on this, they may realize that much of it does not mesh well with the standard story. Despite the standard theory's lack of testable hypotheses, it may seem a reasonable descriptive approximation in some cases, such as when choosing fruit and vegetables, whose relative prices change seasonally. Yet in other cases it may seem wide of the mark in descriptive terms. The obvious question that follows from such reflections is whether economists need to develop and with a variety of theories that suit particular contexts or whether they might be able to come up with an alternative approach that is generally applicable.

This paper offers a pluralistic perspective on the theoretical implications of accepting the idea that 'context matters'. It is divided up as follows. Sections 2 and 3 examine the significance of context from contrasting theoretical perspectives, respectively, a mainstream trade-offs/rational expectations approach and a heterodox rule-based approach. Section 4 uncovers eight main dimensions of the context of choice and what these imply for likely behaviour. It focuses on problems of information and knowledge associated with particular kinds of products and the psychological, social and institutional contexts in which they are purchased and used. Section 5, which is followed by concluding comments, presents a couple of mini-cases of very different decision making contexts to show how the approach works in practice.

Before we proceed to the main body of the paper, it is important to acknowledge that mainstream economics, like other social sciences such as marketing and psychology, has become increasingly willing to admit that the decisions people reach are shaped by the contexts in which they are made. Indeed, decision researchers across such disciplines are tending to converge in their views of choice (Swait *et al.*, 2002). Beginning with the work of Thaler (1980), phenomena such

as framing effects and preference reversals have become well-known within economics as what Sent (2004) calls the 'new' behavioural economics has gained currency (for example, see the papers collected in Camerer, Lowenstein and Rabin, eds, 2003, and that handbook edited by Altman, 2006). However, the aim of this paper is not to argue that 'context matters' just because of what has been learnt from the heuristics and biases literature. Rather, the perspective offered is closer to that of what Sent (2004) calls the 'old' behavioural economics associated with the work of 1978 Nobel Laureate Herbert Simon (which hardly figures at all in the papers in Camerer *et al.* (eds), 2003). The paper thus does not merely advocate building models of context effects as ways of acknowledging empirical data that are problematic for standard models whilst keeping the standard analytical core pretty well unchanged. Rather, its focus is on predicting which strategies consumers are likely to adopt to try to cope with the diverse challenges they face in making up their minds about what to buy. The paper therefore is best seen as descended from the 'fast and frugal heuristics' research of Gigerenzer and Goldstein (1996) and Gigerenzer, Todd and the ABC Research Group (1999), and from the adaptive view of the consumer offered by Payne, Bettman and Johnson (1993), who draw attention to the way that consumers change how they process information depending on the complexity of their decision task. Whereas the 'new' behavioural approach emphasizes the non-rationality of context effects to which people unknowingly succumb, the paper focuses on *economizing* that consumers do – and which they could, in principle, describe to researchers undertaking protocol analysis (cf. Ericsson and Simon, 1984) – when dealing with different kinds of problems of information and knowledge that they encounter in different contexts.

2 A MAINSTREAM PERSPECTIVE ON THE CONTEXT ISSUE

The big departure from the conventional approach to consumer behaviour offered in this paper is not merely its move away from a 'one size fits all' approach but also its recognition that choices are made at levels other than the set of characteristics associated with the likely outcome of selecting one product (or combination of products) in favour of others. In particular, choices can also be made between rival decision making contexts in which to spend one's time, and between rival ways or strategies for dealing with a chosen context. In this section we consider how this issue would be approached in terms of mainstream economics.

As will be detailed in later sections, contexts differ in the challenges they present regarding problems of information and knowledge that are largely driven by the nature of the product, as well as in their technological, institutional and social aspects. The context in which a decision is made thus comprises a variety of characteristics, just as does the product or the output derived from a product that is the focus of the consumer's decision. This opens the possibility that contexts of choice could themselves be subjects of preference and choice. For example, some consumers might prefer contexts characterised by uncertainty or time pressures to those with a significant social dimension (perhaps because they are comfortable about their places in society but feel the kind of need for excitement explored by Scitovsky, 1976, 1981). Other consumers may be particularly attracted to contexts involving the challenges of new technologies, while those with 'anorak' tendencies may revel in contexts with masses of bits of factual information to get acquire, and so on. Sometimes it may appear that consumers have decision-making contexts imposed upon them, as with, say, the need to arrange a funeral for a relative who has died suddenly. However, the consumer still has the choice to concentrate on other choices—in the funeral example, the consumer may feel a moral obligation to make the arrangements, but still has the option to leave it to others.

Different ways of going about making a decision in a particular context also have different characteristics. Some methods will involve a major commitment of time and/or stress, some may involve enjoyable social interaction (for many, after all, shopping is a significant recreational activity and not something simply to be seen as 'transaction costs'), some may be quick but with risks of avoidable error, such as where short-cuts are taken in gathering or processing of information, or where the decision is outsourced to an agent whose expertise is not all it seemed to be or who succumbs to a conflict of interest.

Though this multi-level perspective is not conventional for mainstream economists, they can apply their regular heuristics to it so long as they can state what the relevant tradeoffs are. A rare example of this is a paper by Heiner (1986) that models the choice of search strategies by a consumer as a problem of constrained optimization. The consumer is constrained by both time and information processing capacity and therefore risks making errors due to both not having relevant information ('imperfect information') and having too much information to process ('imperfect decisions'). The task is thus to find the optimal way of dividing time up between gathering more information and processing information that is gathered.

Whatever the level at which the choice is being made, consumers need to be able to identify the prospective outcomes along the dimensions that they perceive as relevant. For example, in the context of getting a car serviced, one strategy might be to choose a branded dealership and another might be to choose an independent 'no-name' service agent, and yet another might be a 'do it yourself' approach. If so, the consumer needs ways of assessing the likely differences in quality of work that would result from each strategy, as well as the likely financial cost and time involved. This sort of judgment often requires an economic theory of what determines the outcome in question, which raises a further question: how does the consumer select an appropriate theory of the situation?

A characteristically non-pluralistic mainstream economics reaction to this conundrum is to theorize 'as if' consumers form 'rational expectations' by applying the best available economic analysis to the problem at hand. This is pretty much the thinking that underlies the mainstream analysis of national and global brands offered by Klein and Leffler (1981). Simply put, their argument is that customers have a stronger case for trusting such brands than smaller local suppliers because, if many customers are being served by a single brand, it might take only one or a few well-publicised instances of supplier shortcomings for there to be a collapse of confidence in that supplier (as happened with Arthur Anderson following the ENRON revelations). The firm that invests in building up its brand thus has a major incentive to control quality and live up to promises, unlike a here today, gone tomorrow 'fly by night' supplier. Similarly, we might theorize as if consumers apply agency theory when choosing between firms involved in sectors that involve diagnosing problems and undertaking remedial, such as optometry and dispensing opticians, vehicle maintenance and repairs, and pest management. If diagnosis and remedial work are undertaken by a single business, there is an incentive to over-serve the customer, so the rational customer will, other things equal, tend to favour firms that specialize in diagnosis and do not have such a conflict of interest.

From this perspective, the underlying trade off the consumer faces in this context is between brands that are higher-priced but which economic theory leads to a higher probability of trustworthiness/reliability, versus cheaper, more questionable suppliers, with the choice depending on risk preferences.

3. A RULES-BASED PERSPECTIVE

The rational expectations assumption is a way of closing what otherwise seems to be an inherently recursive problem of choices within choices. This is potentially misleading whenever there are a variety of rival academic economic models of the phenomena in question and because real-world consumers mostly lack any training in economics and might therefore be operating with their own 'lay economic models'. Even if behaviour seems to be consistent with mainstream thinking it might result from entirely different thinking, while some consumers may in any case choose to behave differently. For example, contrary to Klein and Leffler's analysis, some may think that 'An independent, local business has a very strong incentive to avoid lapses of quality since the owner's wealth could be wiped out if bad local publicity caused customers to stay away, whereas an employee of a globally branded business only stands to lose his or her job by letting quality slip'. Despite this, they might still choose a factory approved dealer rather than their independent local service station, on the basis that 'the main dealer will be able to get the job done more efficiently because they can draw upon a bigger sample of cases to help them diagnose problems, and have factory-trained personnel and access to the latest computerised diagnostic test.' Chances of a rational expectations case applying are further limited where the economics literature itself offers rival analyses of the context in question.

One inference to draw from this is that the way ahead lies in behavioural research into lay economic thinking, not merely what consumers believe but how they decide what to believe about economic situations (cf. Boland, 1986). An alternative but by no means inherently rival approach is to see the consumer's problem essentially as methodological in nature and addressed in the same way that scientists address their problems of knowledge, namely, via a *system of rules*. This latter approach is what we propose as a general meta-cognitive tool for understanding how consumers deal with diverse contexts of choice. Our proposal allows for choices to be made without finding an underlying trade-off and without presuming rational expectations can be formed. It also allows for trade-offs to be made at some levels in the choice process but not others.

Within a general paradigm that says actions are based on rules, we can have rules operating at a variety of levels and taking many different forms. Lower-level rules can be those external to the agent that are deemed admissible by the higher-level rules that they use for running their lives, but they can also be internal ones that the agent has developed. The list of possibilities being considered can be affected

by chance and contingent factors, and which rule initially comes to mind as a possible means for reaching a decision may also be triggered by the situation at hand. However, so long as decision rule that comes to mind is not at odds with their higher-level rules in the context in question, it may be allowed to determine the outcome.

External rules include those of legal and social institutions regarding what one should do in particular contexts, the extent and means of information gathering about options and/or how to choose between the options on one's agenda of possibilities. For example, a person whose removal expenses are going to be paid by their new employer might be required to get three quotations from removal companies and to choose the cheapest one. If the person had, via another rule, already got a preferred supplier in mind, such an external rule might be circumvented by using other rules to get more than three quotations of which at least two were more costly than that of the desired carrier. Such a strategy would be opportunistic in Williamson's (1975) sense and it might be ruled out on moral grounds as, in effect, 'not the sort of thing that someone like I see myself as being would do'. If so, this would be an example of a higher-level rule dominating. Some social conventions for how to behave in particular contexts may, of course, have economic underpinnings. For example, they made be low-cost means of efficiently coordinating social behaviour. However, a more general approach is to see rules as being selected by other rules: people will break with conventions if these are at odds with their higher-level rules.

The higher-level rules are what stop the seemingly infinite regress of 'choices about choices', in exactly the same way as the 'core axioms' of a scientist's research programme provide an anchor not merely for devising models but also for interpreting empirical results (cf. Lakatos, 1970). The set of rules is rather like an onion, with many layers, but if one keeps going up to a higher level the core is eventually reached. It can be thought of in a manner analogous to constitutional rules and high-level courtroom ruling systems in nations: they are there to determine which lower-level rules are permitted to operate (i.e. which ones are not 'ruled out of court') and to arbitrate when several lower-level rules are admissible but produce contradictory results (Earl, 1986, pp. 145-7). Another way of thinking about higher-level rules is as analogous to the operating systems of computers, with the lower-level rules being akin to application programmes.

In the context of this paper, an important role of higher-level rules is for determining in what kind of context agents define themselves as being. Thus, for example, if one has a lower-level rule that says 'When in Rome, do as the Romans do', it will not be brought into play unless

the agent has identified that they are indeed 'in Rome'. Note also that if the agent is 'in Rome' and observes a variety of forms of behaviour in particular contexts there, then the agent needs another high-level rule to pronounce which form should be copied, such as 'follow the action of the most respectable-looking person you can see'. That, in turn, would require a rule for judging who might be more respectable than someone else.

Lower-level rules for search, evaluation and choice within a particular context can take many forms, some of which may result in consumers seeming to choose as if they have preferences of the kind assumed in standard analysis. Some rules might thus provide a means for judging the likely payoff to further search, while some rules might spell out trade-offs that are acceptable, sometimes in ways that imply diminishing marginal rates of substitution. However, other rules might be very different, such as ones that say simply 'buy the "best buy" product recommended in a particular consumer magazine' or involve rejecting products that do not offer, to specific performance standards, an entire set of features on a checklist, or use a priority ranking of characteristics targets gradually to filter out contenders until only one is left (Bettman, 1979; Earl, 1986).

The set of rules used by a consumer will evolve through time, with new rules (discovered from external sources or created internally) being added to their repertoire so long as they are deemed admissible by their core. Sometimes, acceptance of new rules will require that particular existing rules are abandoned (for example, 'don't judge a vehicle's safety by its size, but by its ENCAP rating').

Whilst the notion that choices are based on the application of an evolving framework of hierarchically related rules is a general one, the key point is that it allows for the possibility that consumer may evolve very different forms of rules for dealing with different contexts. In some contexts, the consumer may use rules that deny it is worthwhile to engage in much search, whilst in other contexts search processes may be truncated by using decision rules suggested by particular individuals or agencies, with different rule suppliers being used in different contexts (Earl and Potts, 2004). Sometimes, consumers might be expected to approach problems in a pluralistic manner, using different rules to form perspectives on what to do, and then move from being 'in several minds' about the choice to 'making up their mind' via a higher-level rule for judging which is the best rule to apply in that context.

4. CONTEXT CATEGORIES AND CONSUMER RESPONSES

Let us now keep both the 'find the trade-off' mainstream approach and the 'hierarchy of rules' evolutionary approach in mind as we dissect the main ways in which contexts of choice differ, their underlying drivers, and plausible ways for consumers to deal with particular kinds of context.

4.1 *Contexts involving goods that are the buyer expects eventually to dispose of in a second-hand market*

The more expensive a durable good is, the more likely that transaction costs will not prevent it from being traded on a second-hand basis rather than being consumed by its original owners until completely worn out or rendered obsolete. This brings a speculative dimension to durables choices, which can be characterised via Keynes's (1936, ch. 17) analysis of portfolio choice (see also Earl, 2002, ch. 11). We may anticipate consumers to keep well clear if they have reasons to suspect rapidly crumbling residuals and a lack of interest when they try to trade in the product. In turn, we can anticipate tendencies for them to play safe in such contexts and avoid products with thin secondhand markets. Predictable results of this are vicious circle phenomena such as a Mercedes-Benz continuing to be cheaper to own in some markets than cheaper Japanese or Korean executive vehicles whose makers find it hard to shake off histories of rapid depreciation. The few who buy products that can easily be discovered (for example via trade magazines) to have catastrophic depreciation rates must either be using inefficient rules for evaluating ownership costs, or be choosing via non-compensatory decision rules that prevent the ownership costs from being weighed against other features. (For example, they may require a brand-new vehicle within a budget that is too low to accommodate a product that will have slower depreciation, and hence also ruling out a used example of the latter.)

4.2 *Contexts in which the consumer's financial circumstances are uncertain*

Access to credit permits discretion in the timing of purchases but interest rates may be prone to variation and the income flows from which debts are serviced may be contingent on promotion or success in relocation and can be suddenly terminated by unemployment. Many consumers will also face periods in their lives when their wealth is uncertain due to changes in assets prices (for example, share price changes that affect superannuation fund values) and pending family

matters (for example, divorce/separation settlements and legacies from wills that are being processed).

When consumers are nervous about their budgets, they can limit their expenditure by postponing or reducing expenditure on non-essential items. They can substitute in favour of cheaper discretionary consumables (for example, a local holiday rather than a lavish overseas one) but durables present a problem because of imperfections in second-hand markets and, where such markets exist, the possibility that second-hand values could tumble due to widespread selling by consumers suffering from financial distress. Trade-in losses make it expensive to change one's consumption strategy regarding durable goods when one's financial circumstances change. However, to the extent that durables are replaced before they are completely worn out beyond repair, purchases of new ones can often be postponed until the consumer's financial future becomes clearer. Demand for such products is thus prone to be affected by shifts in consumer confidence (see further, Katona, 1960, Smith, 1975).

4.3 Contexts in which the consumer's requirements are uncertain

Uncertainty about what one wants is often associated with new products. It is likely to be an issue in many areas that are new to the consumer even if the product has been around for a very long time: for example, how well is a child going to take to the violin? Uncertainty about possible changes in their non-financial personal circumstances can often be addressed, again, by postponing action, but when consumers do not really know what they want and need time to discover this through experience, risks will have to be taken.

Consumers can also limit their risks by making the most of retail demonstrations and opportunities to 'take it home and try it over the weekend', by renting a product initially rather than buying it outright, by hedging one's bets via the selection of a 'happy medium' between two different views of what might be the best kind of product to go for, or by selecting products with an eye to their option values – in other words, their versatility, amenability to upgrading, and so on. (For example, if consumers are looking for a sports car but is uncertain about whether they will be starting a family or need frequently to carry bulky items, a 'hot hatchback' has considerable option value compared with a roadster or high-performance sedan.)

Strategic thinking would not be necessary in a real-time economy if perfect second-hand markets existed: if they did exist, consumers would not face risks of capital loss beyond those reflecting physical depreciation if they wished to undo their choices. Because of this, the importance of making the right choice is far greater when buying a

durable than when buying a consumable with a similar expected cost per occasion of use.

4.4 *Contexts with psychological significance to the consumer*

Heterodox economists are used to distinguishing between 'routine' purchases and what Shackle (1972) called 'crucial' decisions: the former are amenable to probabilistic calculations but according to Shackle that latter are not because they entail a one-off choice that may have major implications, for good or bad, depending upon its sequel. It is at first sight tempting to see one-use products that are purchased to meet needs that arise repeatedly as fitting into the former category: a lacklustre performance by whichever product is chosen today does not lock the consumer into buying it on future occasions. The choice of such a product can be seen as a replicable event that adds data to the consumer's sample pool. By contrast, a durable could involve a substantial capital loss if a mistake is made and the consumer attempts to reverse it by trading it in against something else.

On closer examination, however, the potential downsides of experimentation are not necessarily a simple function of the lifespan of the product or its price relative to the consumer's total budget. Rather, they will depend on the whether the context is one of high or low psychological 'involvement' (see Laaksonen, 1992) regarding the wider and deeper ramifications of an undesired outcome. There are two main issues to keep in mind here. The first is a consequence of the fact that a regretted purchase of a relatively cheap durable is less easy to disregard than a disappointing consumable of similar price. This is because the durable remains as a nagging physical symbol of poor judgment unless the buyer disposes of it. In cognitive terms, neither storage nor disposal is likely to be costless, though 'white elephant' stalls at school fetes provide a more honourable way out than disposal via the guilt of the rubbish bin or the ignominy of using the formal but highly imperfect second-hand market via a visit to Cash Converters. Thus, for example, the choice of a \$30 music DVD will elicit greater caution than a decision about a \$30 concert ticket (cf. Earl, 2001).

Second, and much more importantly, note that the risk associated with a particular product may be affected by its context of consumption. For example, a bottle of wine for an evening meal at home has fewer risks than a bottle of wine being chosen to take to a dinner party where one needs to make a good impression. Likewise, an unreliable rental car matters less if one is renting for a long period with no particular itinerary than briefly to get to and from a particular event. A choice may thus be akin to a 'crucial' one even if it does not involve a major *initial* financial outlay if its context involves risks of

non-trivial *subsequent* costs in terms of a need to buy yet more products for damage-control purposes, or in terms of psychological costs of embarrassment. If the consumer knows that a set of costly implications would not arise, or at least has a low probability of arising, with particular brands, then there is little sense in trying other brands with unknown probabilities of performance or with known higher variances in performance.

In some contexts, we may expect the psychological significance of the decision to be so great that it gets in the way of behaviour that economists would expect from a rational consumer. Situations seen as threats to the consumer's core concepts may be seen as 'no go' areas (for example, 'I'm not the sort of person who...'), while unfamiliar situations may result in impulsive behaviour or the consumer fleeing, rather than a careful attempt to learn about them and discover efficient ways of making a choice (see Kelly, 1955; Earl, 1986).

4.5 *Contexts with inherent uncertainties about the product*

It is under this heading that we find the most extensive and long-stranding context-based perspective on choice, beginning with the work of Nelson (1970), who distinguished between search goods and experience goods when discussing the economics of advertising from an information-based perspective, and Darby and Karni (1973), who introduced the concept of credence goods when discussing the economics of defrauding customers. Our experience in working with the three concepts has led us to work with definitions somewhat more formal than those that are commonly used. (For example, Wikipedia portrays search goods as those for which it is 'easy' to obtain information about price and quality.)

The way that we have come define the three classes of goods is as follows:

- *Search goods* are products for which, in principle, it is possible to resolve all issues of knowledge and uncertainty *prior to purchasing and using them* by gathering information.
- *Experience goods* are products for which it is inherently impossible to resolve all issues of knowledge and uncertainty prior to purchasing and using them, but for which it is possible to resolve these issues *once the products have been experienced by the consumer under normal conditions of use*.
- *Credence goods* are products for which it is impossible to resolve all areas of uncertainty *even after a significant time has elapsed after they have been paid for*—in other words, they have inherent problems of both *ex ante* and *ex post* uncertainty, whereas

experience goods only have *ex ante* uncertainty as an inherent problem.

These definitions are 'in principle' ones and they distinguish between information, knowledge and uncertainty. This is much more in keeping with the interest of heterodox economists in the philosophy of knowledge and enables us to reflect more deeply on the kinds of problems that different contexts present.

Rather than just presuming it is easy to spot which kinds of goods fit within each category, let us now consider what kinds of intrinsic aspects of products cause them to be experience goods or credence goods rather than search goods. It is important to do this partly to ensure that tautological discussions are avoided. For example, to say that 'A used car is an experience good because you can't be sure if it has anything wrong with it at the time you buy it' begs the question 'What is it about a used car that causes this problem?'. It is also important to assemble a framework in order to be able to analyse less obvious cases and for debating potential for policy interventions to switch a good from one category to another.

The key issues that can cause a good to be an experience good seem to be as follows:

E1. *If the product takes the form of a contingent contract for future delivery, the buyer risks being disappointed due to a dispute over whether a particular state of the world has eventuated or because the supplier has ceased trading by the time a particular delivery clause becomes operative.*

This condition is one of the factors that prevent insurance products from being search goods despite their specifications being stated at length in 'customer disclosure statements'. It is problematic to deal with this by allowing the customer to pay for the contract at the time it expires and decline payment to the extent that promises have not been honoured—there could still be dispute about what the state of the world had actually been, or the customer could have been ruined by not receiving the promised service.

E2. *If the product is a durable, questions need to be asked about its performance in the long term.*

From the standpoint of heterodox economics, it will be natural to see as experience goods many durable products that mainstream economists would see as search goods. Durability complicates the choice process because it brings uncertainty into the task of valuing the product: How long may it last? What will it cost to maintain? How long will it be until it is made obsolete by something new?

(And, as noted in section 3, for how long will the consumer want to use it?) These questions may be impossible to answer *ex ante* because everyday knowledge about the product has not yet become established and market institutions have not yet subjected it to long-term testing or gathered a large sample of data about probabilities of particular problems arising in use. In some cases, the product may be so new that its potential durability is greater than the length of time it has so far existed in the market (or even than the time since it was invented).

Risks associated with high technology durable goods can often be limited by avoiding products/systems that have architectures that are integral rather than decomposable (in the sense of Simon, 1962). This is likely to have a major impact on the risks of its continued operation at some point only being possible if substantial non-routine repair costs are incurred. (A qualification to this is the possibility that interfaces between modules are themselves a source of potential problems.)

- E3. *Some durables have characteristics that hinder the development of a rental market for them. This prevents consumers from avoiding being concerned about long-term performance of these by renting them instead of buying them outright.*

The feasibility of a rental market for a durable product will depend on the product's nature and mode of usage as these factors will affect the transactions costs of organizing and enforcing rental contracts. The owner needs to guard against potential moral hazard problems whereby renters do not treat the product with the care that they would apply if they owned it. Where the costs of verifying whether the renter has abused the product are high, rental contracts are unlikely to be workable. Rental markets may also be prone to failure in the case of products that are complex to operate and for which no standard operating system has yet evolved. This is because a person who only uses such a product for a short period of time will face high set up costs in getting to grips with using it. (In some case it will be viable to rent the product with the services of an operator, as with a taxi as opposed to a rental car in an unfamiliar city.) By contrast, if there are standard user/product interfaces and would-be renters also expects to use the class of product frequently over the long term, then investing in mastering the standard user interface will not lock them into products of the first brand chosen for renting. In the latter case, it is thus far less important to make a good choice of supplier first time around.

E4. *If the long-term price of the product is not finalized at the time the agreement to purchase it is made, unexpectedly higher charges for continued access to the product may be difficult to escape due to significant switching costs.*

This issue was originally raised by Colton (1993) about the shortcomings of competitive processes in the provision of telephone services but seems applicable to many other services whose contracts do not entail a fixed duration or where costs will be incurred if one wishes to switch suppliers at the time contract renewal falls due.

E5. *If the buyer is unable to obtain a demonstration of the product, information gaps may remain.*

Barriers to a demonstration may arise where:

- (a) The product is being purchased at arm's length, for example over the Internet, and at best can only be examined in a 'virtual' manner;
- (b) The product is subject to quality variability so that examples viewed today are only an approximate guide to what it will actually be like if ordered for future delivery or if the consumer receives an unopened, packaged version of what has been observed in the retail environment;
- (c) The product is a unique item being supplied specially for the customer, so at best the supplier can only show examples of somewhat similar products;
- (d) The product's performance is a function of its internal condition and this cannot be seen without either making it problematic to use the product at a later date (for example, once peeled, a piece of fruit is less suitable for eating several days later) or without incurring substantial costs of disassembling it and risks of putting it back together incorrectly;
- (e) The product essentially consists of information (as with books, magazines and movies) so suppliers will limit demonstrations of it to avoid falling foul of the 'Arrow Paradox' (Arrow, 1962) that once a full demonstration of such a product has been given the potential customer no longer has any need to buy it;
- (f) Although the supplier could in principle provide samples of the product, this is uneconomic due to the costs of: (i) packaging small lots for sale; (ii) measures to prevent customers from taking more than what is necessary for sampling if free samples are provided; or (iii) preventing customers from causing damage when testing a non-divisible demonstrator product.

In many contexts combinations of these factors will apply. For example, a holiday at an unfamiliar destination may involve elements of both (a) and (b), while a used sports car may involve (d) and (f), or even (e, if the key question is what 'What would it be like to drive?'). Note that point (e) depends on the complexity of the information content of the product: complex information flows may be hard for boundedly rational consumers to commit to memory, thus limiting the significance of the Arrow Paradox.

- E6. *If expert knowledge of the product is required from another party in order for the buyers' questions about its characteristics to be answered accurately, the buyers ultimately will have to trust their sources of 'expertise', for providers of information cannot be audited without trusting a third party.*

In the absence of bounded rationality on the part of buyers or the possibility of incompetence or opportunism (in the sense of Williamson, 1975) on the part of sales personnel and those called upon to audit their claims, shopping would often be just a matter of asking for information and processing it. Opportunism is potentially a serious issue in contexts where those who are providing advice also stand to benefit from providing products purchased on the basis of that advice. Second opinions about the necessity of a potential purchase will be costly to obtain in contexts where the expertise involves a major investment in human capital and/or years of experience, and it may even be necessary to get a bigger sample of opinions to achieve a clear majority verdict.

- E7. *If a product is complex in the sense of having many features or requiring know-how to operate, buyers may face 'tacit knowledge' problems.*

Learning what to ask of a product or how to get the best out of it takes time, so even if there is no uncertainty about its long-term ability to perform and even if sales personnel try honestly to answer all of the questions posed by the buyer, its properties may remain somewhat unclear at the time of purchase. The product may have irritating quirks and sources of what are often referred in the trade press in an implicitly Shackleian manner as 'surprise and delight' and it may be impossible to acquire all the relevant knowledge about its features and mode of operation from in-store demonstrations, websites and market institutions. (Note how this issue relates to the previous discussion about failures in the rental market.) To acquire this knowledge, a period of extended use may be necessary.

E8. *If the product is designed for use with complementary products, its full potential may be impossible to evaluate because some of these complementary products do not yet exist.*

At the time Nelson introduced the search good/experience good distinction, consumers rarely faced this issue, but it is a common one in the digital age. Many appliances are essentially forms of computer hardware or peripherals whose usefulness depends on their ability to be connected to other devices and run programmes, which frequently depends, in turn, on their ability to be upgraded. Today's consumer thus faces problems of what Post Keynesians tend to call 'fundamental uncertainty' when choosing. A computer or a DVD player cannot be a search good in the sense the term is being used here because at the time it is purchased information regarding some complementary products with which it or its rivals may eventually be used exists nowhere in the system—not even as figments in the imagination of software engineers, film directors or musicians. Suppliers of software may also not yet have announced which operating systems they will support (cf. the standards battle between Toshiba's HD DVD format and Sony's Blu-Ray DVD). To follow the biggest herd of fellow consumers may be a simple way to avoid costly errors when a standards battle is in play between rival new technologies.

In the case of credence goods, the factors just considered may also apply as sources of *ex ante* uncertainty and problems of knowledge, but the problems may persist *ex post* for reasons such as the following:

C1. *If the product involves a contingent delivery contract and a contingency does not arise during the period covered by the contract, then the consumer receives no evidence about how the supplier would have behaved had the contingency occurred.*

In the case of insurance, for example, re-buy decisions by non-claimants are inherently based on guesswork unless customers can draw upon experiences of members of their social network who have had to make claims.

C2. *If the supply of the product is undertaken 'back stage' and involves work on the inside of something owned by the customer, the customer may have no evidence that the work has actually been performed.*

Routine maintenance of a motor vehicle is a classic case of this, and was the one on which Darby and Karni focused: if there was

nothing obviously wrong at the time the vehicle was delivered for servicing and nothing obviously wrong or better when it is picked up, then perhaps nothing has been done at all.

C3. *If particular know-how is required to confirm that a product has been delivered as claimed, and/or if verifying such claims in effect involve repeating all or most of the work, then the costs of achieving verification may force the customer to trust the supplier's word about what has been done.*

C4. *If the product is one that the customer applies personally as a precautionary device, it is clear when the product has been delivered but, if the event it is supposed to prevent never occurs, there will be no counterfactual to demonstrate it functioned as advertised unless the customer runs a set of controlled experiments or is able to compare experiences with other consumers who made different choices.*

This kind of problem is even more acute when, as with many cosmetics products, the manufacturers make no precise claims about what the outcome of using it will be, or where the outcome claimed is probabilistic in nature.

C5. *If the effects of the quality of what is supplied take a long time to manifest themselves, the consumer may find it hard to disentangle them from other possible causes of what is observed.* Causal ambiguity reduces incentives for suppliers not to make false claims about the products they have supplied for fear of being exposed as such in the long run.

Many goods have aspects of more than one of these three classes: in some areas they are search goods but in other areas there are inherent *ex ante* or *ex post* problems of information and knowledge. If the context is one in which consumers are likely to see that a mistake could be costly, we may expect them to stick with known brands on a safety-first basis (cf. Roy, 1952, Blatt 1981-2) and to remain locked into these brands unless they have low-risk opportunities to experiment with them on other occasions.

Specifying an underlying trade off is more problematic with credence and experience goods than with search goods: if there are inherent problems of appraising what suppliers have to offer, how can one supplier be deemed better or more trustworthy than another or, less ambitiously, how can it be inferred which suppliers might be at least be satisfactory? These are issues of judgment, resolved by following particular lines of logic or sidestepped by the use of proxies.

But search goods are also problematic: their mysteries may be resolvable but if problem solving is a costly exercise, then perhaps it is not worthwhile to try to do so. If so, then choices of search goods likewise can only be understood if we can understand how judgments are made when information is incomplete.

4.6 Contexts with potential for information overload

Consumers suffer from physical limitations to the pace at which they can process information (about 10 bits per second, according to Marschak, 1968) and the number of items they can keep in mind at a time (7 ± 2 according to Miller, 1956). If the situation at hand runs into these limitations, consumers risk making processing errors due to forgetting things or computational errors. On the other hand, if they limit the information they gather to stay inside their cognitive constraints, they risk making errors due to oversight (cf. Heiner, 1986).

The more products there are, the more characteristics they have and the more that they differ in their performances across characteristics, the bigger the potential challenge the consumer faces in terms of gathering and processing information. The scale of the ignorance that could be overcome or uncertainties that would be resolved will, in turn, depend upon:

- The consumer's prior experience and expertise in this area. Note that information and knowledge issues may differ between contexts not merely at the time of purchase but also in prospect from an ease-of-use perspective: if we can presume customers have a lack of expertise with a complex product, then their lack of confidence about their ability to use it will favour the use of retailers and products that will make the task easier, even if there is no reason for favouring particular brands as means of ensuring quality in other senses. (For further discussions of the significance of capabilities for consumer choices, see Langlois and Cosgel, 1998.)
- The pace of technological change and new entry of suppliers and changes in relative competitive strengths of suppliers.
- The promotional strategies that suppliers have been using.
- The extent to which the market in question has the characteristics of a 'confusopoly' (as in the cases of superannuation funds with complex fee structures, and mobile phone contracts) with manufacturers deliberately complicating the way the product is presented.
- The extent to which members of the consumer's social network have been active in this market and prone to share their experiences of it with the consumer.

Potential for information overload is further increased by time pressures to reach a decision. To some extent, such pressures are always there, as time spent shopping and procrastinating reduces the time they have for consumption. However, they are particularly acuted in cases where the consumer can see that procrastination will allow a host of negative implications to arise. For example, as when a pipe has burst and a plumber needs to be chosen: in this case, the consequences of delay may not be fully fleshed out in the consumer's mind, but they are clear enough for a quick cost-benefit assessment of whether it is essential to search for the cheapest plumber rather than merely trying to judge which plumbing firm is likely to have someone available to come right now. Likewise, circumstances will dictate a rapid decision if one has discovered a rare opportunity and it seems likely that others could discover it soon and be interested in putting in a bid for it.

Experiments conducted by Payne (1976) revealed that as the complexity of a decision is increased (where complexity is a function of the number of options available and the number of characteristics or attributes associated with each option) the more subjects are inclined to limit the quantity of information they base their decisions on (see also Fasolo *et al.*, 2007). In addition, people are inclined to adopt simplified ('fast and frugal') decision heuristics to help them cope with complexity and may therefore avoid the detailed calculations associated with a decision process based on evaluating trade-offs (Gigerenzer and Goldstein, 1996; Luce *et al.*, 2001). We might thus expect to see consumers using the following strategies for containing information overload:

1. *Search extensively, but then rank products using an information processing strategy that simplifies by not seeking to compute overall values for all of the rival products.*
Consumers may set aspiration levels defining a minimum required performance for each element of their (reduced) choice set. They may then combine these targets using non-compensatory 'checklist' rules to divide the rival products into 'acceptable' and 'unacceptable' piles. If no product is acceptable in all areas, then a prioritisation of characteristics as a sequence of hurdles a product must get over is a way of simplifying the problem: the product which get furthest before knocking a hurdle over wins. If a number of products are deemed 'acceptable', then at least the checklist will have operated like a short-listing process and may have produced a short enough list of contenders to rank using trade-off rules. If not, the buyer may bring subsidiary rules into place to tighten up the

requirements of the checklist and thereby let fewer contenders through on to the shortlist. These kinds of contingent and hierarchical decision making systems or preferences have been analyzed by writers such as Bettman (1979), Earl (1986), Drakopoulos (1994), Drakopoulos and Karayiannis (2004), Lavoie (2004), explored experimentally by Norman *et al.* (2004) and utilized by, for example, Scott (2002) and Philippidis and Hubbard (2003).¹ The concepts of aspiration (or target) setting and hierarchical preferences are consistent with Simon's analysis of satisficing behaviour by boundedly rational decision makers who seek to economise on their scarce cognitive resources (Loasby, 1999; Simon, 1957).

If we can assess a choice context as one in which many consumers will be likely to apply such checklist rules, then we can predict marketability problems for products whose mixes of characteristics are highly skewed in opposing directions compared with the normal mix of features. If the market is working efficiently, then supplies will have adapted to match commonly-employed checklists, with thin markets for other combinations of characteristics.

2. *Do not complicate matters by seeking to compile a bigger set of relevant information or eliminate uncertainty; instead, use some kind of proxy or one-dimensional rule to reach a decision based on information already at hand.*

For example, although CDs are in principle search goods, the fact that a typical record store offers thousands to choose between and only a limited amount of time and headphones for sampling them drives the consumer toward familiar artists' works, thereby contributing to the superstar phenomenon (Rosen, 1981, Giles, 2005), or to those they have heard in the media or via social networks. Olsahvky and Granbois (1979) suggest that such simplification is far more common than even consumer researcher in marketing normally recognize. It can entail delegating the choice to someone else (for example, by buying the 'best buy' from a consumer magazine), sticking to a familiar brand subject to it being known that it meets certain basic requirements, or choosing the market leader or – perhaps on the basis that it will be trying harder – the underdog).

¹ Drakopoulos and Karayiannis (2004, p. 375) point out that a general hierarchical approach does not rule out some limited substitution between elements once threshold aspiration levels have been reached.

3. *Use a hybrid of the previous two strategies.*

This could involve ignoring many brands altogether and focusing only on those deemed acceptable in terms of a very simple initial screening rule (for example, 'must not be a Korean/Chinese brand') and then using stereotyping beliefs about the acceptable brands to infer how they will perform in particular ways without actually checking on the accuracy of these inferences. In the case of the housing market in a large city, checklist rules are a means to produce workable shortlists from printed and internet listings; they economize greatly on the time taken in finding potentially suitable properties. Although a final choice might be perfectly feasible using a trade-off rule from amongst those that get on to the short list and are then viewed physically, such rules would be problematic to apply to all the properties on sale in the city at any one time.

Note that though these strategies can be specified as rules and that in some cases the strategies that seem likely to be popular violate standard axioms (the use of checklists, for example), it can still be said that choices between them involve economizing in the usual sense (trade-offs are made between different dimensions of the problem, for example between the number of possibilities examined and the effort devoted to weighing up the pros and cons of each).

4.7 *Contexts with a social/institutional dimension*

The social side of consumption is central to the literature on positional goods—that is to say goods whose utility is a function of how much of them one has relative to other consumers, rather than one's absolute level of consumption of them. For example, housing is a positional good if, say (following Frank, 2007, who examines many other examples), most people would prefer to be in a situation in which they lived in a 3000 square foot house and the average size was 2000 square feet, rather than one in which they lived in a 4000 square foot house and the average size was 6000 square feet.

Some of the key contextual features that determine whether a good is positional are as follows:

- The product's consumption must be *conspicuous*, so that consumers can observe their relative access to it.
- If the cost of the product cannot be assessed simply by observing its features, it must be *cognizable*, so that its price can readily be assessed as an indicator of the owner's wealth (for a more detailed discussion of this issue, see Earl, 2002, pp. 160-2).
- There are physical *externalities* with products in the same category owned by other consumers (for example, if the passive safety

capabilities of a motor vehicle are a function of its mass relative to the mass of a vehicle that collides with it, one needs a heavier vehicle than other road users to achieve this goal—hence the popularity of giant SUVs).

- The product is *exclusive* because there are barriers to reproducing it, so one person's access to it prevents another from consuming it once spare stocks run out due to growing demand (as Hirsch (1977) emphasizes, rising populations mean that we cannot all enjoy deserted beaches or homes with waterfront views).

If we use these dimensions to identify contexts involving positional goods, then we will not be surprised to observe behaviour akin to an arms race in these markets, with expenditure on them crowding out expenditure on non-positional goods despite it being difficult for the typical consumer to make headway relative to the rest of the population.

Whether or not the consumer is purchasing a positional good, the task of working out what might be a good buy is much simplified to the extent to which the context of choice is a market characterised by a well developed set of social institutions (in the sense used in Hodgson's 1988 analysis of markets). Established standards leave people free to focus more on other characteristics. However, for those who are unsure how to choose, the presence of quality rating systems, high-profile market experts and knowledgeable social connections provide opportunities to outsource much or all of the decision-making process (see further Earl and Potts, 2004) In contexts where this is going on, market share may end up depending on how closely firms manage to tailor their products to fit the decision rules of opinion leaders. (Consider the impact of UK motoring pundit Jeremy Clarkson on the sales of the Vauxhall Vectra—whose sales took off poorly, resulting in the closure of the UK production plant at Luton—after his scathing review of it on his widely-viewed television programme, *Top Gear*.) If it is well established socially what is 'cool' rather than 'naff', then the context is one in which consumers who deviate from socially favoured choices need to be well armed with arguments to justify their choices publicly—unless, of course, the context is one of private rather than social consumption.

Market turbulence associated with changes of fashion is a source of risk, not merely financial via its effect on resale values, but also in terms of one's social reputation if one places the wrong bets on what will be 'in' and what will be 'out'. For those who seek to avoid such risks rather than revelling in the possibility of developing and maintaining a reputation as being ahead of the pack, following the

biggest herd of fellow consumers may seem the most obvious strategy.

Outsourcing of choices is something that consumers in a social world can do quite consciously as a matter of rational choice. But in some cases it is hard not to conclude that choice is essentially institutionalised by social convention: we do what is done in that kind of situation and operate as 'social dopes' rather than rational economic actors carefully considering alternatives (cf. Koppl and Whitman, 2004). For example, it is not intrinsic to a funeral that the mourners should wear formal black clothing but we would not think for a moment of showing up in beachwear even if we both anticipate a blazing hot day and know that our grief and respect for the deceased will be conspicuous via other aspects of our behaviour. Our decision set is much reduced by these social norms: which black tie, which pair of black shoes, and even there the social norms may impinge, requiring 'smart' black shoes, and so on.

4.8 Contexts with new products and questions about scrapping old ones

Many of the issues so far raised converge in decisions about the adoption of new products or scrapping existing assets. From the standpoint of the 'new' behavioural economics, these decisions are expected to be affected by whether or not the consumer has recently spent money on the old product: the notion of 'sunk cost bias' embodies the empirical tendency for decision makers commonly to fail to leave sunk costs out of subsequent calculations. Anxiety about dealing with new products may also be a barrier to change, even if the technology in question is not bedevilled with uncertainties about future developments and standards battles of the kinds already mentioned. On the other hand, there may be social kudos to being a pioneer or being able to demonstrate one's wealth by splashing out on something new.

In the absence of such psychological complications, decisions about adoption of new technologies may sometimes be anticipated purely the context in which the products will be used. All that may be necessary to know about are consumers' existing sets of durables and patterns of using them. This is because consumers will face differences between average fixed costs and average variable costs between different vintages of consumption technologies. By adapting the work of Salter (1960) on choices of plant and machinery to the consumer's decision, we can anticipate which kinds of consumers will be earlier or late adopters of the latest technology merely on the basis of their usage histories, even if we know rather little about their 'preferences' in the sense of mainstream economics. However, care is needed by

economists in contexts in which the marginal costs of using the new technology's marginal costs are so much less that consumers rapidly learn new habits and spread them socially, greatly altering the timing of adoption (as in the case of digital photography: see Earl and Wakeley, 2007).

5. TEACHING THE CONTEXTS OF CHOICE APPROACH

The view of choice that we have been outlining presents new challenges for the economics classroom. On the one hand, it is likely to involve spending less time learning traditional graphs or mathematical versions of optimal search and utility maximization. On the other hand, it inherently requires that time be spent introducing students to a range of themes from behavioural/evolutionary economics and information economics as well as the essentials of the traditional story. It is, however, very important that such a wide-ranging pluralistic coverage is presented for otherwise, if students are asked to analyse how the context of choice affects decision making by consumers, they are likely to rely on introspection and fall into the misapprehension that 'it's all commonsense, really'. We have found that the essential economic ingredients can be covered in 2-4 hours of lectures and we then focus tutorial discussions and assignments on contrasting case study contexts. To stop the students from slipping into 'person in the street' introspection based on their own experiences, and to show them that economic arguments can provide an organizing framework that offers more insight, it is important that some of the chosen contexts are ones of which the class members are likely to have very limited experience. We also try to ensure a mix of search, experience and credence goods, ideally with some ambiguity about which category is the appropriate one for purposes of classification.

This section gives two examples to show how the approach works in practice. It is possible to design cases to include potential for heuristics and biases to play a role (as in 'A consumer faced with the prospect of another repair bill on an old car that had recently had a very expensive service', to provide an entry point for a discussion of sunk cost bias, or 'Buying a CD player to replace the radio-cassette player on an old car that has recently been purchased for a couple of thousand dollars' to invite a discussion of framing effects in search, via Thaler, 1980, p. 50). However, the ones presented here were chosen primarily to test an appreciation of the informational and institutional drivers of choice

Context 1: Arranging a funeral for a relative who has died suddenly. Funeral services are likely to be an 'experience good', since each funeral is to some degree a unique event and it is rather unlikely that the person choosing the provider would first attend a funeral being arranged for another customer. However, inexperienced choosers may find it more like a credence good: even though they will be able to see what was delivered, they may not know how much was *really* necessary. Hence they need trustworthy advice on this. To some extent, funeral service companies can provide information via illustrations in their catalogues and perhaps nowadays via video extracts, and they can show potential customers their facilities, but some elements will have to be experienced to be appreciated properly, such as the attitude of the staff, the pace of the event, the quality of the food at the reception afterwards, and so on. The choice of provider thus is made with some uncertainty.

The word 'suddenly' implies limited scope for doing in-depth search about the relative merits of possible rival suppliers of funeral services, since it is common (i.e. social institutions dictate) that, unless there is a major delay due to an autopsy, a funeral should be held within a matter of days after a person has died. Given the difficulties that many people have in facing up to their mortality, we may expect it to be common for friends/relatives to find themselves in this situation, rather than for the deceased to have researched the market and made contingency plans. That being the case, we should expect the market to have adapted to simplify the search process and here we can indeed note that whilst it is in principle possible to shop around for suppliers of caskets, flowers, a venue, catering, and so on, the typical funeral services firm is a one-stop shop that reduces transaction costs considerably. Even so, those making the arrangements will typically find, if the geographical context is a large urban area, that there are many one-stop shops providers vying for business.

There are other factors here that add to the information problems faced by the person who chooses the service provider: they may live far away and have no local knowledge, or they may have no experience of funerals and thus have little idea what they should sign up to have provided or what constitutes a reasonable price. The nature of the product may also be one that seems at odds with extensive shopping around and haggling over the price or what is to be included in the deal. In terms of social mores, this is not a time for doing that sort of thing.

The potential vulnerability of the person choosing the funeral service provider is enhanced by the shock that they have suffered, which is hardly conducive to rational thought. But the need to get the best deal may be somewhat limited if they are not themselves paying

for it (unless they can see that it will reduce the sum that they inherit from the deceased's estate). There is thus a problem of agency here, though the person to whom it falls to arrange the funeral may be trying to keep in mind at all times what the deceased would have wanted.

If shopping around is unlikely in this context (beyond perhaps a few initial phone calls to get a rough idea of charges and to confirm availability—the latter a crucial checklist requirement), then we would predict that market institutions may play a major role: how long a company has been established, its membership of the relevant trade association (as signalled by its Yellow Pages advertisement), or perhaps recommendations from members of one's social network, neighbours of the deceased, or the solicitor with whom the will was made.

It may also be the case that some brands of funeral service providers stand out more readily when the person makes initial investigations: some may have many branches listed in the phone book. Here there is potential for the Klein and Leffler (1981) analysis to apply: customers are likely to expect that quality is more likely to be assured since a bad experience could have severe repercussions for the investment the firm had made in creating the brand. Multi-branch funeral services may also be vaguely more familiar to potential customers if they have been taking advantage of their ability to spread the fixed costs of advertising to generate a higher profile, with a wider geographical reach than single-branch businesses. We should thus not be surprised to find that in recent years the funeral services sector has been characterised by mergers/takeovers and the emergence of suppliers with a considerable presence, in contrast to the industry's traditional old-fashioned family firm image.

As a way of simplifying the choice process and reducing transaction costs suppliers may be predicted to offer standard bundles of funeral service products (basic, deluxe, etc.). The social aspect of funerals may be discussed in relation to the level of product chosen: there may be issues of respect for the deceased that make it hard for those arranging the funeral to choose only the most basic service. Such a choice might also cast them in a bad light with friends and family.

Context 2: When choosing which movie to see for an evening out.

This is typically a socially consumed experience good: a joint decision may be involved in which several people's decision rules need to intersect, while the product itself is a flow of information and a full prior demonstration is problematic due to the Arrow Paradox. Checklists seem likely to be used in this context. Although there is inherently uncertainty about detailed aspects of the rival movies, it is

common for movies to be classified by genre and censor's rating (adults-only, parental guidance recommended, etc.). If a film is a sequel, uncertainty is much reduced and likewise, to some degree, if the film is based on a well-known novel or television series. Such films may also present less of a challenge to prospective viewers in the sense that, once watching them, they will have less of an effort to get to know the characters and plot-lines. Very broad kinds of categorisation may also provide clues about the kind of challenge different films will present: 'art-house' films may not offer 'Hollywood endings' (cf. Scitovsky, 1976, 1981 on differences in the desire for comfort, pleasure and excitement amongst consumers in modern societies). The sheer range of movies, venues and viewing times on offer in a large city implies that, to avoid information overload, would-be movie-goers are likely also to need to use checklists, adding their own requirements such as time, venue, length, genre, star rating by trusted reviewers, acceptability of stars/the director, how friends have rated it, whether it is coming to the end of its run, the probability of it being available later on DVD if missed now. In a small town, with only one cinema, matters could be different: Miller's 7 ± 2 Rule would be less obviously relevant.

The context of choice here may differ quite significantly between movie-goers for reasons other than their location. Some may have overriding reasons for suspending their usual decision rules because of the particular social nature of the evening, such as a male being open to a 'chick-flick' rather than an action movie because he is on a date. Features of potential venues further complicate the choice, again pushing consumers towards using intolerant checklist rules to whittle down the choice, such as whether or not parking is too difficult, the sound system too loud, the décor too tatty, and so on. This may result in venue being chosen first by one rule and movie being chosen, via a different rule, from what is available at the selected venue – or vice versa.

The switch from single-screen to multiplex cinemas in recent decades has changed the context of choice in several ways. It has increased the total range of films between which to choose (adding to information overload) but also the range of venues at which a given film might be viewed. The latter may have simplified the choice problem insofar as it has enabled more consumers to have a regular venue rather than needed to visit a wide range of venues in order to see the variety of films they wish to view. The ability to run trailers of films being run both concurrently and in the near future at a particular venue may also help mitigate bounded rationality problems to some degree by concentrating the regular clientele's attention on a particular set of films. Multiplex cinemas also simplify choices by enabling

parents and children to see different films running at the same time rather than the parents having to deal with childminding logistics; they also make it easier for customers simply to make a sudden decision to go to the movies at a particular venue and work out what to see once they arrive, as the probability of there being *something* they will like and which is starting shortly is increased.

From the standpoint of information economics, we might expect the presence of stars and their current standing to be seen as a good signal of movie quality: a star needs to choose carefully which movies to appear in, for a box-office disaster can be bad for their reputations, so in a sense their willingness to appear in a film is a kind of celebrity endorsement of it. Empirically, however, there is rather less support for this than we (and the movie production companies) might expect. As De Vany (2004, p. 92) comments on his findings in this area,

Only 19 stars had a statistically significant impact on the hit probability. The names on the list are familiar ones. But some stars thought to have box-office power do not make the list: for example, neither Sylvester Stallone nor Robert De Niro were statistically significant.'

De Vany goes on to emphasise that only four of the 19 on his list were female stars and that, in statistical terms, no star is a 'sure thing'. His book instead emphasizes the importance of network effects, such as word of mouth, as the means by which consumers deal with the inherent uncertainty regarding movie quality. It is also possible that branding on the basis of the production company (Sony Pictures, Touchstone, Disney, etc.) is used by some people as a means of simplifying their choices: different production houses specialise to some degree in different genres.

6. CONCLUDING COMMENTS

Contexts of choice differ considerably in the challenges they present regarding the need to be able to make reliable inferences about how far to search for and process relevant information. Recognition of this should take the focus of consumer behaviour theory to the economics of different ways of reaching decisions and away from seeing it as optimizing with well defined preferences and constraints. Consumers choose to get involved in particular contexts of choice, prior to choosing and applying a strategy for gathering information and eventually deciding on the choice of action. We leave readers in something of a reflexive corner, with a choice of two views about how

these choices of how to choose are made, which can be resolved in an 'either/or' or 'both/and' manner. The 'find the trade-off' approach will appeal to experienced economists who are used to looking for such things, but actual consumers may not be so adept at doing this. The 'rules-based' approach neither presumes nor excludes the possibility that consumers will in some contexts reason like economists. However, beyond envisaging hierarchical relationships between rules, it says nothing specific about which kinds of rules will be used to deal with particular contextual problems. To narrow this down, it helps to have 'commonsense' knowledge of institutional aspects and an awareness of cognitive constraints that will preclude the use of certain kinds of rules in the context at hand.

It has not been the intention of this paper to claim that the context *determines* choice in a particular way, but at least we may be able to get a clearer idea of the probabilities of consumers using particular strategies. However, we do believe that, armed with the theoretical perspectives offered in the paper and commonsense knowledge of a context, it is possible greatly to narrow down the set of possible actions by consumers who come to the context from diverse starting points. The analysis offered here might be seen as an extension of Heiner's (1983) claim that we can only predict behaviour because consumers use simplifying rules for coping with complex situations rather than adapting optimally to their singularities. At the very least we can have a bigger chance of understanding why a few brands dominate in some markets but not others. Having done this, the economist should be in a good position to advise what market research questions might be asked to uncover which specific rules are used by consumers, and their relative frequencies of use. However, there is an obvious case for undertaking extensive academic research into 'lay economic thinking' about different kinds of context.

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