

Unavailability and the evaluation of goods*

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ABSTRACT

In this article we summarize several views on how consumers react to the unavailability of consumer goods. The focus of the article is on how psychological theories can be used to enrich economic demand theory, and more specifically the understanding of the relationship of availability characteristics and consumer preference. We discuss the different forms and causes for limited availability and how they affect the evaluation of goods. We review economic-psychological theories such as reactance theory, frustration theory, commodity theory and behavioural cost theory and recent research findings to come to an enrichment of the traditional, i.e., microeconomic view on how consumers evaluate goods of limited availability.

SOMMAIRE

Dans cet article, nous présentons différentes vues sur les réactions du consommateur en cas d'indisponibilité d'un produit. L'objet de cet article traite des possibilités d'utilisation de théories psychologiques pour élargir notre compréhension sur la théorie économique de la demande, et plus particulièrement notre compréhension de la relation entre les caractéristiques de disponibilité et la préférence du consommateur. Nous traiterons les différentes formes et causes de disponibilité limitée et leur effet sur l'évaluation des produits. Nous ferons passer la revue différentes théories economico-psychologiques telles que la théorie de réactance, la théorie de frustration, la théorie des commodités et la théorie du coût de comportement ainsi que des résultats de recherche qui apporteront un enrichissement de la vue traditionnelle, micro-économique, de la façon dont les consommateurs évaluent des produits en cas de disponibilité restreinte.

ZUSAMMENFASSUNG

In diesem Artikel werden verschiedene Standpunkte verglichen, die beschreiben, wie Konsumenten auf die Nicht-Verfügbarkeit von Gütern reagieren. Der Artikel richtet sich auf die Frage, wie psychologische Theorien, herkömmliche ökonomische Theorien der Konsumgüternachfrage ergänzen können. Wir versuchen den Zusammenhang zwischen Verfügbarkeitskriterien und der tatsächlichen Bevorzugung von Gütern durch Konsumenten verstehen zu lernen. Im weiteren diskutieren wir verschiedene Formen und Ursachen von eingeschränkter Verfügbarkeit und wir ergründen, wie diese Einschränkungen die Beurteilung von Gütern beeinflussen. Es werden ökonomisch-psychologische Theorien wie die Reaktionstheorie, Frustrationstheorie, Güterntheorie und Verhaltenstheorien in Bezug auf Kosten besprochen und jüngste Untersuchungsergebnisse erörtert, um die traditionelle, sprich mikroökonomische Sicht, zu ergänzen.

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ABSTRACT for the Journal of Economic Literature

In this article we summarize several views on how consumers react to the unavailability of consumer goods. The focus of the article is on how psychological theories can be used to enrich economic demand theory, and more specifically the understanding of the relationship of availability characteristics and consumer preference. We discuss the different forms and causes for limited availability and how they affect the evaluation of goods. We review economic-psychological theories such as reactance theory, frustration theory, commodity theory and behavioural cost theory and recent research findings to come to an enrichment of the traditional, i.e., microeconomic view on how consumers evaluate goods of limited availability.

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I INTRODUCTION

Scarcity is the essential concept within neoclassical economics. LAVOIE (1992) remarks that "everything of significance in neoclassical economics is scarce. ... Scarcity is the fulcrum of neoclassical economics ... Scarcity justifies the supply and demand analysis. It gives prices their crucial role. It governs the behaviour of the economy." Classical economic theory posits that market value or price is enhanced through scarcity, which decreases the demand for a good. However, the theory assumes that scarcity should not affect the psychological value or desirability of a commodity (LYNN, 1992a).

The focus of this article is on how psychological theories can be used to enrich economic demand theory, and more specifically the understanding of the relationship of availability characteristics and consumer preference. Starting from criticism on the microeconomic theory of consumer demand, an overview of relevant empirical and conceptual work on the relationship of unavailability and consumer evaluation will be given.

Then a discussion follows of psychological theories and experimental evidence that may explain the effect that different types of unavailability and limited availability have on the evaluation of goods.

II TOWARD A NEW APPROACH OF THE MICROECONOMIC THEORY OF CONSUMER DEMAND

In traditional economic theory of consumer demand, consumer choice is said to be determined by a confrontation of preference with financial means. This traditional form of the economic demand theory (e.g., HICKS, 1959), as can be found in any textbook, has been criticized on both formal and material grounds. The deductive and normative aspects of the theory have raised some metatheoretical arguments. CLARKSON (1963) argues that as the theory lacks operational rules about how to measure relevant concepts, it cannot be falsified. He further argues in favour of putting this theory aside and directing research efforts to the study of decision making.

Others have not been so eager to sacrifice the rigor and elegance of the theory, being afraid of 'crass empiricism' (MORGAN, 1978). 'Revealed' preferences as introduced by

SAMUELSON (1947) have improved the operational qualities of preferences as integrated in modern treatises of demand theory (e.g., LANCASTER, 1971).

Another metatheoretical point of debate pertains to the status of the assumptions in the theory. FRIEDMAN's statement (1953: 14) that 'the more unrealistic the assumptions the more significant they are as pillars for theory foundation', has been a topic for discussion for many years.

MUSGRAVE (1981) shows that for all three types of assumptions that can be distinguished: negligibility, domain assumptions and heuristic assumptions, this standpoint cannot be held. The more realistic the assumption the more fruitful it is as a basis for theory formation. More material criticism has been raised concerning the content of the assumptions of traditional consumer demand theory. Rational economic man has been said to be a bounded rational man due to Simon's work. The 'complete knowledge' assumption has led to research on the cost of search (e.g., STIGLER, 1961; CROSS, 1980) as well as to research that shows the relevance of risk and uncertainty (TVERSKY and KAHNEMAN, 1981) for decisionmaking (see for reviews SLOVIC, FISCHHOFF and LICHTENSTEIN, 1977 and EINHORN and HOGARTH, 1981). Criticism on the economic model of behaviour has been covered most extensively by SCHOEMAKER (1982) and FREY (1983).

Frey, in discussing shortcomings of the economic model of behaviour, advocates the enrichment of both constraints and preferences in consumer demand theory. Such enrichment could well be attained by experimental work on the behavioural basis of economic man. The experiment has been advocated as a tool for economists for a variety of practical, heuristic or theoretical reasons: (HALL, 1992)

Bestknown are the experimental studies that depart from traditional economic theory of consumer demand (HICKS, 1959) and aim at a renewed reflection on the underlying assumptions about human economic behaviour. Since the pioneering work of SIMON (1955) on bounded rationality, studies that aim at discovering and explaining decision making processes have been recognized as a task for social scientists (TVERSKY and KAHNEMAN, 1974 and 1981).

Both the normative and the descriptive studies on the boundedness of rationality broaden our view of the economic man (KLEIN, 1983). In the following we will discuss these experimental efforts concerning consumer demand and the availability of goods. More specifically we will focus on choice behaviour as dependent of constraints such as price and availability.

III UNAVAILABILITY AFFECTING PREFERENCES

1 Reasons for Unavailability

The literature suggests that there are three types of conditions that potentially evoke situations of scarcity. Table 1 contains unavailability and these types of limited availability, namely restricted availability, conditional availability, and limited availability due to market circumstances.

insert Table 1 about here

Table 1 organizes the theoretical views presented below. The rows identify situations of unavailability, the columns represent analytical elements to explain the effect of unavailability. The different types of limited availability are shortly described and specific forms given. Table 1 presents the related behavioural mechanisms and their effects on product evaluation.

Unavailability can be distinguished into two categories: no longer available with nobody special to blame (caused by nature) and blocked availability where an alternative is made unavailable, for instance, by regulations. These two situations give rise to different types of reactions with opposite consequences for product evaluation.

Restricted availability refers to availability dependent on membership of a specific group, e.g., a professional organization like the Society for the Advancement of Behavioural Economics. *Only for* individuals belonging to such a group a good is available. When one is a group member, the otherwise unavailable good gives rise to a status motive that increases the value for that good. If one is not a member of the restricted group the product evaluation depends on the relationship with the group, especially the possibility to become a member.

The third type of *limited availability* refers to *market circumstances*, or factors concerning demand and supply that lead to the limited availability. Flaws in supply, demand, or both represent market causes for unavailability. Several studies have shown that scarcity induced through market factors has a stronger impact on the desirability of goods than scarcity due to nonmarket factors. Diminished supply or increased demand may evoke a cost perception for the commodity, but they may also lead to the arousal of social motives that inhibit the choice of an otherwise preferred good. In all, commodities that are unavailable due to market circumstances increase in value. Goods that are unavailable due to accidental or nonmarket circumstances do not invoke a behavioural mechanism of judgment, and therefore

do not give rise to a preference increase for those goods.

Conditional availability means that a good becomes available *only if* certain conditions or task requirements are met, for instance, a lecture becoming available after taking place in an auditorium. Such requirements include 'effort to be spent', 'time to wait', 'a financial price to be paid' and 'a service to be rendered' (BROCK, 1968).

The condition to be satisfied is thus one of effort: only if a behavioural, financial, or social sacrifice has been made, will the commodity be available. This process is guided by a cost perception. The sacrifices, or prices to be paid, are related to the individual's behavioural, financial and social budgets, yielding a perception of costs involved. Those commodities are preferred that involve relatively high costs.

2 Unavailability

Two popular expressions can be noted (ELSTER, 1982) on how unavailability and other extrinsic product information affect the preference and the valuation of goods:

1. The 'forbidden fruit is sweet' saying expresses that the preference for a commodity that is outside one's reach is increased just because it is unreachable.
2. The 'sour grape' expression implies that when a commodity is not available the individual therefore reduces his preference for it. These sayings seem another's opposite. A way out of this controversy is to have a closer inspection at the type of conditions that evoke unavailability. The 'forbidden fruit is sweet' saying can be seen as a rudimentary form of the psychological reactance theory (BREHM, 1966). The 'sour grape' expression can be considered as a specific form of frustration theory. Both theories have been connected with the effect of availability on preferences (see the first row in Table 1).

2.1 Reactance Theory

Individuals may perceive unavailability as a threat to their freedom to possess the commodity. This perceived threat increases the desirability of the object, because individuals will try to reestablish threatened freedoms (BREHM, 1966; WORCHEL, 1992). Scarce commodities limit individuals' freedom to possess these commodities and consequently cause reactance. This reactance manifests itself through increased attraction to and enhanced evaluation of scarce commodities.

WORCHEL et al. (1975) investigated the effect of availability change and the cause of unavailability on the valuation of cookies. They showed that scarce cookies, especially

when due to popularity, were rated highest on liking and attraction. The interpretation of the findings given by the experiments was based on reactance theory (BREHM, 1966).

Reactance theory hypothesizes that when a choice alternative is removed from a given set this is perceived by individuals as threatening their decision freedom. This threat is reacted upon by increasing the perceived value of the removed alternative. In the condition in which an abundantly available cookie becomes scarce due to popularity, the threat is assumed to be most pronounced. Therefore, the highest value rating is obtained following predictions based on reactance theory. This result confirms the 'forbidden fruit is sweet' explanation (ELSTER, 1982).

WORCHEL (1992) argues that the scarcity-value relationship only holds for those commodities to which individuals think they should have access to. So only if they perceive that a previously existing freedom of access has been violated, does this relationship occur. A moderator of this relationship is the number of others possessing the commodity. Reasons for inaccessibility that are aimed at the individual have a stronger impact than those aimed at the product. When individuals cannot access a commodity that others have access to, their desire for the product is positively related to the number of others possessing the commodity, and the degree of personalism in the cause for the unavailability. In his second study, Worchel found that the desire to hear a withheld, prerecorded message increased when the censorship of the withheld communication was aimed specifically at certain participants, namely those who showed a certain profile on an attitude questionnaire. Participants' endorsement of the statement in the communication increased when compared to the uncensored communication conditions.

2.2 *Reactance Theory versus Frustration Theory*

VERHALLEN (1982) had female homemakers choose between three recipe-books in a simulated product test situation. Three levels of availability (available, unavailable, unavailable changed to available) varied across the three books. One out of four reasons for unavailability was given: accidental circumstances, popularity, limited supply and both popularity and limited supply. The hypothesis based on reactance theory was rejected: The unavailable book was not valued highest over all conditions but valued lowest, especially when having a market induced reason for its unavailability. The unavailable book that changed to become available was not rated lowest but highest. These findings were most clear-cut for participants who showed an interest in the product and under the market cause conditions.

For the unavailable good an explanation based on the occurrence of frustration in the experimental situation was given. The elimination of a choice alternative, which would have been evaluated as most positive, could be interpreted by individuals as blocking a desirable alternative. The induction of frustration will then, according to the frustration-aggression hypothesis (DOLLARD et al., 1939), make subjects prone to devalue the unavailable alternative. The 'sour grape' explanation (ELSTER, 1982) is consistent with this view rooted in frustration. Blocking or removing alternatives in a choice task has stimulated a separate field of research (phantom objects, see PRATKANIS and FARQUHAR, 1992).

The comparison of the experiments by WORCHEL et al. (1975) and VERHALLEN (1982) may suggest the conditions that lead to either theoretical explanation. The relationships of the two distinguished types of unavailability with preference are summarized in Table 1. If, as in WORCHEL et al. (1975), a choice alternative is first offered and subsequently removed (made unavailable or threatened to be made unavailable) a reactance effect occurs and the alternative increases in value. However if, as in Verhallen's experiment, an attractive choice alternative is offered as unavailable or blocked from the beginning, a frustration effect might be hypothesized, and the alternative decreases in value. Thus, the specific preceding conditions are relevant for predicting the effect of unavailability on preference formation. If a product is no longer available due to nature or simulated nature, the typical reaction of individuals is to regret the impossibility to have that product and to reevaluate that product more positively: there is no person to blame for the unavailability of the product. If, however, a person or institution can be held responsible for the unavailability of a product, e.g., due to regulations, the typical reaction would be to feel frustrated and to devalue the product.

2.3 *The Scarcity Heuristic*

Unavailability may serve as a heuristic cue. In this sense, it resembles the price-quality relationship (RAO and MONROE, 1989). DITTO and JEMMOTT (1989) state that 'if all that is known about some object or characteristics that it is rare, people may rely on a *scarcity principle* to infer an extreme evaluation.' Confronted with the information that a certain health disorder is rare, people will infer that it is serious. In that vein, if consumers learn that a commodity is rare, they will assume that it is valuable. The idea is that because scarcity affects availability, less common goods are more valuable. This relationship between supply and demand has probably been reinforced during consumer socialization. It therefore is reasonable to assume that people associate scarcity with value (CIALDINI, 1987). For

LYNN (1989), assumed expensiveness mediates the enhancement of value by scarcity. Starting from the assumption that 'it is plausible that people have learned to associate scarcity with expensiveness,' LYNN (1992a) concludes that individuals want expensive things more than inexpensive things. This desire may be driven by an attribution of higher quality to the more expensive commodity, or by an increase in perceived status by possessing scarce objects.

DITTO and JEMMOTT (1989) believe that the mechanism of *evaluative extremity* operates here. The perceived prevalence of a good, or a piece of information, drives the evaluation to an extreme both for desirable and undesirable objects. People have learned that prevalence information is a reliable indicator of evaluative extremity. Scarcity does not simply lead to more positive evaluations; it leads to extreme evaluations. The general principle is that an evaluation will be more positive if the object of evaluation is positive or desirable. It will be more negative if the object under evaluation is seen as negative or undesirable. They suggest a hierarchical effect: first, the scarcity heuristic directs individuals' initial evaluations to a good, and second, other mechanisms like need for uniqueness come into play.

FOLGER (1992) states that unavailability may act as a cue, a signal of some property associated with unavailability. This cue-based approach acts prominently in naive economic theories. He contrasts this signalling approach with a cognitive accessibility approach to scarcity. Goods become more salient because of unavailability, rareness, or uniqueness. So it is plausible that those features enhance the probability that people think about such goods; next, the more often it comes to mind, the more it might prompt consideration and rehearsal. They enhance the motivation to process relevant information (BOZZOLO and BROCK, 1992). Unavailable goods that are easily substituted by alternatives will probably not lead to an enhancement of value. Therefore, product category and product need, such as the need for social recognition, may mediate the scarcity-value relationship.

The scarcity heuristic as it stands now, may be regarded as a restatement of the phenomenon of the value-enhancing effect of scarcity. It does not provide an actual explanation for it. It is postulated that factors like scarcity lead to a polarization of the initial valence of the object. Evaluations thus become more extreme under the influence of commodifying factors like scarcity. Therefore, BROCK and BRANNON (1992) prefer to refer to the scarcity-*polarization* relationship.

IV RESTRICTED AVAILABILITY: SOCIAL VALUES AND NORMS

The second row of Table 1 describes restricted availability and its associated behavioural mechanism and product evaluation effects. Restricted evaluation means that a good is only available for individuals who belong to a certain group. As has been noted above, being a member or not of a social group affects product evaluation through the arousal of social values and norms.

1 Restricted Availability: Social Values and Norms

HIRSCH (1976) introduces the concept of 'positional goods'. These 'socially scarce' goods, as opposed to materially scarce goods that are in principle available to each of us, but cannot in practice be made available to us all. Examples are, e.g., a high social position and an old masterpiece of art. The valuation of these positional goods is said to depend not only on intrinsic product qualities but also on the possibilities to attain such a good. Similarly LEIBENSTEIN (1976) argues that in Veblen-, bandwagon-, and snob-effects a nonfunctional demand becomes overt. Nonfunctional demand is that portion of demand that is not a result of intrinsic product qualities. So both authors stress the value enhancing effect of unavailability characteristics, being either product or not product specific.

The valuation of positional or socially scarce goods, as discussed by HIRSCH (1976), might be based on the social prestige that is perceived to be associated with such a good. FROMKIN et al. (1971) suggest that in some situations not a need for uniqueness but other social motives occur. These social motives depend on whether the individual is a member of a group.

Being a member of a group when membership is no longer available or when the possibility to become a member has been blocked, arouses feelings of status and enhances the valuation of membership. Not being a member leads to different evaluations. If one is not a member of a society whose membership is no longer available, a reactance effect occurs. By removing the possibility of becoming a member that had been present in the past, the individual's freedom is reduced, thus leading to an increase in the valuation of that membership. A decrease in the valuation occurs when the potentially desirable possibility to become a member has been blocked, i.e., has never been available to the individual. Here, the arousal of frustration makes the individual play down the attractiveness of group membership.

Restrictions on the availability of goods may lead to an attribution of social value, e.g., need for uniqueness or prestige, to the commodity or to the elicitation of social norms

like altruism and equity (LERNER, 1981) that inhibit the overt choice. COLEMAN (1990) has discussed the importance of social constraints in economics. Attitude theory (AJZEN and FISHBEIN, 1980) views a behavioural or a buying intention as influenced by two factors, namely the attitude toward an object or act and the social norms that may inhibit or simplify the expression of personal preferences in overt behaviour. Restricted availability may arouse motives like social prestige and altruism that subsequently influence the valuation of goods; they can also elicit social norms that influence overt choice exploration.

V LIMITED AVAILABILITY AND PREFERENCE

From an economic standpoint a completely unavailable good is irrelevant, as it cannot be exchanged. However, if a nonexisting good is valued highly by prospective buyers, this desire may stimulate new product development or product reformulation. A good that has been unavailable in the past but has become available now, or a good of limited availability are obviously relevant. Their evaluations depend on the cause of the limited availability: this may be due to market or nonmarket circumstances (see the third row in Table 1).

VERHALLEN (1982) found that an unavailable book that became available was rated significantly more attractive than an always available one. This finding suggests a new point of view, as frustration and reactance theory do not apply. The increase in attractiveness does not occur because a choice alternative is blocked (frustration), taken away (reactance) or unavailable (scarcity heuristic). In contrast, the reverse has happened by *adding* an alternative to the existing ones. A reversal of a reactance effect was hypothesized but not supported, given the higher preference for the added alternative. In addition, the value increase of the alternative that became available was significantly higher than in the condition in which an accidental reason was offered. Therefore, it is not the change in availability as such but the *perceived* cause of this change that determines the preference increase.

It is a commonplace in psychology and marketing to say that scarce goods or services are more attractive than abundantly available ones. Scarcity increases value. Even one- and two-year olds are sensitive to conditions of scarcity: When means, here toys, are scarce, conflicts arise (CAPLAN et al., 1991). Commodity theory has been used widely to investigate the effects of scarcity on the evaluation of goods.

1 Commodity Theory

BROCK (1968) argued that the valuation of a commodity jointly depends on intrinsic, functional product attributes, and on supply and demand characteristics. The main premise of the theory is that any commodity will be valued to the extent that the more unavailable a good is, the higher it will be valued. This general unavailability premise is specified in eight hypotheses grouped into four categories about scarcity, restrictions, delay and effort. These hypotheses express that the valuation of a good is dependent on the size of its demand and supply, the restrictions set by the supplier to attain a good and the amount of time and effort necessary to attain a good. Commodity theory restricts itself to information, the effectiveness of messages, as the relevant commodity (BROCK, 1968: 248). It has also been employed to explain the value enhancing effect of restrictedly available erotic material (FROMKIN and BROCK, 1971).

Recently, BROCK and BRANNON (1992) reformulated commodity theory to include personal traits and skills and positively and negatively valenced objects. The latter has led to the postulation of the scarcity-polarization effect. The main contribution of commodity theory has been first the identification of sources of unavailability, such as scarcity, restrictions, delay, and effort. Second, a first attempt has been made to identify possible reasons and behavioural mechanisms to explain the value-enhancing effect of unavailability. A need for uniqueness is hypothesized to explain the value increasing effect of unavailability.

1.1 Need for Uniqueness

FROMKIN et al. (1971) showed that a good only available at restricted periods in time is more highly valued than a good of unrestricted availability. Fromkin and his associates argue that such effects of restriction can be best understood from the arousal of a need for uniqueness (ZELLINGER et al., 1975; SNYDER and FROMKIN, 1980).

Unavailability implies that few people possess a certain resource, thus evoking a sense of self-uniqueness (SNYDER, 1992; SNYDER and FROMKIN, 1980), downward comparison processes with those that do not possess a resource, and a sense of power over those who want to possess the unavailable source (EMERSON, 1962). This need for uniqueness should explain the value increasing effect of unavailability. Individuals have a desire to perceive themselves as unique members of society. One way of acquiring or maintaining this sense of uniqueness is by possessing scarce objects. In this vein, people differentiate themselves from others (BELK, 1988) by the possession and display of scarce objects. FROMKIN et al. (1971) showed that a good only available at restricted periods in time is valued more highly than a good of unrestricted availability; compare *limited edition* advertising strategies.

LYNN's (1991) analysis showed that the enhancement of a commodity's value was stronger the greater individuals' need for uniqueness. This finding suggests that tactics aimed at inducing scarcity effects will be more effective when addressed to individuals displaying a higher than average need for uniqueness. It is, however, hard to explain the effect of scarcity due to popularity or the effects of effort and delay to attain a good on its valuation by assuming a need for uniqueness. The need for uniqueness is only one out of several behavioural mechanisms that can be aroused by limited availability.

1.2 *Altruism*

VERHALLEN (1982) hypothesized that an altruism motive was aroused in some participants who were not interested in scarce books in choice experiments. This altruism motive could have caused the participants within the experiments not to choose the alternatives of limited availability. Altruism refers to "acts of concern for others—such as sharing, helping, showing concern and consideration, reassuring, and defending—that are performed independent of hope of reward or fear of punishment from external sources and that may even be of some cost to the altruist" (GRUSEC, 1991: 9).

Preferences are not always converted into overt choices even when financial constraints are absent. VERHALLEN and ROBBEN (1994) have shown the effect of social circumstances when participants did not choose their most preferred alternative. The occurrence of social norms inhibiting preferences to be expressed in overt choice may even be more important than financial budget constraints (LINDENBERG, 1983).

2 Limited Availability Due to Market Circumstances

Commodity theory states that scarcity is a way to convey unavailability. The number of co-recipients and the number of suppliers of a good influence the valuation of that good. BROCK (1968) provided empirical evidence concerning the effect of increased demand on the valuation of messages. With respect to tangible goods or communications, WORCHEL et al. (1975), VERHALLEN (1982), and VERHALLEN and ROBBEN (1994) show the effect of scarcity on the evaluation of goods to be stronger when scarcity is due to an increased demand than when due to accidental circumstances. For intangible commodities, the persuasiveness of a communication did not increase when it was unavailable due to accidental circumstances (WORCHEL, 1992).

The effect of scarcity due to limited supply on the valuation of tangible goods has

hardly been experimentally addressed. VERHALLEN (1982) reports an effect of limited supply on choice behaviour in the expected direction: goods of limited availability were chosen more often.

These studies have shown that accidentally scarce goods were not more highly valued than abundantly available goods. It is not the mere limited availability but the attribution to the cause of unavailability that produces the preference increasing effect. Market cues may cause an impression of being harder to get, more costly or giving the recipient a unique commodity. The effect of limited availability due to market causes on preference is hypothesized to be mediated by both a cost and a uniqueness evaluation (VERHALLEN and ROBBEN, 1994).

VI CONDITIONAL AVAILABILITY: DELAY, EFFORT, SERVICE, AND PRICE AS COST FACTORS IN AVAILABILITY

Commodity theory distinguishes four groups of factors that convey unavailability: restriction, delay, effort, and scarcity. A review of experimental research based on commodity theory showed that only the effect of restrictions on the valuation of commodities received extensive empirical attention (FROMKIN and BROCK, 1971). Since then, the effect of scarcity on the valuation of goods has received more attention (LYNN, 1991, 1992a, 1992b; VERHALLEN, 1982; VERHALLEN and ROBBEN, 1994). WRIGHT (1992) investigated the role of effort in this sense, but delay has been neglected. Conditional availability refers to situations in which commodities become available after an individual has fulfilled specific conditions (see the fourth row in Table 1).

Delay and effort are a combination of a price element (delay equals time price), and a cost sort, with effort as relative task difficulty. For instance, a decision task requires both psychic and physical activities. The effort associated with the task depends on the person's abilities. VERHALLEN and PIETERS (1984) emphasize the importance of nonfinancial costs for the explanation of reasoned action. Financial costs are extended with behavioural and social costs. Behavioural costs include psychic, physical and time demands. Commodity theory's delay and effort, divided in psychic and physical effort, are behavioural costs. Social costs such as compliance, instrumental services and acceptance (see, e.g., BLAU, 1964) can also be distinguished. Apart from a financial price, a behavioural or a social price may have to be paid in given situations to obtain a good.

Following SCITOVSKY (1945), the possible dependency of value as expressed in

product preference and price has been considered: price may serve as an indicator of quality. GABOR and GRANGER (1966), for instance, confirmed this hypothesis on the price-quality relationship. In a similar vein we may extend this relationship to a *full-price* (cf. BECKER, 1993), which indicates the value of a commodity to an individual. If, in a choice situation, an alternative increases in full-price (its financial price, time price or delay, effort, social services to be rendered), its attractiveness, and consequently the preference for that commodity increase. To explain the effect of conditional availability, conveyed through information about delay, effort, services and price, on preferences a total-cost perception may be at work. A stronger availability requirement leads to a higher perceived full-price that within a given choice situation leads to a higher cost evaluation. There is empirical evidence for the financial form of this cost-value relationship (see, e.g., OLSON, 1977; MONROE and PRETOSHIUS, 1981). The behavioural and social cost-value relationship also received support recently (ROBBEN and VERHALLEN, 1994; VERHALLEN and ROBBEN, 1994).

VII CONCLUSIONS

An assumption of demand theory that has received little attention is that goods are assumed to be readily available. If they are not readily available, the costs to make them available, the acquisition costs, according to modern treatise of demand theory have to be taken as part of the total price (e.g., BECKER, 1965; LESOURNE, 1968). Recent theorizing on this topic has broadened the scope with psychic costs, such as 'the cost of thinking' (SHUGAN, 1980), 'sunk costs' (THALER, 1980) and 'behavioural costs' (VERHALLEN and PIETERS, 1984). It is discussed there that not only financial constraints but also behavioural and social constraints do affect economic behaviour. Our contribution argues that unavailability in its different forms not only expresses a constraint, but also acts as a cue for the value of the good of limited availability.

The discussion of the effect of different kinds of limited availability on the preference for goods may shed new light on long standing exceptions within demand theory such as Veblen- and snob-effects (VEBLEN, 1965). The overview tries to clarify that to predict the effect of limited availability on the preference for commodities, the specific reason for this unavailability needs to be specified.

This literature review shows that there is no consensus on a particular behavioural mechanism within commodity theory that explains how unavailability cues affect the evaluation of goods. As some of these unavailability conditions have not been investigated in

great detail their effect remains hypothetical. Need for uniqueness and other motives, reactance and frustration theory, the scarcity heuristic, and behavioural costs have been discussed as potential and mutually nonexclusive mechanisms.

In contrast to BROCK and BRANNON's (1992) opinion, there is evidence that a good of limited availability is only valued more than an alternative of unlimited availability when the limitations are not due to accidental circumstances (LYNN 1992b; VERHALLEN and ROBBEN, 1994). The causes for the limited availability determine the attributions people will make.

Scarcity may act as a cue that enhances the value of a good. Three conclusions follow from this observation. First, scarcity implies that goods have financial, behavioural, and social prices to be paid to make the good available. Second, restricted and limited availability may convey social and behavioural costs that influence the valuation of goods. Third, the valuation of goods does not only depend on functional intrinsic factors but also on perceived costs associated with them. For some goods, there is a significant uncertainty about their intrinsic qualities (e.g., perfume). Scarcity cues may have a larger impact on the perceived value of such goods compared to goods that have a more functional appeal. Future research should elaborate the behavioural basis for the availability-preference relationship by studying conditions that may arouse other social motives and conditions that influence cost evaluations and consumer choice.

In contrast to the traditional economic price definition, the notion of full-price may encompass and more accurately express individual economic phenomena (FREY, 1986). The liberation of price into the full-price concept may challenge the study of basic economic phenomena and shed new light on the integration of economic and psychological theories (ANTONIDES, 1989; STROEBE and FREY, 1980; FREY, 1992).

Table 1 Types of limited availability, behavioural mechanisms, and product evaluation				
Type of availability	Description	Specification	Behavioural mechanism	Product evaluation
Unavailability	(a) nature	(a) no longer available	(1) reactance	(a) increase
	(b) regulations	(b) availability blocked	(2) frustration	(b) decrease
Restricted availability	a commodity is available <i>only for</i> certain individuals	only for: group membership		
		(a) no longer available		
		- member	(3) status	(a) increase
		- non-member	(1) reactance	(a) increase
Limited availability	due to market or nonmarket	(a) increased demand	(3) social status, need for uniqueness	(a) increase
		(b) availability blocked		
		- member	(3) status	(a) increase
		- non-member	(2) frustration	(b) decrease

Table 1 Types of limited availability, behavioural mechanisms, and product evaluation				
	circumstances	(b) limited supply (c) limited supply and increased demand (d) accidental	(4) behavioural cost evaluation (7) altruism	(a) increase (b) decrease (c) none
Conditional availability	a commodity is available <i>only if</i> specific conditions are met	(a) behavioural conditions: only if effort (b) financial condition: only if paid for (c) social condition: only if social service rendered	(4) behavioural cost evaluation (5) financial cost evaluation (6) social cost evaluation	(a) increase (a) increase (a) increase

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