



Efficient Marketing Communication: Helping the Customer Learn

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The author proposes that firms should treat customers as partners when they make decisions about marketing communication. The proposal is defended by a claim that for many firms this would help maximize long-term profits. This is supported on two grounds: First, with competition or repeated trade, it may be roughly consistent with literal profit maximization; and second, compared with profit maximization, it is more operational and less conducive to "short-termism."

Efficient Marketing Communication: Helping the Customer Learn

It has become broadly accepted that firms should be "customer-oriented." I propose here that this notion should be extended to marketing communication, such that firms treat customers as partners when communication plans are designed. The argument is an application of the strong form of my "efficiency criterion" (Wernerfelt 1994a), and I suggest that adoption of efficient communication plans for most firms, in most circumstances, will help maximize long-term profits. The point of the proposal is that it only rarely pays off to make it unnecessarily costly, or difficult, for customers to learn.

To give the reader a flavor of the implications of such a pervasive customer orientation, I start with a frank discussion of some examples:

1. If firms can make it cheaper for customers to acquire information, they should do so as long as their own costs do not go up by a large amount. For example, many information services, such as 800 numbers, impose wait times on the average consumer. The question raised by the efficiency criterion is whether the firm can reduce the average wait at lower costs than the sum of customers' marginal costs of waiting.
2. If a face-to-face meeting is necessary to transmit critical information, traveling should be done by the party for whom it is cheapest. An application is the retail auto market in which sellers (typically) come to buyers in Japan, whereas buyers usually come to sellers in the United States. It would be interesting to see if this can be justified on efficiency grounds.
3. Consumers should be informed about more, rather than less, important attributes. This criterion suggests that it may be short-sighted for food sellers to suppress information, such as about calories and the percentages of various ingredients. The counterargument is that consumers believe (want to believe)

that these values are much more attractive than they in fact are. Thus, if a seller of cranberry juice labels "X% fruit content," consumers would assume other brands to be better and not reward the "honesty." I concede this point. On the other hand, if the attribute information is very salient, it is likely that dissemination in the news media can adjust expectations to the point where it pays to inform consumers about the attribute. For example, some fast-food establishments are now making fat and calorie information readily available, presumably because the public's uninformed expectations have become very unfavorable.

4. Information should not be communicated in a form that renders it unnecessarily difficult to absorb. If possible, then, non-technical language and familiar references should be used. The counterargument is that firms sometimes gain because consumers impute positive value to attributes they do not understand (Carpenter, Glazer, and Nakamoto 1994). I again concede this, but I do not believe that such tactics are sustainable on a large scale. If too many firms do this too often, imputations will change.

As is evident from these examples, one cannot say that the maximization of joint firm-customer surplus is equivalent to the maximization of profits, because the information may be less favorable than prior beliefs such that an informed customer may decide *not* to buy, whereas some uninformed customers may decide *to* buy. Thus, it may not be in the firm's interest to help the customer avoid mistakes. I will not deny this, but I believe that it is rare and it opens the door for competitors and leads customers to mistrust the company. Accordingly, with potential competitors and possible repeated trade, major deviations from efficiency will not be profit maximizing. A more fundamental advantage of the partnership, or efficiency, criterion is that it is much more operational and less conducive to "short-termism" than is an explicit profit-maximization criterion. Therefore, by attempting to maximize the sum of profits and customer surplus, many firms in the long run will do better than they would if they tried to maximize profits.

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I first outline the theoretical background for the argument and then go on to define and defend efficient communication plans from a normative perspective. I conclude with some implications for efficient use of different communication channels and a brief discussion.

BACKGROUND

If a buyer-seller pair can negotiate and contract costlessly and perfectly, I expect them to execute that set of trades that gives them highest partnership (team) payoffs.¹ In reality, of course, negotiation is time-consuming and perfect contracts cannot be written, even at high cost. So the statement in the first sentence may seem purely academic. However, if the parties trade repeatedly, the team outcome may be approached; in such cases the cost of once-and-for-all negotiation can be spread over many trades and the parties can benefit from (costless) implicit contracts. Alternatively, if several firms compete, negotiation and contracting costs may be reduced by market discipline.

Elsewhere, I have suggested that firms use the efficiency (or partnership) criterion when making decisions about product design, the allocation of manufacturing tasks, and the effort expended in the exchange of information (Wernerfelt 1994a). The criterion suggests that parties in vertical trading relationships allocate their efforts toward manufacturing and information exchange such that no other arrangement makes them all better off. The strong form of the criterion suggests that joint payoffs should be maximized.

There are, of course, important measurement problems associated with the costs and benefits of information. Nevertheless, I believe that things, in fact, are moving in the direction suggested by the efficiency criterion. In product design, there is a growing emphasis on "listening to the customer" and trading off customer benefits and manufacturer costs of alternative designs (Griffin and Hauser 1993). In the organization of production processes, it is a central tenet in the "reengineering" movement that a task should be performed by the buyer if he or she can do it cheaper than the seller, and vice versa (Hammer 1990). A similar phenomenon from another area is that many Japanese firms consider both stockholders and employees residual claimants (Milgrom and Roberts 1992, p. 41).

For many reasons, things are different in the area of information exchange. First, there is a long tradition that stresses the persuasive nature of the firm's communication with its customers (e.g., Assael 1993, p. 559; Kotler 1994, p. 598). This contrasts with an efficiency criterion that argues that a customer, once he or she has experienced regret, will be harder to persuade, such that future trades will be ever more costly and eventually lost. Thus, the contention is that persuasion is a short-term solution and that it is better to help customers assess whether a product is a good choice for them.

Second, unlike trade in goods, the acquisition of information is an irreversible investment resulting in identical repetition being ruled out (except for forgetfulness).

Competition will force firms to compensate customers for information acquisition costs. In a monopoly, however, the efficiency criterion must be justified by appeal to repetition, and a firm must think of repeated communication of new pieces of information rather than repeated communication of the same information.

Third, much academic and practitioner thought in the area depicts the customer as somewhat irrational and perhaps sometimes easier to fool than help. In fact, much consumer research in behavioral decision theory appears to point out ways in which customers can be fooled. In contrast, applying the efficiency criterion to communication implies more rationality on the part of customers. Efficient information transmission requires rational decisions about information acquisitions. That is, prior to incurring the costs of getting and processing information, the customer must be able to assess the prior expected value of that information. If customers can be fooled again and again into making large brand-specific investments in information, it may be in a firm's interest to attempt to exploit the situation.

EFFICIENT COMMUNICATION

Consider an industry in which a firm offers a set of brands to a number of customers with possibly heterogeneous tastes. For the sake of simplicity, assume that prices are fixed and that some customers are less than perfectly informed about the brands. The firm could communicate by applying a communication plan consisting of, for example, a sales force of a given size, several retail showrooms, some catalogs, and a set of specific television advertisements. Faced with such a communication plan, each customer develops a search plan, which can be seen as an adaptive decision rule. For a given set of beliefs about the brands, it specifies which communication should be received next, or, alternatively, which brand should be purchased. Thus, the search plan may lead the customer first to seek out and process a specific message and then, depending on what was learned, to proceed to either another message or a purchase decision. A customer will prefer that search plan that maximizes his or her expected surplus, given his or her initial beliefs and the communication plans of the firms. Similarly, the firm will prefer a communication plan that maximizes expected profits, given the beliefs and search plans of customers. A pair consisting of a set of search plans and a communication plan is efficient if no other pair can increase the sum of expected firm profits and expected customer surplus. A communication plan is efficient if there exists a set of search plans such that the pair is efficient. This implies that efficient communication plans induce the efficient division of labor, between buyers acquiring information and sellers supplying it.

In principle, any player can initiate a shift that enhances joint payoffs. However, as is reflected in the order of moves, I here think of the firm as the principal designer of the game.² Thus, if a shift involves two consumers, I still think of the firm as proposing it and possibly profiting from the idea. This enables me to think of consumers as more passive and with little market power.

¹This classical argument is made by many writers, for example, Milgrom and Roberts (1992, p. 24).

²Notwithstanding Gautschi and Sabavala (1995).

It takes a bit of an apparatus to define the concept of efficient communication plans precisely, because the parties are imagined to agree on functions of unknown information, rather than on what amounts to an exchange of that information. Because this is a central concept, I will make it precise, although only in a static context without externalities (see the Appendix).

It could be believed that the efficiency criterion applies only to a narrow subset of marketing communication. I disagree. The content of the communication can be interpreted broadly: It can be information about attributes of the brand, attempts to associate the brand with things that make processing and recall cheap or enjoyable (pretty women in beer commercials), or attempts to endow consumption of the brand with signaling value (Wernerfelt 1990). Customer demand for these three types of messages differs among categories and customers. If the purchase decision is "risky," the customer should be motivated to acquire information to reduce the risk. If the purchase decision is not risky, the customer should be more interested in messages that reduce the costs of processing or recalling other information about the brand. Although this is a different angle from that used in most contemporary research on consumer behavior, the two angles need not be inconsistent. For example, consider a group of consumers who, in the language of the consumer behavior angle, are uninvolved or brand loyal. Such consumers are generally thought to be relatively more receptive to noninformative advertising (Krugman 1965; Leclerc and Little 1994; Petty, Cacioppo, and Shumann 1983). However, this is consistent with the point made previously, that for low-risk purchase decision, customers will have relatively stronger demand for messages that facilitate recall and use of information.

The model is also consistent with firms having awareness objectives for communication. The argument would go as follows: Customers decide whether to pay attention to messages on the basis of the cost thereof and the expected net present value of receiving the message. Once the message is received, there presumably are costs of storing and using it (Hauser and Wernerfelt 1990) and these would play a role in the "decision" about whether to remain aware.

From a theoretical perspective the model of customers used here is a trivial, albeit important, generalization of the "cognitive" or "rational" model of learning (Assael 1987, p. 90; Hagerty and Aaker 1984; Hauser, Urban, and Weinberg 1993; Johnson and Payne 1985; Meyer 1982; Ratchford 1982). As in that model, I assume that there are costs of using (acquiring, processing, and recalling) information (Bettman 1979; Shugan 1980) and that customers make intelligent decisions about which of these costs to incur. The customers in the present model will behave in many of the same ways as they will in standard cognitive learning models. For example, when choosing between two types of information, they *ceteris paribus* will first select that about which they are most uncertain (Simonson, Huber, and Payne 1988). The present model is more general because, as noted previously, it allows for information whose only function is to reduce the cost of using other information. This generalization is trivial because with optimal use of this "process productivity" information, it is still reasonable to assume

that the risk of the purchase decision is a decreasing function of the costs incurred in getting and using attribute information. Similarly, with optimal use of attribute information, the risk of the purchase decision should be a decreasing function of the amount of "processing productivity" information received.

In conclusion, I do not believe that it can be argued that the efficiency criterion is "narrow" in the sense that some types of communication are not considered. As long as the communication may have some net present value for the customer, it can be incorporated.

NORMATIVE APPEAL

It should be clear that maximization of profits generally will yield different decisions than does maximization of profits plus customer surplus. However, if play is repeated, I know from the (game theory) "folk theorem" that several decisions may be profit maximizing, depending on the decisions of the players. In particular, if play is repeated with sufficiently high frequency, it may be that the efficient decisions can be profit maximizing.³ Furthermore, it is known from the "fundamental theorems" of welfare economics that this is more likely to be the case when the market is competitive.⁴ These two forces can work in the context of marketing communication. The following example is illustrative.

Assume that the firm is a monopolist facing a unit mass of customers with unknown reservation prices. Specifically, the reservation prices are described by a uniform distribution on the unit interval. With no further information, individual customers do not know their reservation prices. For purposes of this example, we set variable costs of production equal to $2/5$.

Suppose first that no further information is provided, such that the customers must make the purchase decision on the basis of the expected reservation price. In this case the monopolist charges the expected value $1/2$, sells to all the customers, and earns profits $1/2 - 2/5 = 1/10$. Expected customer surplus is zero, so the sum of profits and surplus is $1/10$.

Suppose next that the firm, at no cost to itself, can communicate information to the customers, such that they, without search or processing costs, can identify their reservation prices. In this case, demand at price p is $(1 - p)$, and the optimal price maximizes $(1 - p)(p - 2/5)$. This yields a price of $7/10$, and profits equal $9/100$. Accordingly, the firm fares better without communication, essentially because communication would enable some customers to learn that they should not buy, whereas without communication they would all buy (a phenomenon first discussed by Zettelmeyer 1995). On the other hand, the customers do better in this case. Expected customer surplus equals

³The folk theorem says, roughly, that any outcome that pays each player at least his or her outside option can be sustained in an equilibrium of a repeated game. Thus, this includes efficient outcomes (see, e.g., Fudenberg and Tirole 1991, ch. 5).

⁴The fundamental theorems say, roughly, that in competitive economies, any efficient outcome can be sustained in some equilibrium and, conversely, that any equilibrium is Pareto efficient (see, e.g., Varian 1984, p. 200).

$$\int_{7/10}^1 (u - 7/10)du = 9/200,$$

and the sum of profits and surplus is 27/200, bigger than with no communication. Therefore, in this example, profit maximization suggests a different communication plan than does the efficiency criterion.

Let us now introduce a second firm that sells a substitute product and also has costs 2/5. The reservation prices (u_2) for the second firm's product are also ex ante unknown to customers and described by a uniform distribution on the unit interval, though they are independent of the reservation prices (u_1) for the first firm's product.

If neither firm communicates, they will each sell to one-half the customers, and prices (p_1 and p_2) will equal costs. Therefore, the profits are zero, expected surplus is $1/2 - 2/5 = 1/10$, and the sum of profits and surplus remains 1/10. If one of the duopolists, say firm 1, communicates, the customers can learn their reservation prices for that firm's product and assume a reservation price of 1/2 for firm 2's product. Thus, firm 2 sells to p_1 customers at $p_2 = 1/2$ and to $(p_1 + 1/2 - p_2)$ customers at lower prices. Given this, $p_2 = 1/2$. Accordingly, in equilibrium the communicating duopolist assumes the role of the communicating monopolist mentioned previously; it will price at 7/10 and get 9/100 expected profit. Firm 2 sells to 7/10 customers and gets 7/100 in expected profit. Expected customer surplus is 9/200, and the sum of profits and surplus is 41/200. If both firms communicate, customers select the firm that offers the largest value of $u_i - p_i$ ($i = 1, 2$), and firm 1 will sell

$$\int_{p_2}^1 \int_{u_2 - p_2 + p_1}^1 du_1 du_2 + \int_0^{p_2} \int_{p_1}^1 du_1 du_2.$$

Maximizing profits demonstrates that equilibrium prices are $\sqrt{(14/5)} - 1$, profits per firm are $119/25 - (14/5)^{3/2} \sim 7\frac{1}{2}/100$, customer surplus is $2/3[\sqrt{(14/5)} - 1]^3 + 10/3 - 2\sqrt{(14/5)} \sim 19/200$, and the sum of profits and surplus is $\sim 49/200$. Therefore, in equilibrium both firms will communicate and the sum of profits and surplus is maximized.

As this example illustrates, competition forces firms to worry about customer surplus and implicitly weigh it in their decisions. The conflict between maximization of profit and maximization of profit plus surplus is likely to be smaller in more competitive markets.

Returning to the monopolist, assume that the firm will sell a sequence of different products or that the firm for some other reason needs to communicate repeatedly. Each customer may buy at most one of each. For "good" firms the reservation prices are iid according to some distribution H , and for "bad" firms they are according to a distribution (first-order stochastically) dominated by H . Suppose that customers do not know whether the firm is good or bad. In this case a good firm may want to communicate such that more customers can increase the probability with which they believe that it is good. This will help the firm's current and future sales, and it will help customers. A bad firm would be less inclined to communicate, but customers presumably would boycott a noncommunicating firm, thinking that it is bad. Thus, the bad firm may have to communicate as well. Such signaling and reputation phenomena, in the

presence of a sufficient amount of repeated trade, will lead to more efficient equilibria (see, e.g., Kreps and Wilson 1982). This is a general result. For an extremely large class of games, it can be demonstrated that repetition creates new (and more efficient) equilibria (see, e.g., Fudenberg and Tirole 1991, ch. 5).

To evaluate the robustness of this, it is useful to look at another example. Suppose that firms can produce either low- or high-quality products and that consumers rely on advertising for prepurchase information about quality. In a one-shot market, firms may produce low quality but advertise high quality, thus "fooling" consumers and profiting from it. However, if the firms bring out sequences of new products, this strategy is likely to be less profitable because consumer recall and word of mouth would work against it. It is true that the firms could collude to sell low quality at high prices. However, then there would be no point to ongoing misleading advertising, and even price collusion would break down if it is easy for other firms to enter the market. If there is some inflow of new consumers between periods, some firms could fool the new consumers (Montgomery and Wernerfelt 1992; Tellis and Wernerfelt 1987). Such firms presumably would be very short-lived, and the magnitude of the problem would be limited by the number of first-time buyers.

As the examples show, even if communication is not cooperative when players are myopic, it will likely be so if they look forward to many future interactions.⁵ The conflict between maximization of profit and maximization of profit plus surplus is likely to be smaller in markets with repeated needs for information.

Let me summarize and clarify my arguments about competition and repeated trade. First, many static models of oligopoly have the property that more competition leads to more efficient equilibria. However, this is not true of all such models, and there exist formulations for which competition has no effect on efficiency. On the other hand, almost all game theory models have the property that repetition creates more efficient equilibria. Thus, both factors push profit-maximizing (equilibrium) actions toward efficiency, though repetition is the more robust force.

Because competition and repeated trade are the norm rather than the exception, the case can be made that the efficiency criterion is often not in severe conflict with profit maximization. Nevertheless, it seems odd to propose a criterion known to be correct at most sometimes, instead of one, such as profit maximization, which is correct in all cases. There are two more fundamental arguments for the efficiency case. First, it may be helpful to recall that firms normally do not instruct all their employees to "maximize profits." This is presumably because "maximize satisfaction," "minimize costs," or "maximize sales" ultimately lead to higher profits than does "maximize profits." Part of this is admittedly due to incentive problems. If a salesperson influences sales in only one region, free-riding problems typically mean that it is difficult to reward him or her on the basis

⁵This could be extended to determine whether the firm should lie about its competitors' products. If firms that lie have other unattractive characteristics or if consumers do not like such firms, there should be equilibria without misleading comparative communication.

of sales less costs for the region, much less for the company. However, these concerns do not operate at the top management level, and even there, almost all companies have missions, goals, and objectives that are different from "profit maximization." In fact, most business schools offer courses in strategy that presumably would be superfluous if "maximizing profit" were a perfect guide to action.

Most objectives have the nature of decision rules. For example "maximizing quality" is a decision rule, the use of which is predicated on the beliefs that (1) higher quality generally leads to higher profits and (2) it is difficult to calculate the profit-maximizing action at each instant, whereas it is easy to determine if an action increases quality. For example, if a manufacturing worker wonders whether it pays to clean a dirty component, it is much easier to assess the cost or quality implications than the long-term profit implications. I contend that the efficiency objectives for communication have the same properties. That is, it is easy to figure out if a communication strategy helps the customer, whereas it is difficult to trace through how this will lead to greater long-term profit. The basic idea is, then, that profit maximization is difficult but that a near-optimal equivalent, maximization of partnership payoffs, is easier.

Second, I go further and suggest that attempts to maximize profit often fail in a predictable direction. Specifically, many writers have noted that large firms have a tendency to be too short-term oriented (behaving as if the discount rate were "too big") relative to stockholder value maximization (Porter 1992). There are many possible reasons (Becker 1962; Grout 1984; Myers 1989; Stein 1988, 1989; Weitzman 1980), and, most likely, several forces are at work. Firms have been using several different tools to counteract this myopia. For example, by basing rewards on customer satisfaction, they motivate employees to look beyond the current sale and invest in goodwill for repeat business (Hauser, Simester, and Wernerfelt 1994). The entire quality movement can be viewed as an attempt to build customer goodwill by focusing on the quality, as opposed to the cost, of a product. The efficiency perspective is just a characterization of this, and when applied to product and process design, it is not controversial. I argue that the efficiency perspective can be applied to communication with much the same results: helping to counteract a short-term bias in communication decisions. Therefore, by attempting to maximize partnership payoffs, most firms end up closer to maximizing long-term profits.

The British retailer Marks and Spencer (Marks and Spencer, Ltd. [A] 1979) is a possible example of this. The company has been profitable for more than one hundred years, and it was recently rated Britain's most admired company (The Economist 1991). Lord Marks (Chairman 1916-64) said that "In the course of the years we have built up three great assets: (1) The goodwill and confidence of the public, (2) The loyalty and direction of management and staff throughout the system, and (3) The confidence and cooperation of our suppliers." His successor Lord Sieff (1964-68) said that "The future of the business depends on the quick imaginative study of what the people need—not what the public can be persuaded to buy" (Marks and Spencer, Ltd. [A] 1979). The company puts its "St.

Michael's" name on most of its products, advertises only to introduce customers to new lines, and pioneered sell-by dating and refunds in Britain. Many courses in business strategy use this case to illustrate the building of long-term competitive advantage through relationships with buyers and suppliers (Collis and Montgomery 1996).

To make the implications of the partnership perspective a bit more concrete, I now discuss the properties of some commonly used communication channels.

IMPLICATIONS

Customers receive the communication if the *ex ante* expected benefits outweigh the costs, and they buy if their beliefs are sufficiently positive. Accordingly, a firm must worry about customers' expected benefits from receiving communication and customers' costs of doing so, as well as its own costs. However, if the firm engages in short-term profit maximization, it should not be concerned about customers' post-purchase utility. Therefore, all else being equal, the firm would want to avoid communication that enables some customers to learn that the product is less desirable for them. The central difference between efficient and myopically profit-maximizing communication strategies lies in the importance given to the customer's actual versus perceived benefits from receiving the communication.

To help make the concept of efficient communication concrete, I now compare a set of commonly used communication channels in terms of the parameters relevant for efficiency. Recognizing that the properties of these channels depend on the specific products, attributes, and customers involved, the following general characterizations of seven different channels of communication are offered.

Sales Force

Customer benefits. For products that are complicated relative to the consumers' expertise, a salesperson can often help determine whether a brand is suitable (Wernerfelt 1994b). Although there are issues of credibility, the sales force often can supply fairly good information. A particular advantage of the sales force is that the information can be *customized* to better address the needs of different segments.

Customer costs. The consumer's cost of "using" a salesperson consists of the time spent interacting plus the time taken, if any, to meet with the salesperson. Because the consumer normally can cut the interaction as short as desired, it is the premeeting time that is most critical. The choice between having a traveling sales force and asking the customers to travel depends on several factors. The relative cost of time is clearly important, as is the need for difficult-to-move equipment for demonstration. Finally, it is critical that the traveling sales force be able to identify potential customers with some degree of certainty. Otherwise they will spend too much time knocking on the wrong doors.

Firm costs. It is relatively expensive to communicate through a sales force. Communication is typically one-on-one, and there are few economies of scale. Nevertheless, this is the most widely used channel of communication.

Retail Showrooms⁶

Customer benefits. For products for which the consumer can evaluate a brand by seeing and/or handling it, a retail showroom provides such an opportunity. How beneficial this information is varies from product to product (compare such closely related products as apples and coconuts). In general, however, it is an advantage that the consumer to some extent can customize the information received by paying attention to different aspects of the product.

Customer costs. Travel cost, including time, is an important component of the consumer's cost. The average travel cost is determined by the geographical density of retailers. In turn, the choice of density depends on several factors. Once again, the relative cost of time matters, but the number of customers per store is also important. Because the cost of providing a retail showroom is virtually independent of the number of customers it serves, it is uneconomical to have too high a density.

Firm costs. Compared with catalogs, retail showrooms are expensive, even if no sales assistance is offered. Although there are big economies of scale in terms of customers per store, there are fewer economies of multistore operation. However, there are also *economies of scope* from having multiple brands and categories in the showroom, enabling the consumer to spread the travel costs over several products. It is not surprising that single-product retailers are rare.

Catalogs

Customer benefits. Catalogs provide less reliable and less customized information than do showroom retailers, because only a picture and a description, rather than the physical product, can be inspected. On the other hand, for some products, a knowledgeable consumer can get a lot of information from catalogs (e.g., computers).

Customer costs. One advantage of catalogs is that they are cheap to use. There is no travel required, and a customer can use them any time of the day (as opposed to sales assistants who come to the customer, or stores open fewer than 24 hours). However, it does take some concerted effort to sit down and look at a catalog (relative to television).

Firm costs. The major advantage of catalogs is that they are relatively cheap and there are economies of scale in producing them. It is important that the firm can identify customers with some precision. If only one out of x catalogs reaches a potential customer, the costs of communicating with that person is x times the cost per catalog. Thus, it is important to have a good mailing list.

Print Advertising

Customer benefits. Newsprint advertising performs much like catalogs in terms of the benefit of the information given.

Customer costs. Regarding the cost of using it, customers may be better off because the marginal cost of going from a newspaper article to an advertisement is smaller than that of going from the paper to a catalog.

Firm costs. Print advertising differs, however, in the extent to which it can be targeted, as well as in the costs of delivery. Whereas a catalog costs several cents to mail, the newsprint advertisement comes with the paper at very small marginal cost. However, the paper cannot be well targeted because it is used as a simultaneous vehicle for numerous advertisements.

Television Advertising

Customer benefits. Television advertising rarely provides good attribute information, but perhaps offers good processing information. Because the ads are expensive to produce, they are run many times, and the format must make this tolerable for the viewer. If too much information is given, this would not be the case. A related disadvantage is that the information cannot be customized, which further reduces its value.

Customer costs. On the other hand, the consumer's cost of using the information is low. Given that one is sitting in front of the television, is it worth it to exert energy and use the break for a glance at the paper, a conversation with a family member, or eating a cookie? Or should one just relax and watch the commercial?

Firm costs. A further advantage of television advertising is that it is subject to large economies of scale and, in fact, is cheap on a per-consumer basis.

Sampling by Mail

Customer benefits. For experience goods, sampling can provide the consumer with better information than can any other vehicle.

Customer costs. The consumer still incurs a cost to try the product instead of pursuing alternative activities. If the consumer elects not to try the product, no information can be communicated.

Firm costs. The cost of sampling depends critically on the nature of the product. It is larger if the product is durable, expensive, and useful only to a segment that is difficult to identify. Thus, sampling is often used in categories with items such as cereal, shampoo, and laundry detergent.

Word of Mouth

Word of mouth, understood as contact between past and potential customers, can provide beneficial information, often at negligible cost. Unfortunately, it is often difficult for the firm to provide past users with appropriate incentives to help inform others. I should also be clear that when such incentives are set up ("enroll a friend, get one month free"), the reliability of the information decreases.

Although these characterizations are general, for specific products, a firm can compare these communication channels in terms of informativeness and cost of acquisition, plus cost of supply. These characteristics will vary among consumers, attributes, and attribute levels. That is, consumers may absorb information differentially about different attributes, and it may be more difficult to communicate, for example, extreme attribute levels through some channels. Nevertheless it is not too difficult to make judgments about the characteristics of channels in a specific use.

⁶The characterization in this section is consistent with that of Betancourt and Gautschi (1988).

Given a specific purpose, a channel should be used only if no other channel can provide similar benefits at lower total (firm + customer) cost or higher benefits at similar total costs. Over time, some channels become obsolete because they fail this dominance criterion in all uses. For example, at current cost levels, developed countries see very little, if any, use of product demonstrations at marketplaces, even though this is common in some less developed countries (Elreedy 1992). Indeed, the marketplace institution itself is becoming less and less common, presumably because media advertising allows for "long distance" price comparisons (Wernerfelt 1994c).

CONCLUSION

Rather than summarize what this article is about, I highlight two things it is not about. First, it is not an article about marketing ethics. It may be true that maximization of profits plus customer surplus is a socially desirable criterion. However, the proposal does not rest on that; it rests on the claim that the efficiency criterion often will help the long-term (profit) performance of the firm. Second, I am not saying that it never pays off for firms to hide or misrepresent information to customers. There are clearly cases in which it pays not to "help the customer learn."⁷ I only maintain that in many cases it does not pay in the long run.

This article is written about communication with final customers. However, the efficiency criterion also applies to communication with other channel members (e.g., retailers). Recent trends toward increased information sharing between manufacturers and retailers could be a move in the direction of efficiency. The presumption of repeated interaction certainly applies to this case.

Finally, a word about the style of argument: It is difficult to write an article that maintains, essentially for algorithmic reasons, that an optimal criterion (profit maximization) should be replaced by a near-optimal but different criterion. I have chosen a theoretical route. Another possibility is to present anecdotal evidence about firms that have done well and have followed the proposal. This is the approach of the Harvard Business Review, and it has great persuasive powers, though it is subject to obvious sample selection bias. In my view, the best supporting evidence is that it is difficult to find examples of long-lived, successful firms that habitually mislead large groups of customers. This is, however, not enough, because "not misleading" could be different from "helping." Nevertheless, this suggests that aiming to "help the customer learn" is not in gross conflict with the long-term survival of the firm.

APPENDIX

Efficient Communication Plans

Consider a firm with n brands, indexed by j , where the vector a_j is the attribute levels of the j 'th brand, and $a = (a_1, \dots, a_n)$ is the vector of brands. We use $A_j(a_j)$ to denote the firm's communication plan for the j 'th brand given a_j

(and a), and α_j is a communication strategy that specifies a communication plan for each value of a_j . A communication plan specifies a set of channels along with a set of messages for each. Use $A_j^0(a_j)$ to denote the set of communication channels in $A_j(a_j)$, as well as their search and processing costs, but without the messages. Only the firm knows a , but because it moves first, each customer (i) knows $A_j^0(a_j)$ and his or her tastes and beliefs about a are summarized in his or her type t_i . Exposure to different channels of communication causes the customer to learn more about the brands, and h_i is used to denote the current state of i 's knowledge. If I define $A^0(a) = [A_1^0(a_1), A_2^0(a_2), \dots, A_n^0(a_n)]$, then i 's search plan $B_i(A^0(a), t_i, h_i)$ specifies which firms and channels to search as a function of i 's type and current information. Use β_i to denote i 's search strategy, specifying a search plan for each $(A^0(a), t_i, h_i)$. Neither the firm nor the customers know $t \equiv (t_1, t_2, \dots, t_m)$ and $h \equiv (h_1, h_2, \dots, h_m)$, but they all share distribution functions $T(t)$, $H(h)$ (except that i knows t_i, h_i exactly).⁸ Although the customers incur costs when they receive information, I assume that they can decide costlessly whether to receive a particular message. In doing so, I assume that they can make a (Bayesian) estimate of the expected net present value of receiving the information, including both the ability to make better purchase decisions and any reduction in the costs of processing or retaining other information. I assume that this estimate is unbiased given t_i, h_i . Within this notation, the firm and its customers agree to play strategies $\alpha = (\alpha_1, \dots, \alpha_n)$ and $\beta = (\beta_1, \dots, \beta_m)$ without revealing their private information (a for the firm, t_i, h_i for customer i). An α, β pair gives the firm an expected profit and each customer an expected surplus. Therefore, if a player is offered a side payment to shift from α, β to α', β' , he or she can evaluate whether it is worthwhile. A pair α, β is then efficient if no subset of players can pay the others to shift away from α, β .

If this is an infinitely repeated game with new products introduced each period, then the folk theorem says that there exist efficient equilibria. Under weak conditions—primarily sufficiently low interperiod discount rates—a version of the folk theorem holds for this game.

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⁷I have only hinted at the types of conditions under which this is true: monopoly power, infrequent needs for communication, turnover of consumers, and so on. A catalog could be developed of formal models with and without the property that communication is honest in equilibrium.

⁸For simplicity, I think of a one-segment model.

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⁶ **The Economics of Retail Firms**

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