Introduction

More than 200 studies on sales promotions have been published in the past 10 years, compared to about 40 studies between 1965–1983 (Blattberg and Neslin 1990). This dramatic rise in research can be explained by both the large increase in promotional spending and the availability of scanner panel data.

Organization

This review takes an historical perspective rather than a thematic approach. It is organized by research tradition in order to mirror the innovation process of science at its best. A research tradition was defined by Laudan (1977) as "a framework hinging on a privileged theory, methodology or conception of the world". This notion can help us understand the persistence of conflicting results on many key issues: these conflicts are due to the fact that these results are the fruit of many diverse research traditions. Besides, scholars can assess the problem-solving potential of each tradition so as to motivate, or deter, their insistence upon one research tradition or another.

The main distinguishing factors between one research tradition and another are neither its concepts nor the methodologies employed, but the cognitive aims and the...
viewpoints each of them favour. The consumer-oriented research tradition emphasizes the study of consumers’ behaviours associated with sales promotions. It has two subdivisions: the identification of frequent users of sales promotions and the study of purchasing strategies involving sales promotions. In contrast, the aim of the theory-oriented research tradition is to test various cognitive, behavioural or economic theories. This paper will further distinguish the reference-price theories from other more comprehensive models. This cluster is, of course, a compromise between the within-group cohesion and the clarity of exposition. It is, to some extent, subjective since no consensus about the adequate aggregation level of research traditions in marketing exists, despite the recent interest in this area (Laurent et al. 1994).

**Definition and Typology**

The numerous definitions of sales promotions available have in common the idea that sales promotions are a temporary and tangible modification of supply, the goal of which is to directly impact consumer, retailer and sales force behaviour. The diversity of phenomena encompassed by this definition has led scholars to focus on one of the particular aspects indicated in Figure 1. Recent but sparse research has completed this panorama by emphasizing the direct-marketing and communicative aspects of sales promotions, but they will not be reviewed here (Vemette 1990; Desmet 1991; Guilbert 1991; Ward and Hill 1991; Jones 1992).

The above definition encompasses many promotional techniques (price reductions, coupons, games, etc.) and scholars are not certain whether we must study them separately, as it is currently the case for price promotions and coupons, or if it makes sense to speak of sales promotions as a whole. The most widely accepted typology to date makes three distinctions: (a) retail promotions; (b) trade promotions; and (c) consumer promotions (Figure 2). However, this “natural” typology is not completely relevant to consumer research. For example, price-cuts

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**Figure 1. Different levels of analysis of sales promotion.**
and games are both targeted to consumers but they bring about very different reactions. Only price-cuts are spontaneously associated with the word "sales promotions" by the vast majority of consumers (Guilbert 1991). What is needed is an a posteriori typology, based on consumers' reactions to sales promotions. The exploratory research of Diamond and Johnson (1990) is a useful first step in this direction which could be replicated using real promotions instead of abstract definitions. Their typology is based on the nature of the gain (whether it is monetary or not), the amount of effort required to attain it, and the relationship of the gain to the product (more of the same product, gain of a prize or anything other than the product). These criteria permit distinction of price-cuts from quantity gains and from gains of another product.

The Consumer-oriented Research Tradition

Identifying the Frequent Users of Promotions

Demographics were the first variables employed to identify the frequent users of sales promotions, with few, if any, conclusive results. For example, the effect of income is not clear (Blattberg and Neslin 1990, pp. 73–76). As a result, the more recent studies have relied on: (a) perceived risk theory (Bauer 1960); (b) economic theory; or (c) psychographics (Tables 1–3, respectively). Overall, these studies have sketched a rather coherent portrait of the frequent users of promotions: they are price sensitive; receptive to price and promotion information; brand switchers; and heavy buyers of the category. Besides, they stockpile and accelerate their purchases in reaction to sales promotions. These studies are also useful for, e.g. targeting the heavy users of promotions or deterring buyers from taking advantage of promotions².

²The percentage of redemptions made by buyers depends on various coupon characteristics (Henderson 1985; Neslin and Clarke 1987) as well as on the time period used to define who is a buyer of the brand (Ehrenberg and Uncles 1993).
### Table 1. Identification of the frequent users of sales promotions thanks to perceived risk theory

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>Independent variable</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intention to redeem the offered coupon (1)</td>
<td>Self-declared familiarity (1)</td>
<td>(1) Shoemaker and Tibrewala 1985</td>
</tr>
<tr>
<td>Redemption of direct-mail coupon (2,3)</td>
<td>Brand purchases (panel data) (2,3)</td>
<td>(2) Bawa and Shoemaker 1987b</td>
</tr>
<tr>
<td>Increase in the repurchase likelihood of new buyers (3)</td>
<td></td>
<td>(3) Bawa and Shoemaker 1989</td>
</tr>
</tbody>
</table>

### Table 2. Identification of the frequent users of sales promotions thanks to economic theory

<table>
<thead>
<tr>
<th>Mediating variables: Perceived costs and benefits of promotions usages</th>
<th>Independent variables: Household characteristics</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Costs:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>- Substitution of a preferred brand for a less preferred, promoted brand (1-3);</td>
<td>House ownership: (+) for (3).</td>
<td>(4) Narasimhan 1984</td>
</tr>
<tr>
<td>- Opportunity costs of time (clipping and holding coupons) (3-5);</td>
<td>Living in large cities: (+) for (5).</td>
<td>(5) Bawa and Shoemaker 1987a</td>
</tr>
<tr>
<td>- Inventory of stockpiled promoted brands.</td>
<td>Higher education: (+) for (3-5).</td>
<td>(6) Jolson et al. 1987</td>
</tr>
<tr>
<td>Benefits:</td>
<td>Price sensitivity: (+) for (6).</td>
<td>(7) Henderson 1985</td>
</tr>
<tr>
<td>- Smart shopper feelings (3,5).</td>
<td>Size: (+) for (3), (n.s.) for (5).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Brand and store loyalty: (-) for (5,7).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Children: (-) for (4), (n.s.) for (5).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Working housewife: (n.s.) for (4,5).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Income: (n.s.) for (4-6).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Age: (n.s.) for (5,6).</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Sex: (n.s.) for (6).</td>
<td></td>
</tr>
</tbody>
</table>

### Table 3. Identification of the frequent users of sales promotions thanks to psychographics

<table>
<thead>
<tr>
<th>Dependent variables</th>
<th>Independent variables</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Coupon usage: (+) for (8), (n.s.) for (10).</td>
<td>“Market mavenism”: possession and transmission of market expertise (Feick and Price 1987) (8-10).</td>
<td>(8) Price et al. 1988</td>
</tr>
<tr>
<td>Prediction of future promotions: (+) for (9).</td>
<td></td>
<td>(9) Krishna et al. 1991</td>
</tr>
<tr>
<td>Search and memorization of prices, purchase of generics: (n.s.) for (10).</td>
<td></td>
<td>(10) Lichtenstein et al. 1993</td>
</tr>
</tbody>
</table>

n.s., not significant.

### Purchase Situation and Purchasing Strategies Involving Sales Promotions

The literature on purchasing strategies has taken a situational approach, as opposed to the former stream of research which assumes that a “natural” deal-proneness explains consumers’ responses to sales promotions. For example, the economic model reviewed above predicts that such a penchant should not vary across product categories, since the costs associated with coupons are the same, and since it is in consumers’ best interests to spread these costs over the maximum number of purchases (Bawa and Shoemaker 1987a). These authors find that, contrary to their original hypothesis, up to 31% of consumers use coupons in some product categories but not in others. Bawa et al. (1989) show that a single consumer experiences varied
marketing environments in different stores which then translate into varying perception of and sensitivity to sales promotions. This study shows that promotional activity: the number of displays and the width of the assortment in the preferred store, are correlated with overall deal-proneness and price sensitivity. Familiarity with promotions is also employed, along with store familiarity and inventory level, to predict the "decision state" of a consumer on a particular shopping trip (Bucklin and Lattin 1991). While an opportunistic decision state leads to deal-proneness, consumers only react to their own preferences when they are on a "planned" shopping trip. Similarly, consumers use less coupons but react more to features when on an unplanned shopping trip (for a refill, for instance) than on a regular trip (Kahn and Schmittlein 1992).

Consumers adapt themselves to a changing marketing environment by employing various purchasing strategies (Tellis and Gaeth 1990). Currim and Schneider (1991) have established a typology of the purchasing strategies used by consumers when they encounter promotions on their preferred brands or on other brands (e.g. inertia, brand switching, stockpiling, etc.). Of the five purchasing strategies mentioned in their study, two involve promotions: (a) passive deal-proneness (stockpiling of the preferred brand displayed); and (b) active deal-proneness (brand switching and purchase acceleration for any brand featured, or holding coupons). Their research shows that three out of four consumers use more than one purchasing strategy, at least one of which involves sales promotions. Another study by the same authors shows that active deal-prone consumers may become passively deal-prone but that the reverse is rare (Schneider and Currim 1991). They did not find any pure, i.e. not provoked by promotions, variety-seeking purchasing strategy because of data aggregation problems in household (in contrast to individual) panels (Kahn et al. 1986), or simply because this kind of behaviour has become less frequent with the pervading of sales promotions.

Synthesis and Areas for Future Research

This literature has shown that the diversity of promotion usage patterns between and within consumers can be partly explained by the perception of the costs and benefits of promotions. Still, the most promising area for future research in the identification of frequent and infrequent users of promotions is in the use of psychographics. Smart-shopper self-concept, role perception (homemaker pride) personality traits (need for cognition, need for variety) or other price-related schemata have already been used in the theory-oriented literature (Cacioppo et al. 1984; Kahn and Louie 1990; Schindler 1992; Lichtenstein et al. 1993; Mittal 1994). The feelings (fun, entertainment, anger) or moods created by many consumer promotions and the influence of social factors are other under-researched areas that could improve our understanding of who exactly uses them. For instance, Simonson et al. (1994) found, in an experiment, that a "useless" premium may deter consumers from buying the brand when they know that they will need to justify their choice to others of their social group. There are probably individual differences in this phenomenon worth examining. Finally, a very interesting direction is to enhance the explanatory power of demographics through the use of consumer self reports on "perceived busyness" or "perceived financial wellness" (Mittal 1994).
This literature has also shown that, if each consumer is indeed inherently prone to
deals, his behavior also depends on the point-of-purchase promotional environ-
ment. Future research is needed to determine which of these two sources of variance
is dominant. By favoring the personality explanation, scholars may have been
victims of the fundamental attribution error, that is the tendency to attribute one's
behavior to personality rather than to environment. The next step in this line of
research could be to study the long-term effect of the multiplication of sales
promotions: namely, do they encourage active deal-proneness?

The major limitation of this research tradition is to have measured deal loyalty
instead of deal-proneness. However, we know that consumers may be heavy deal
users if their preferred brands are frequently on sale, or if they take advantage of
promotions only when satisfying their desire for variety (Lichtenstein et al. 1990;
Froloff 1992). Other findings are rather tautological. It is obvious, for instance, that
brand loyalty is inversely related to overall promotion usage. The present tendency
towards more theory and non-observable constructs should help surpass these
limits. Furthermore, enhancing our knowledge of why promotions are used will not
only improve our knowledge of the deal-prone consumers, but also approach critical
issues like the long-term effects of promotions on brand equity or on the
relationships between manufacturers and retailers.

The Role of Price: Reference Price and Attribution Theory

There is an abundant literature on price and pricing. This paper will now focus on
the theories that have been specifically applied to price promotions.

Theoretical Foundations of the Reference-price Concept

The adaptation-level theory (Helson 1964) was the first theory to argue that
individuals compare prices, or any other attribute, to a personal reference level
instead of valuing their absolute amount. Cognitive psychology has supported this
abandon of the notion of objective price by showing that the human perceptual
apparatus is best suited to the evaluation of changes than to absolute values
(Kahneman and Tversky 1979). The assimilation-contrast theory (Sherif and
Hovland 1953) adds that there is a "just-noticeable" difference within which there is
no reference effect but assimilation. Gupta and Cooper (1992) have shown that this
threshold is larger for retailers' brands, a conclusion which corroborates the
hypothesis that consumers have a reference price for each level of quality.

Formation and Encoding of Reference Prices

However largely accepted the reference-price concept may be, there are many
controversies concerning its formation (Table 4). There is reason to believe that

4Note that if consumers are very receptive to the promotions offered on their preferred brand (to which
they are loyal), generally speaking "brand loyal" consumers are not deal-prone.
5For a review of the general literature on price and pricing, see Gijsbrechts (1993).
consumers form and use more than one reference price. Brand loyal and self-confident consumers tend to stick to their internal (temporal) reference prices, whereas brand switchers use mainly external (contextual) reference prices (Puto 1987; Rajendran and Tellis 1994). Let us highlight the fruitfulness of the forward-looking reference-price concept in the domain price promotions. Being temporary, sales promotions induce consumers to think about future prices, not only past or current prices. This, in turn, explains both purchase acceleration (anticipating future purchases) or deceleration (postponing of planned purchases) phenomena.

Reference prices are not only influenced by the amount of the deal, but also by their frequency and their pattern. In a computer experiment, Krishna (1991) found that consumers can assess the frequency of regular price promotions, but underestimate frequent promotions and over-estimate the frequency of a rarely promoted brand if other brands are frequently promoted. Because the external validity of such computerized experiments is weak (Burke et al. 1992), Krishna et al. (1991) have replicated this result with a field experiment. Response accuracy appears to be better for loyal buyers of the brand, those with lower incomes and larger households (Wakefield and Inman 1993). These results are important because the impact of a promotion is substantially larger when unexpected (Lattin and Bucklin 1989; Kalwani and Yim 1992). All in all, these studies recommend random promotions so that consumers cannot plan ahead.

The perceptual encoding of price promotion is a topic of importance for understanding wear-out effects. Prospect theory assumes a utility function that is concave over gains (Kahneman and Tversky 1979), which predicts that people prefer a 50 cent coupon and a $5 price than simply paying $4.5. That is why the promotion is separated from the price, i.e. promotion and price are put into two separate “mental accounts” (Mazumdar and Jun 1993). The type of sales promotion moderates this principle: non-monetary promotions (premiums, lotteries) are framed as gains, whereas price reductions are framed as reduced losses, and thus aggregated with the price of the product (Diamond and Johnson 1990; Diamond and Sanyal 1990). This type of aggregation is important because sales promotions framed separately tend to lower less reference prices (Diamond and Campbell 1989).

Evolution in the Conception of Reference Prices

The reference-price concept has been criticized in present years. In a field survey, Dickson and Sawyer (1990) found that the attention devoted to price information, its memorization and the resulting confidence in consumers’ estimates are globally very weak, even when they are collected at the point of purchase just after a choice is made. Contrary to common knowledge, consumers do not take more time when choosing a brand on sale, and their price estimates are not less precise but systematically under-valued. The same thing applies for purchases made with coupons (Buzas and Marmorstein 1988). These results challenge the economic view of a rational consumer since the vast majority (at least) don’t have precise internal reference prices. However, these internal reference prices can be easily replaced with contextual reference points. In addition, it appears that consumers easily remember if a price was cheap or expensive, even if they cannot remember the exact figure. Mazumdar and Monroe (1990) found that consumers don’t pay attention to absolute
<table>
<thead>
<tr>
<th>Reference price</th>
<th>Formation</th>
<th>Empirical evidence</th>
<th>Experimental evidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>Internal</td>
<td>Memorization of the price paid in previous purchases (Winer 1986).</td>
<td>The coefficient of the reference price variable is significant in logit models of choice.</td>
<td>Consumers have estimates of normal price, albeit often biased among occasional buyers.</td>
</tr>
<tr>
<td></td>
<td>Memorization of the prices seen in previous purchase occasions (Lattin and Bucklin 1989).</td>
<td>The overall fit of the model improves significantly.</td>
<td>Reference prices are rarely used to assess the value of brands when consumers have access to external price information because they don’t trust their memory (Urbany and Dickson 1991).</td>
</tr>
<tr>
<td>External</td>
<td>On the point of purchase, (attribute-based instead of memory-based).</td>
<td>External reference price is measured in logit models of choice by the price before the promotion (whether the brand was bought or not).</td>
<td>The perceived value of the savings and purchase intentions are increased if former prices are indicated (Bearden et al. 1984), especially if they are precise (Mobley et al. 1988) but even if they are exaggerated (Urbany et al. 1988).</td>
</tr>
<tr>
<td>Forward-looking</td>
<td>From past promotional activity.</td>
<td>Assuming that consumers are capable of foreseeing future prices (Kaliwani et al. 1990).</td>
<td>Consumers compare actual prices to normal prices in the same store, but also to the cheapest price in the area. For a review of context effects, see Biswas and Blair (1991).</td>
</tr>
<tr>
<td>Multi-attribute</td>
<td>Memorization of the normal level of each attribute (price, quality, etc.).</td>
<td>Assumption that the preferred (reference) brand is the combination of these reference attributes (Hardel et al. 1993).</td>
<td>Consumers’ reference prices are influenced by current prices and one’s estimates of their typical fluctuation (Jacobson and Obermiller 1990).</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Each individual has his own preferred combination.</td>
<td>Generalized prospect theory (Tversky and Kahneman 1991). No direct experiments involving sales promotions.</td>
</tr>
</tbody>
</table>
prices unless they want to make comparisons with other stores or make choices regarding quantity. In most common brand choice decisions, consumers only need to be aware of relative (cheap/expensive) prices (Krishnamurthi and Raj 1988).

**Attribution Theory**

Price reductions are not neutral. They bring about inferences and attributions which, in turn, moderate the reference-price effects mentioned above (Lichtenstein *et al.* 1991). Generally speaking, attribution theory deals with the mechanisms by which consumers discount price reductions, the quality of promoted brands or the purchase of a brand. Recent research has focused on causal attributions, i.e. “Why is this brand promoted?” When consumers encounter an unusual promotion, Lichtenstein and Bearden (1986) found that they use counterfactual reasoning (Kelley 1973). To assess whether this has something to do with the product (respectively, the situation, the store), they check whether the promoted brand is the only one to be on sale (respectively, has already been on sale in the past, is promoted in other stores). Table 5 summarizes the few studies that have applied attribution theory to sales promotions. A recurrent finding is that consumers familiar with the product are less prone to the discount of price-cuts. The “discounting principle” says that it is because these consumers can imagine many reasons for the occurrence of sales promotions (competition, etc.) that, in turn, diminish the credit granted to each of the possible explanations and thus prevent negative attributions (e.g. poor quality) from predominating.

**Synthesis and Areas for Future Research**

All in all, research on price perception has highlighted the multiple facets of price. It has also specified the rules of reference points formation as well as their share in the influence of sales promotions. This area has been relatively thoroughly covered.

<table>
<thead>
<tr>
<th>Experimental results</th>
<th>References</th>
</tr>
</thead>
<tbody>
<tr>
<td>Consumers discount very large discounts unless they are familiar with the brand. On the contrary, store familiarity has no effect.</td>
<td>(1) Moore and Olshavsky 1989</td>
</tr>
<tr>
<td>Same results with purchase intention and perceived value of the discount as dependent variables.</td>
<td>(2) Gupta and Cooper 1992</td>
</tr>
<tr>
<td>Beyond a certain level, the perceived value of a price cut is higher when this type of discount is rare.</td>
<td>(3) Lichtenstein and Bearden 1989</td>
</tr>
<tr>
<td>The perceived value of a price reduction is higher for national brands and non-discount stores.</td>
<td>(4) Biswas and Blair 1991</td>
</tr>
<tr>
<td>Perceived quality of a brand is hampered by definitive price reductions but not by coupons.</td>
<td>(5) Schindler 1992</td>
</tr>
<tr>
<td>Perceived value of a price-cut and attitude towards the promotion are better if consumers think that manufacturers want to attract customers rather than if they think that it is to get rid of unwanted goods.</td>
<td>(6) Lichtenstein and Bearden 1989</td>
</tr>
</tbody>
</table>
Nevertheless, the long-term effects of repeated price promotions are worth investigating (e.g. how long before the effects of price promotions wear-off and consumers decide to accelerate or decelerate purchases?). Moreover, attributions appear to moderate the effects of price promotions, but this area needs further research. The abundant literature on cognitive psychology (Hilton 1991) could be used to differentiate causal attributions (“Why did it happen?”) from attributions linked to the intrinsic propensity of a brand to be on sale (“Why is this brand often on sale?”). Other studies are necessary to examine the impact of prior beliefs, and not only information, related to attributions. Finally, no one has studied the impact of attributions on mood, attitude towards the brand, or towards the promotion. One particularly interesting case is that of sweepstakes which announce a certain gain of, for most consumers, a deceptive prize. What are the effects of attributions concerning the reasons for the loss (e.g. bad luck or dishonesty) on mood and attitude towards the sponsor?

Attitudinal, Cognitive and Behavioural Sales Promotion Models

Many theories have been employed to explain why consumers are sensitive to deals beyond the price reduction explanations. These theories postulate different levels of information processing intensity and, thus, operate at the comprehensive attitudinal, purely cognitive or even behavioural levels of analysis.

The Theory of Reasoned Action and the Concept of Deal Proneness

The theory of reasoned action is an expectancy-value model distinctive for its reference to rationality (Fishbein and Ajzen 1975). It posits that attitude stems from personal beliefs, while social pressures form subjective (perceived) norms. Attitude and subjective norms are then at the origin of behavioural intentions. In application to coupon usage, Shimp and Kavas (1984) measured beliefs of the buyer and her husband about the costs and benefits of coupons. Overall, the perceived economies and the smart-shopper feelings attributed to coupon usage are the variables which correlate most with attitude towards coupons and self-declared behaviour (see also Tat 1994). Shimp and Kavas’ study is one of the few to acknowledge the influence of familial pressure, even if spouse beliefs were found to be very inter-correlated. Finally, Bagozzi et al. (1992) found that the influence of personal beliefs is greater among action-oriented individuals, and, conversely, that subjective norms are critical for state-oriented people. By incorporating this personality trait, as well as prior experiences with coupons, the percentage of explained variance reaches 58%, 10 points above Shimp and Kavas’ model.

Among the literature on the influence of sales promotions on attitude, there is a special case to be made for the concept of deal-proneness. Deal-proneness is an attitudinal construct caused by beliefs and attitude toward promotions. It has been measured by Frolof (1993) at the level of self-declared behaviours (“I am influenced by promotions at the time of purchase”). Her exploratory research suggests, in addition, distinguishing attitude and deal-proneness vis-à-vis preferred brands from attitude and deal-proneness vis-à-vis any brand. Further, Lichtenstein et al. (1990)
distinguish deal-proneness from coupon-proneness. The former stems from what Thaler (1983) calls acquisition utility (pleasure due to the utility of the product itself relative to the price paid), and the latter from transaction utility (pleasure due to paying less than the reference price). Deal-prone consumers are experts who have well-defined internal reference points and who declare using coupons only if they increase the price-quality ratio. Coupon-prone consumers pay attention to prices and features, have a lower income, and declare using coupons to pay less than other consumers (Lichtenstein et al. 1991; Lichtenstein et al. 1993). It is interesting to note that these two groups use an equal number of coupons.

Cognitive Models of Light Information Processing

Historically, attitude models were developed for highly involved situations that bring about intensive information processing, whereas in consumer goods, most decisions are rapid and involve little processing (Olshavsky and Granbois 1979). Inman et al. (1990) used Petty and Cacioppo's Elaboration Likelihood Model (ELM) (1986) to reconcile conflicting evidence regarding the processing of promotional information. The ELM acknowledges that situational and individual factors can diminish the likelihood of information elaboration and divert one's attention away from central elements. Their study showed that high need-for-cognition consumers (Capioppo et al. 1984) process all the information of promotional messages and do not react to promotional signals (e.g., displays) which are not accompanied by a price-cut. In contrast, low need-for-cognition consumers are influenced by the mere announcement of a sale: they buy the product without checking the price. Moreover, there is much evidence to suggest that there are circumstances in which promotions may serve as cues (Moriarty 1983; Currim and Schneider 1991; Schneider and Currim 1991; Schindler 1992; Cheong 1993). Besides, the coefficient of a dummy variable indicating the presence of a promotion is always significant in logit-type models of choice.

The notion of schema is a recent alternative to the ELM model. According to Norman and Bobrow (1975), a schema is "a framework for tying together the information about a given concept or event with specifications about the types of inter-relations and restrictions upon the ways things fit together". A schema is often based on past experiences and encoded as a prototype that will be compared to the actual situation, sometimes even mindlessly (Langer et al. 1978; Pinson 1986). According to Diamond (1990), there are three schemata associated with promotions. The simplest are non-algebraic heuristics (semantic statements such as "A promotion is a gain"), then perceptual processing (e.g., cheap/expensive categorization) and, finally, complex schemata using cognitive algebra (e.g., multi-attribute models). Finally, scripts are schemata which also involve behavioural sequences (Shank and Abelson 1975). Henderson (1988) argues that some consumers use the script "Buy the brand for which I have a coupon", and other consumers use the more complex purchase strategy "Buy the cheapest brand", but these hypotheses were not confirmed. The model of Gardner and Strang (1984) associated the two routes to promotional influence: scripts and attitude change. It has not yet been tested.
Behavioural Learning Theories

Sales promotions create changes in behaviours thanks to tangible stimuli. This phenomenon fits well into the behavioural learning paradigm (Rotschild and Gaidis 1981; Gaidis and Cross 1987; Rotschild 1987; Blattberg and Neslin 1990). Operant conditioning theory argues that reinforced behaviours tend to be repeated more often than other behaviours. In this view, promotions are rewards that reinforce the purchase of a brand if both the reward and the behaviour to be reinforced are closely and regularly linked. When conditioning is effective, its effects last even after the reward has ended. Moreover, behavioural learning theory distinguishes primary reinforcers which have intrinsic utility (product usage) from secondary reinforcers which have none (coupons). This theory states that promotion usage can replace brand usage as the reinforced (“learned”) behaviour if promotions become the primary reinforcers. This phenomenon is likely to take place when there are no perceived differences between brands, when it is a mature brand and when promotions are pervasive. In other cases, brand usage reinforces brand purchase. Finally, immediate reinforcement, continuous and then random, produces the most durable effects.

Synthesis and Areas for Future Research

These reviewed theories offer various explanations as to the effectiveness of promotions beyond price reduction. Ten years after Sawyer and Dickson (1984), it can still be said that they are reasonably complementary. On one hand is the robust multi-attribute model of attitude change suited to extensive information processing situations. It could be extended to other involved promotions like loyalty programmes. One important and not yet resolved issue is the postulate of cognitive–evaluative–behavioural sequence. Knowing that the costs of clipping coupons are perceived as being lower for more frequent users of coupons (Jolson et al. 1987; Tat 1994) does not indicate whether beliefs cause behaviours or the reverse. Generally speaking, our knowledge of consumers’ beliefs about promotions and promoted products is very poor. Further research is needed to investigate their beliefs about the amount of effort necessary, the sincerity of the sponsor and his motivations (Alpert 1993; Froloff 1993; Tat 1994). Turning to deal-proneness, future research could link the two types of deal-proneness with each consumer’s conception of value (Zeithaml 1988). However, by articulating the distinction between coupon-proneness and value-consciousness, attitude research has demonstrated the limits of its earlier postulates of a rational consumer.

On the other hand, scholars have proposed the notions of signal, schema and script, as well as behavioural learning theories that are suited to succinct information processing situations. These models deserve future research. Specifically, we have medium involvement situations in mind, where promotional signals can serve to attract consumers’ attention, which would in turn result in the brand entering the consideration set and its information being centrally processed. Besides, consumer behaviour theories adapted to routine purchases like the Hoyer Purchasing Tactic Model (1984) would benefit from explicit account of sales promotions. Finally, behavioural theories, and especially recent ones (Shimp 1992), deserve further
attention since they have highlighted one of the major long-term issues of sales promotions: do they teach people to buy products on sale?

The Economic Approach: Stylized Theoretical Models

"Stylized" theoretical modelling is the emerging line of research in Marketing Science (Eliashberg and Lilien 1993). The objective of these models is to help marketers understand the market mechanism by concentrating on some of the multiple forces that rule it (Moorthy 1993; Schmittlein 1994). They are based on normative assumptions, "stylized" for pedagogical purposes, and aimed at capturing the essence of the relations between firms and markets. Prescriptions concerning the optimal behaviour of firms are then mathematically derived. Generally speaking, theoretical models explain when and why it is in the best interest of firms to promote rather than to lower prices. The first line of research views promotions as long-term equilibrated discrimination strategies (Gijsbrechts 1993). The interest of the second line of research is in the role of promotions in competitive games.

Static Models

Sales promotions can take advantage of consumer heterogeneity in three ways (Table 6). The first way is for retailers to use this heterogeneity to reduce inventory costs or the opportunity costs entailed by too frequent sales. The second consists in only offering coupons to consumers who have a low opportunity cost of time and high demand. By doing this, monopolistic firms can reap high profits on those consumers who don't want to spend time and effort clipping coupons and who are less price-sensitive. This promotion-as-a-discriminating-tool view is original because it argues that promotions can be profitable long-term strategies even if they do not convert new buyers into loyal ones. They are simply a way of charging prices adapted to the demand of the different segments of consumers. Lastly, promotions can be a way to test the demand for a temporary product, such as clothes, by reducing prices as soon as those consumers willing to pay higher prices have bought.

Other researchers have investigated the presence of cross-promotional asymmetries. The model of Blattberg and Wisniewski (1989) links utility to quality, price and willingness to pay for quality (which results in national brand loyalty). It assumes that markets are composed of three levels within which quality is similar: national brands, regional brands and generics. If willingness to pay for quality has a bi-modal distribution, promoted brands attract buyers of brands belonging to the same level or to an inferior level but have no effects on buyers of superior-level brands. This explains why private labels don't tend to promote. In addition, it nullifies the comparison to a prisoner's dilemma because neither party loses as much if they don't co-operate (i.e. if they promote). Finally, Sivakumar and Raj (1993) show that national brand's promotions are the only promotions to attract new buyers to the category, which largely explains the asymmetric pattern of brand competition discovered by Blattberg and Wisniewski.
Table 6. Taking advantage of consumer heterogeneity with promotions

<table>
<thead>
<tr>
<th>Mechanisms</th>
<th>Operationalizations</th>
<th>Empirical evidences</th>
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<tbody>
<tr>
<td>Cost reduction</td>
<td>(1) Transfer of storage costs to the consumers who have cheaper storage costs than the retailer (Blattberg et al. 1981).</td>
<td>(1) Non-perishable products have greater promotional elasticity (Litvack et al. 1985).</td>
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<tr>
<td></td>
<td>(2) Improving the efficiency of price promotions through pseudo price-cuts if there are enough light information processors among consumers.</td>
<td>(2) Simulation in a university retail outlet. The recommended promotional policy yields higher returns (Inman and McAlister 1991).</td>
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<tr>
<td>Sales promotions cost less than everyday-low-price policy.</td>
<td>(3) People with high demand have higher opportunity costs of time. Companies can use the following costs to discriminate their customers:</td>
<td></td>
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<td></td>
<td>— Cost of collecting coupons (Narasimhan 1984; Vilcassim and Wittink 1987);</td>
<td>(3) Coupons are offered on expensive products (Vilcassim and Wittink 1987). Consistent with the discrimination hypothesis, promotions are often random, of similar magnitude and, above all, purchase probabilities don’t change after a promotional purchase (Tellis 1989).</td>
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<td></td>
<td>— Transaction costs of coupons (Gerstner and Holtausen 1986);</td>
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<td></td>
<td>— Storing promoted products (Jeuland and Narasimhan 1985).</td>
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<tr>
<td>Consumer price-discrimination</td>
<td>(4) If they don’t known how to discriminate consumers, firms can begin by charging a high price and then reduce it in accordance with market size, competition and costs of the information search.</td>
<td>(4) Anecdotal evidence of markets where prices are set very high but promoted soon because competition is weak, suggests that consumers are numerous and information search is expensive.</td>
</tr>
<tr>
<td>Price promotions permit to charge prices adapted to the level of demand of each consumer segment, which is more profitable.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Testing the demand level</td>
<td>(1) Non-perishable products have greater promotional elasticity (Litvack et al. 1985).</td>
<td></td>
</tr>
<tr>
<td>Sales promotions can help assess an unknown demand.</td>
<td>(2) Simulation in a university retail outlet. The recommended promotional policy yields higher returns (Inman and McAlister 1991).</td>
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</table>

Dynamic Models

One recent contribution of theoretical stylized models to the study of price promotions has been the incorporation of time. Kahn and Raju (1991) studied the impact of promotion frequency on brand switching. Their model shows that, for a small brand, increasing the frequency of price reductions raises the share of purchase among inert consumers. Krishna (1992) models the strategic behaviour of consumers over an infinite horizon. She predicts that, in product categories with frequent promotions and little brand loyalty, consumers know when the next promotion will occur. Consequently, consumers anticipate promotions and stockpile less. Assunção and Meyer (1990) derive optimal stockpiling strategies from a theoretical model, although they show that actual consumers' stockpiling strategies are systematically biased as predicted by the Prospect theory (Meyer and Assunção 1990). Compared to theoretical norms, consumers tend to consistently buy the same quantities when prices are stable, to buy too much when prices decrease and not enough when they increase. Lastly, Krishna (1994) found in a computerized experiment that expected prices directly influence how much consumers stockpile. When they expect a promotion tomorrow, they either buy less today or buy a small quantity of a less-preferred brand on promotion.

Other research has demonstrated that promotions can be optimal in infinite competitive games. Narasimhan (1988) shows that, in the case of a duopoly, the
existence of a segment of loyal consumers conditions the optimal pricing strategy. The rationale is that price-cuts can help compete in the price-sensitive segment, while not decreasing the margin made with loyal consumers by too much. If these two segments exist, national brands should promote randomly to prevent competitors from anticipating their promotions and from following them. Optimal frequency and amount depend, respectively, on the number and the strength of preferences of non-loyal buyers (Villas-Boas 1993). Raju et al. (1990) widen the preceding model to the study of oligopoly and empirically verify that there are many more promotions in product categories with many brands and where brand loyalty is weak. Their model argues that bigger brands lose more by promoting because they have, proportionally, a greater number of loyal consumers. However, Rao (1991) shows that poor quality private labels should not promote since they cannot attract many quality-sensitive consumers. Lastly, Lal (1990a) shows that the opportunity costs of promotions can be reduced by alternating them with other national brands. This way, private labels face the competition from one or the other national brands each week. This author shows that this de facto co-operation can be achieved without explicit collusion between the two national brands. The same scholar (Lal 1990b) replicates these results when retailer's objectives (i.e. to obtain the largest trade promotions and to pass-through the smallest part), are incorporated.

Synthesis and Areas for Future Research

This research tradition has been successful in opening new areas for research. Among those issues that were not reviewed here, let us cite consumer welfare (Levedahl 1988; Gerstner and Hess 1990), advertising-promotion trade-off (Sethuraman and Tellis 1991) and the modelling of retailers' behaviour (Sethuraman and Tellis 1993). This research tradition has nevertheless come under fierce criticism for its lack of systematic empirical testing (Schmittlein 1994). Future studies in this research tradition should strive to formulate testable predictions, and should also try to relax the assumptions that go against the most documented results. For instance, the assumption of stationary markets, of perfect information or even of distinct market segments is very questionable. This research tradition must take into account the empirical generalizations that we are aware of (Blattberg et al. 1994) to avoid being called "armchair economists" by scholars from other research traditions.

Conclusion

This literature review suffers from two major limitations. The first is not to have incorporated all the working papers and professional works completed during the past 10 years. This restriction has been partially compensated by citing the most recent working papers. The second limitation has to do with the organization by research tradition which cannot satisfactorily account for the substantial overlap of the various research traditions. Neither does it show how some studies originate from a controversy about a specific issue rather than capitalize on a research tradition's previous results.
Nevertheless, four important points may be made:
— There is ample room for research on the following sales promotions techniques: twin packs, three for the price of two, more product for the same price, premiums, games and, generally, on all the promotional techniques little used in the United States but common in Europe. These studies would be particularly welcomed since these promotions have important implications in little researched areas like the impact of promotions on brand equity, usage, and manufacturer–retailer power relations.
— The consumer-oriented research tradition will no longer continue with the methods exposed here. It is presently being replaced by logit models of individual choice. These models are both more precise and richer because they use single-source scanner panel data; i.e. data combining individual (purchase history) and causal (price, promotions) information (for review, see Chandon 1994b).
— The theory-oriented research tradition is very unbalanced. One one hand, price perception theories have been thoroughly tested but lack external validity. On the other hand, the many very interesting attitudinal, cognitive and behavioural theories lack empirical replications.
— The theoretical economic models have made major contributions to research on sales promotion. It is the only research tradition to have investigated sales promotions from the company’s side, an area where pre-conceived notions proliferate. Three widespread assumptions, all worthy of investigations are: (a) the restriction of sales to short-term weapons harmful over the long term; (b) the view of purchase acceleration as a worry; and (c) the assumption that promotions are profitable. Ironically, research on sales promotions exhibits one of the most criticized bias of sales promotion programmes: their reliance on sales as the ultimate measure of the performance of sales promotions.

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