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INFORMATION REGULATION (INCLUDING REGULATION OF ADVERTISING)

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Abstract

There are three major policy implications from the analysis of advertising regulation: advertising of truthful information should not be restricted by regulatory authorities; deception is most likely and most harmful in the case of 'credence' goods, and regulation is most useful (if it is useful at all) in the case of these goods; and laws or rules mandating disclosure (as opposed to laws banning explicit deception) are generally not needed, and often counterproductive. These points are applied in particular to regulation of price advertising, of health claims, and of advertising by attorneys. An important point of the analysis is that advertising can help markets move to new equilibria, and excess regulation can retard such movements, with consequent losses in consumer welfare. The role of the FTC is stressed throughout since this agency uses economic analysis in its regulation of advertising.

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1. Introduction

More than many areas of law and economics, the literature on regulation of information and deception has been a policy-oriented literature. This may be because much of the literature has been generated by economists and attorneys associated with the FTC who initiated their research as part of a policy-oriented analysis. It is also true that most of this literature is from a statutory and regulatory, rather than from a common law, setting; an exception is Jordan and Rubin (1979). In any event, in discussing this literature it will be useful to organize it in terms of policy related considerations.

Coase (1977) has argued that advertising ('commercial speech') deserves as much protection as any other form of speech. Singdahlsen (1991) makes a similar argument with respect to private competitor suits, although his reasoning would apply more generally. Of course, there are criminal and civil

penalties for explicit fraud, so the regulation that occurs is for information violations that do not rise to this level. Fraud, including deception, is discussed in Lott (1996). Moreover, it is useful in many cases for government to devise an appropriate metric, or scoring system, for measuring some attribute. The US Truth in Lending statute requires the use of the Annual Percentage Rate as the interest rate; the FTC 'R-value' rule requires the use of R values for measuring the effectiveness of insulation (see Beales, Craswell and Salop, 1981b). There is a tenable position that these should be the only functions of government regulation of information, and one with which I have much sympathy. However, it is not a position that policy makers have adopted. In what follows, I assume that there will be some regulation of advertising beyond this minimal level, and ask what efficient regulation would look like.

A general point is that if one believes that there is some market failure caused by a lack of information, then the preferred solution is to provide the missing information, rather than regulate the market directly. Schwartz and Wilde (1979) provide a theoretical basis for this result. Viscusi, Magat and Huber (1986) provide some evidence of consumers' ability to use information effectively in the context of safety regulation.

The literature has derived three major policy conclusions. First, advertising of truthful information should not be restricted by regulatory authorities. Second, deception is most likely and most harmful in the case of 'credence' goods, and regulation is most useful (if it is useful at all) in the case of these goods. Finally, laws or rules mandating disclosure (as opposed to laws banning explicit deception) are generally not needed, and often counterproductive.

In the next three sections, I discuss these issues: advertising and prices; regulation and types of goods; and mandated disclosure. The following two sections examine regulation of particular types of advertising that have been particularly well studied in the literature: health-related advertising and advertising of legal services. I then discuss remedies for deception. The economic literature on advertising is voluminous, and I mention only those parts which are relevant to issues of information regulation and deception. For some more general surveys see Comanor and Wilson (1979), McAuliffe (1987) and Ekelund and Saurman (1988). There have been several papers examining the implications of the economics of information for the regulation of deceptive advertising: Schwartz and Wilde (1979), Jordan and Rubin (1979), Beales, Craswell and Salop (1981b), Craswell (1985, 1991), Muris (1991), Rubin (1991). I rely heavily on these papers, and particularly on Rubin (1991) in what follows. A thorough summary of Supreme Court cases on the issue from an economic perspective is available in McChesney (1996).

First, I introduce some institutional background for the US. While the particular institutions discussed apply in the US, similar functions may be performed by other institutions in other countries. There are at least five

sources of regulation of advertising: The Federal Trade Commission (FTC); other federal agencies, such as the Food and Drug Administration (FDA); state attorneys general; industry self regulation, under the auspices of the National Advertising Review Board (NARB) or the National Advertising Division (NAD) of the Council of Better Business Bureaus (American Bar Association, 1989); and private civil litigation under the Lanham Act and other statutes of common law doctrines, including self-regulation by professional societies including local or state bar associations. Of all of these regulatory bodies, the FTC is now the only organization with responsibility for advertising regulation which explicitly considers economics in its decision making. Economists and attorneys associated with the FTC have contributed a significant share of the literature on advertising regulation. Of those cited here, these include at least: Altroge, Beales, Bond, Calfee, Calvani, Craswell, Ippolito, Jacobs, Keith (Masson), Langenfeld, Lynch, Kwoka, Mathios, McChesney, Muris, Murphy, Nash, Pappalardo, Pitofsky, Plummer, Porter, Rubin, Salop, Schneider, Shughart, and Steiner (see also Calvani, 1989). McChesney (1996) shows that the Supreme Court at one time used economic reasoning in its commercial speech jurisprudence, but has more recently moved away from this form of analysis.

One issue in regulating advertising is the question of the burden of proof: do regulators need to prove that an ad is deceptive, or must advertisers prove that it is true? In 1970, the FTC shifted the burden of proof. Before that time, the agency was required to prove deception. After 1970, an advertiser was required to have adequate 'substantiation' for an ad, meaning essentially that the advertiser had the burden of proof. Sauer and Leffler (1990) have shown that this change caused advertising to become more informative. On the other hand, Higgins and McChesney (1986) have shown that the main effect was to provide increased profits to large advertising agencies. Singdahlsen (1991) shows that this issue also arises under private litigation under the Lanham Act. This issue could benefit from further research.

2. Regulation of Price Advertising

'Deceptive pricing' is the advertising of reference prices which are not actually common transaction prices. Ads like 'Regularly \$100, now \$75' or '\$100 elsewhere, here \$75', where \$100 is the reference price and \$75 is the transactions price, are sometimes considered deceptive unless there have been 'enough' sales at the \$100 reference price, where enough can be defined in various ways. If a product usually sells for \$75 and the firm advertises it as being normally \$100, on sale for \$75, this ad will have no immediate benefits. That is, consumers are not given any new options, since \$75 is the normal price. This is why such ads are sometimes challenged as being deceptive.

Nonetheless, the process started by this ad will likely lead ultimately to lower prices for consumers. Price-conscious consumers will be drawn to this firm since it is stressing price in its ads, and all consumers will be given some information about the distribution of prices in the marketplace. Other firms will be forced to respond to the ad, and some will respond by actually lowering prices below their current level, in part because of the price competition started by the information conveyed in the ad. Ultimately, even the firm initially advertising a price of \$75 may be forced to sell for \$70 as price advertising spreads throughout the industry. On the other hand, if the ad is initially stopped as being 'deceptive' information about low prices is less likely to spread.

One general point which will recur in the analysis is that in analyzing advertising it is important to distinguish markets which are in equilibrium from those which are not. Schwartz and Wilde (1979) indicate that high price equilibria are unstable, so that advertising of better prices or terms can destroy a 'monopoly' equilibrium in an industry. For a market to be in disequilibrium implies some informational failure, and advertising, by providing information, can move markets towards equilibrium (Ekelund and Saurman, 1988). For example, a market may be in a disequilibrium with prices above the equilibrium level. Advertising may be an effective method of moving from the high-priced disequilibrium to the low-priced equilibrium. During the transition some ads may appear deceptive, but stopping these ads may have the effect of retarding the movement towards the new equilibrium. The general point is that there should be no restrictions on true advertising of prices.

Though the FTC does not generally bring cases involving deceptive pricing, the states often do. There are two types of allegations in such cases. One is that goods are not truly available at the advertised transaction price. A second claim is that prices are deceptive because consumers view price as a signal of quality and a fictitious reference price will mislead consumers into overestimating the quality of the good. I consider each type. Both are inconsistent with the Schwartz and Wilde (1979) analysis. There is also substantial empirical analysis of the benefits of advertising in reducing prices: see Benham (1972), Steiner (1973), Marvel (1976), Cady (1976), Farris and Albion (1980), Kwoka (1984) and Haas-Wilson (1986). Indeed, this research has been cited by the US Supreme Court in providing some protection to 'commercial speech' (that is, advertising).

Before proceeding, it is worth mentioning that in general the states do not do as good a job as the FTC in regulating advertising and deception (Beales and Muris, 1993; Muris, 1991). State regulators often bring cases for political reasons, and anyway do not have access to the large staff of the FTC. Moreover, Beales and Muris (1993) point out that having multiple regulators is likely to lead to more restriction of advertising than is appropriate.

2.1 Lack of Availability

This is best discussed through an example. There have been recent attempts in the US to regulate advertising of prices of airline tickets on the grounds that not 'enough' tickets have been available at advertised low fares. Cases such as this will likely have the ultimate effect of raising prices paid by consumers by reducing incentives of sellers to advertise, and thus offer, low prices. The ads are true but allegedly incomplete. However, discouraging these ads is likely to lead to higher prices. New reservation systems are quite sophisticated and enable airlines to track reservations on each flight on a real time basis. If a flight is not selling as well as expected, it is possible for the airline to offer more discounts on that flight. Thus, advertised low prices may be available only on an irregular basis. However, if consumers call and ask for such fares, travel agents will be able to determine which flights have low fares available. If advertising of these fares is outlawed, then airlines will have reduced incentives to offer such low rates.

2.2 Price as Information

The second argument regarding deceptive pricing is that consumers may be misled about quality if they perceive price as a signal of quality. Firms have been ordered to reduce advertising of sales and specials for this reason. There are two problems with cases based on this argument. First, there is no persuasive evidence that consumers are deceived by these ads. Second, there are large social costs from preventing this type of advertising, even if there is deception.

There is a substantial marketing literature examining the effects of price ads on consumer expectations of quality. This is not an appropriate place to summarize this literature, particularly as there are two recent summaries available. Both indicate that the results of the empirical literature examining this issue are at best inconclusive. Zethami (1988, p. 2) says that: 'research on these concepts [price, quality, and value] has provided few conclusive findings'. Similarly, Monroe and Krishnan (1985, p. 229) indicate that 'We have not been able to identify conceptually or empirically when buyers will infer product quality on the basis of price', and 'Considering previous studies individually, it is troubling to find such inconsistency in the results across studies'. Liefeld and Heslop (1985) and Blair and Landon (1981) find similar results. Thus, the evidence for the existence of consumer deception associated with price advertising is highly uncertain.

Even if some consumers are deceived by some comparative price advertising, the costs of limiting or forbidding such advertising are likely to be substantial. For example, consider the issue of the volume of sales which must occur at some price before it can be advertised as the 'regular' or 'normal' price, a common feature of attempts to regulate deceptive pricing. A firm might engage in predictable seasonal promotions, such as sales of tires or white sales

of household furnishings. If consumers are aware that such sales occur, they will refrain from buying except during the sale period. Thus, there will be relatively few units sold at 'regular' prices, even though these prices may be commonly available. In such circumstances, any attempt to limit advertising would have one of two effects. The firm might be forced to offer less frequent specials so that more items would be sold at the normal price, a course of action which would clearly harm consumers. Alternatively, it might cease advertising the regular price, but if, for example, this price is comparable to other prices in the market, then consumers would be denied valuable information. Similarly, if a firm errs in choosing a price, it might sell few items at that price, but restrictions on advertising of reference prices might make it difficult to inform customers of the change (see also Muris, 1991).

Moreover, even if consumers are deceived, there is no evidence that they are harmed. In one experimental study (Urbany, Bearden and Weilbaker, 1988) which did find consumers deceived by price ads, it was nonetheless found that there was no measurable injury even to those consumers who were deceived. The authors found that there is some effect of even of unrealistic exaggerated prices and that 'consumers can be skeptical of advertised sale offers but can still be influenced by them'. Nonetheless, even given this strong finding of deception, it was still determined that there is 'no significant difference between the ending bank balances' of subjects in groups with and without advertised reference prices. Bond and Murphy (1992) found that, averaged over all products, department stores using reference pricing had prices below the average of all competitors.

Interestingly, the authors attribute their results regarding deception in part to the fact that their subjects may have believed that it is illegal to exaggerate reference prices, and that the law is strictly enforced. This indicates that incomplete enforcement of deceptive pricing laws may actually be harmful. If consumers are normally skeptical of such ads, then they cause little if any injury. However, partial enforcement may lead consumers to overestimate the level of enforcement and relax their normal skepticism. This will be particularly likely if there is wide publicity given to the few enforcement efforts which do occur. This is itself likely, given the political orientation of many state enforcement officials.

Schmalensee (1978) presents a model where there may be losses to consumers from deceptive advertising, and where losses are greater as consumers believe ads. Here we argue the converse: losses may be greater as consumers believe that there is enforcement of rules against deception. Viscusi (1985) has found that consumers who believe that the government is enforcing safety standards at a greater level than is true may be 'lulled' into accepting greater risk, and it is plausible that similar results apply to advertising.

The basic problem with policies against deceptive pricing is that in general it is discount firms and firms stressing price which engage in these promotions.

As a result, any effort to limit such advertising is likely to lead to higher prices in the market. As Robert Pitofsky (1977, p. 688), an advocate of rigorous enforcement of consumer protection regulations, has argued, 'as long as consumers are accurately informed of the offering price, they can make sensible decisions, and the transactions may still be at prices lower than could be obtained at most other outlets in the marketing area'. Pitofsky views reduced enforcement of deceptive pricing claims as a gain for consumers. This is especially true since the possible gains from such enforcement are doubtful and speculative, while the costs are obvious and substantial.

3. Regulation and Types of Goods

A public authority charged with advertising regulation has a substantial amount of discretion. The nature of language is such that almost any claim could be interpreted as being deceptive or misleading under some readings, so that there are a large number of cases which could be brought (Craswell, 1985). Moreover, most cases brought by the government are settled through consent decrees (an agreement by the firm not to engage in the behavior in the future), so that there is little litigation over the issue of deception and the correctness of the agency's position is not tested in court. This may be because of the high reputation cost to a firm from being named as engaging in 'deception' (Peltzman, 1981). Mathios and Plummer (1989) generally find that firms which contest FTC orders end up with greater capital losses than firms which consent without a contest.

In this circumstance, it is important for regulatory officials to have a strong theoretical basis for bringing some cases and not others. Economics provides this theoretical basis. Economists argue that the basis for regulation should be the effect of claims on consumer welfare, and economics provides a framework for determining which types of ads are most likely to reduce consumer welfare.

Economic analysis indicates that there are three types of characteristics of goods with respect to advertising. These are called 'search', 'experience' and 'credence' characteristics. For the discussion of search and experience goods, see Nelson (1970, 1974). For credence goods, see Darby and Karni (1973). For applications to regulation of advertising, see Jordan and Rubin (1979), Saunders (1991) and Heald (1988). Search characteristics can be determined before the associated goods are purchased; an example is the color of a suit. Goods must be purchased and used before experience characteristics can be evaluated; an example is the cleansing power of a soap. For credence characteristics, the consumer may never know if the characteristic exists, even after purchase; an example is unnecessary repair to a TV (or unnecessary surgery), for the TV (or the body) will work afterwards even if the repair was unneeded.

Given this classification, some principles of regulation of advertising are instantly apparent. First, for search characteristics, there is no need for regulation. Consumers can immediately determine if the good possesses the advertised characteristic, and cannot be deceived. Moreover, since this is so and firms understand that it is so, there is no incentive for deceptive advertising with

respect to these characteristics. Transaction price is a search characteristic (that is, consumers will know the transaction price before purchase), which is why attempts to regulate advertising of transactions prices, discussed above, are unneeded and counterproductive. Second, for inexpensive goods, there is little cost to deception with respect to experience characteristics. The consumer will be deceived at most one time with respect to such goods, and therefore in general losses will be small. In Schmalensee (1978) there are losses to consumers from deceptively advertised experience goods, with losses increasing as consumers believe ads. Regulators should concentrate on relatively expensive experience goods and particularly on credence goods.

This analysis has additional implications. In particular, it points to the importance of reputation as a protection against deception and to the importance of advertising in generating a reputation (see Rubin, 1990, Chapter 8). Economists had long been puzzled by apparently noninformative advertising. Nelson (1974) showed that in certain circumstances the very existence of advertising would itself provide information. Advertising would only be worthwhile if it led to repeat sales for experience goods, but firms could expect repeat sales only if the product were of sufficiently high quality. Therefore, the willingness of a firm to spend money on advertising would itself provide information to the market that the firm expected repeat sales because it believed that its products were of high quality.

Problems of assuring or guaranteeing quality arise in many markets. The problem was first analyzed by George Akerlof in a famous article dealing with 'Lemons' (Akerlof, 1970). A lemons market is defined as a market which fails in that only low quality items are sold, even though consumers would be willing to pay high prices for high quality items. Three conditions are necessary to generate a lemons market. First, consumers must be unable to determine quality before purchase. Second, it is necessary that higher quality goods cost more to produce than lower quality. Finally, there cannot be a credible way for a firm to guarantee quality. If these three conditions are met, then the market mechanism may break down. This will happen because no firm will be able to convincingly promise high quality items. As a result consumers cannot be sure of obtaining the higher quality and so will not pay the higher price for quality items. Thus, even though consumers would be willing to pay a higher price in order to obtain quality, there will not be an effective way in which this desire can be satisfied. It is in this sense that the market may malfunction.

The lemons problem identified by Akerlof (1970) exists only if firms cannot convincingly communicate to consumers the level of quality in their products. If firms can produce high quality products and convince consumers that they are doing so, then the market failure disappears. There is a substantial literature devoted to the economics of information which demonstrates ways in which markets can and do solve the problem (see Ippolito, 1986). The implications of this literature for advertising regulation have not been fully explored.

Klein and Leffler (1981) explicitly related Nelson's discussion of advertising to Akerlof's lemons problem. They showed that the mechanism identified by Nelson and related mechanisms could be used to solve the lemons problem. Investments in nonsalvageable firm-specific capital (capital which would become worthless if the firm were to shut down) would serve to guarantee quality since the firm would lose the value of these investments if consumers dissatisfied with low quality products forced it to shut down by withdrawing patronage. In addition to advertising (including endorsements by celebrities) such capital includes investments in establishing trademarks and brand names, and also in physical assets, such as signs and decor.

Shapiro (1982, 1983) showed that firms could invest in establishing a reputation for being quality producers and that what might appear to be excess profits would actually be a return on this investment. Generalizations of these results were provided by Allen (1984) and by Kihlstrom and Riordan (1984). Milgrom and Roberts (1986) showed that the results were robust to allowing price variation, and that in this situation price itself could sometimes serve as an additional signal of quality. Lynch et al. (1986) provided an experimental test of these models. They found that it is possible to generate lemons markets in laboratory settings, that truthful advertising will eliminate problems associated with such markets and that reputations will sometimes serve to eliminate these problems.

Arguments regarding incentives to produce quality are routinely accepted in the economics literature. For example Landes and Posner (1987, p. 270) indicate that 'creating such a reputation [for high quality] requires expenditure on product quality, service, advertising and so on'. This article also discusses the importance of creation of property rights in trademarks and brand names. It is only if such property rights are created that firms have proper incentives to maintain quality.

Once it has been decided to confine regulation to particular types of ads and product characteristics, however, the problem is not solved. Any deceptive ad will deceive some and inform others. Therefore, a balancing test of some sort is required in order to determine if a case is worth bringing. Recently, an economic analysis of deception has provided exactly this sort of balancing test: 'An advertisement is legally deceptive if and only if it leaves some consumers holding a false belief about a product, and the ad could be cost-effectively

changed to reduce the resulting injury' (Craswell, 1985, p. 657; see also Craswell, 1991). This criteria for deception essentially says that an ad is deceptive only if the costs of changing it are less than the benefits. Included in the cost of changing the ad is any information lost by those consumers who were not deceived by the initial ad and who would find a proposed substitute less informative. This cost-benefit criterion is a useful guideline for exercise of prosecutorial discretion, and a guideline based on an explicitly economic analysis.

There have also been analyses of competitors suits leading to private enforcement of remedies for deception under the Lanham Act. Jordan and Rubin (1979) are skeptical of the potential benefits of such suits. On the other hand, Saunders (1991) argues that in the context of claims regarding popularity of a product and claims regarding certain categories of credence goods competitors could do a good job of policing. There have been many additional Lanham Act suits since the empirical analysis in Jordan and Rubin (1979) and this is an interesting area for further research.

4. Deception by Omission and Mandated Disclosures

So far, I have dealt with deception in the form of false statements. However, a further class of acts which are sometimes viewed as deceptive are statements which are true but incomplete in some way which is viewed as material. For these cases, regulatory agencies impose various remedies. Sometimes sellers are held to commit 'deception by omission'. In other cases, there is some mandated disclosure associated with an ad. These mandated disclosures may be required 'across-the-board' for all advertising of a product, or may be 'triggered' by some claim (See Beales, Craswell and Salop, 1981a).

An example of mandated disclosure is the set of warnings on cigarette packs and in cigarette advertising. These disclosures are across-the-board since any ad for a cigarette requires a health warning. Triggered disclosures are disclosures required only if some other claim is made. For example, under the US Truth in Lending statute, whenever a statement about down payments is made, there must also be statements about the interest rate (Annual Percentage Rate) and the number and size of monthly payments. Another example is provided by the FTC 'Funeral Rule' which required that funeral providers give consumers various types of information. In a study of this rule, McChesney (1990) found large costs and no measurable benefits.

While such disclosure remedies are common, economic analysis casts doubt on their general utility. There is support in the literature for the hypothesis that, as long as explicit deception is forbidden, sellers have incentives to reveal negative attributes of their products, because otherwise consumers will

rationally assume that an advertisement will omit a critical piece of information (say, the weight of a notebook computer) only if the value of that attribute for that product is low. Thus, producers of products with quality levels above the minimum will have incentives to advertise this fact, and in the limit the market will provide complete information. The models which prove this result are quite general, and the result seems robust. This result has been shown in Grossman (1981), Milgrom (1981), Jovanovic (1982) and Milgrom and Roberts (1986). Jovanovic (1982) shows that in many circumstances there will actually be too much information disclosed. Matthews and Postlewaite (1985) show that under some circumstances mandated disclosure laws will induce firms not to test their products for quality.

An example is the advertising of tar and nicotine content of cigarettes (Calfée, 1986). In the 1950s (and perhaps earlier) consumers began to fear the health effects of smoking, and began to believe that tar and nicotine were undesirable. (The process described here generally requires at least some consumer information regarding the negative characteristic. However, regulation is unlikely to occur in an environment where there is a total lack of such knowledge.) As a result, cigarette companies began to advertise the levels of tar and nicotine, with the advertising being stimulated by those brands with the lowest levels. The process was greatly slowed down in 1959 when the FTC virtually stopped such advertising. Nonetheless, there was a substantial incentive for advertisers to publicize the negative aspects of their products, as long as some brands had less negative characteristics than others.

From a theoretical perspective, the process of advertising negative characteristics is the obverse of the lemons problem, discussed above. In a lemons market, information is not verifiable, and as a result only low quality products are sold because sellers cannot convince buyers to pay for high quality products. The process discussed in this section requires some form of verification, but the theory indicates that if there is some method of checking on claims, then sellers will offer complete information about both high and low quality products. Indeed, the analysis is just the mirror image of the lemons analysis. That analysis shows that if the lemons problem can be solved, sellers of high quality products will have incentives to reveal that their products are indeed of high quality. But this means in the limit that any seller of a product which is of any quality above the minimum will indicate quality. Consumers may then assume that any product which does not disclose quality is of minimum quality, and the informational problem is solved.

In making policy with respect to disclosure, it is important to distinguish between equilibrium and disequilibrium situations. At equilibrium, there will be a substantial amount of disclosure in markets. However, many interesting policy issues occur in periods of disequilibrium. The disequilibrium may be with respect to advertising, but it may be in terms of actual product

characteristics as well. Advertising affects sales at current prices of existing products. It also influences characteristics and prices of products which firms will offer in the future. Advertising changes future product characteristics because a firm will only produce products or establish prices that it expects to be able to advertise. (See Calfee and Pappalardo, 1989, for a discussion in the context of health claims.)

An example is the introduction of Nutrasweet (aspartame) into diet soft drinks. Initially, diet products used a combination of saccharin and aspartame, and advertised 'Now Contains Nutrasweet'. Some states believed that this claim implied the products had no saccharin, and would have stopped the advertising. The FTC, however, did not do so. Rather quickly, other drinks began to use Nutrasweet exclusively, and advertise that fact. Now, virtually all drinks use only Nutrasweet. Thus, the ability to advertise Nutrasweet during the transition was essential to reaching the new equilibrium.

A disequilibrium is likely in a market which has changed in some way. Possible changes are in product characteristics, in information about products, or in consumers' tastes. Because there has been some change, existing products will not perfectly satisfy consumers' desires. Nonetheless, producers of those products which are closest to satisfying new desires will have an incentive to advertise this fact. In such circumstances, some advertisers may initially offer partial information to consumers. At some point other advertisers will compete by offering more complete information, and others may compete by further changing the product to reflect changed tastes. The ultimate equilibrium will occur with relatively full information and with the optimal set of products being offered. However, if the process is stopped because regulatory authorities think that the partial information is deceptive, then the full information equilibrium will never be reached, and the best set of products may not be sold. Moreover, information useful during the disequilibrium period may be different from information needed once the new equilibrium is reached. Disclosure requirements based on information needed in the disequilibrium may simply impose costs with no benefits once the equilibrium is reached.

A good example is the history of advertising of the fiber content of breakfast cereals (Ippolito and Mathios, 1990). This advertising was contrary to the FDA's policies regarding advertising of health claims in foods. Nonetheless, once the advertising began, cereals with higher fiber content increased sales, and new cereals with increased fiber were marketed. Moreover, during the same period, levels of sodium and fat in cereals also decreased. Advertising did a more effective job of spreading this information to consumers than had governmental attempts at communication.

Another example of a change in product characteristics caused by advertising is cigarette advertising, mentioned above (Calfee, 1986). When advertising began, tar content of filter cigarettes was virtually no lower than for regular cigarettes. Nonetheless, over a short period (1957-59) as a result of

heavy advertising of tar and nicotine content, levels (weighted by sales) fell by 40 percent. The first cigarettes to advertise had perhaps only marginally lower tar levels than other brands, and when regulators looked at this advertising they ultimately stopped it as being deceptive. The long-run effect of the advertising before it was stopped was to actually change product characteristics. As sellers competed by advertising tar and nicotine levels, some producers found it worthwhile to reduce levels in order to be able to advertise lower amounts. Other firms responded, and the ultimate result was reduced levels of tar and nicotine. The benefits to consumers of this dynamic effect of the advertising greatly outweighed any potential harmful effects from any alleged initial deception.

5. Regulation of Health Claims

In order to evaluate regulation of health advertising (and particularly advertising of prescription drugs) it is necessary to first look at the effect of the advertising. Leffler (1981) examined prescription drug advertising and found that it informed physicians about the effects of superior new products but also created some barriers to new entry by later competitors. Nonetheless, he found a beneficial effect of advertising and promotion. Hurwitz and Caves (1988) find similar results, and conclude that a law making entry by generics easier should lower the barriers to entry created by advertising of established brands. Rubin (1994) found that there was no evidence of deception in pharmaceutical advertising.

The FTC generally allows any advertising which is truthful, with only a few exceptions, such as mandated disclosure, discussed above. The FDA, on the other hand, greatly restricts even truthful advertising, including advertising of true claims for prescription medicines. Presumably it is for the same reason that the agency is excessively cautious in approving new drugs (Peltzman, 1973). If a direct to consumer print ad for a prescription drug mentions both the name and the use of the drug, it must also provide an extensive discussion of contraindications and side effects. These disclosures are commonly pages of small print. As a result, prescription drug ads often indicate either the name of the drug (usually for price comparison purposes) or that one should 'see your physician' for some unnamed treatment for particular symptoms, although some ads do contain the complete set of warnings in small print. TV ads for prescription drugs were until recently effectively forbidden by the disclosure requirements. There are both health and economic benefits to be expected from prescription drug advertising, and the FDA does not pay sufficient attention to the benefits from promotion (Masson and Rubin, 1985, 1986).

In addition to providing health benefits, increased advertising would lead to lower prices for prescription drugs. Advertising could inform consumers of substitution possibilities and thus put pressure on prices. As of now, many

retailers advertise prices of drugs by name, but they cannot indicate the use of the drug. Some consumers may recognize that the advertised drug is the one that they are taking, but others will not and will not be able to benefit from the low prices. For some studies of the effect of advertising on prices, see Benham (1972), Steiner (1973), Marvel (1976), Farris and Albion (1980), Kwoka (1984) and Haas-Wilson (1986). (See also the references in Section 7 regarding advertising by attorneys.)

The FDA has advertising jurisdiction over some aspects of nonprescription or over-the-counter (OTC) drugs and also over some aspects of food advertising, particularly with respect to health claims. The FDA is sometimes unwilling to allow true claims about even OTC drugs. It is continuing its policy of discouraging truthful advertising of the large effects of aspirin in reducing heart attacks, in spite of overwhelming scientific evidence about the truth of this claim and evidence that physicians do not communicate this benefit to patients (Keith, 1995). The FDA also generally requires prior approval of the substance of many advertising claims. Beales (1994) discusses the costs and benefits of this prior approval in the context of unapproved uses for prescription drugs that are marketed for other uses, and finds that the costs are greater than the benefits. In recent years, the FTC, which shares jurisdiction in a complex way with the FDA (discussed in Calfee and Pappalardo, 1989, and in Beales, 1994) has suggested more leniency in allowing true advertising claims than has the FDA. Part of this disagreement is because economists at the FTC focus on benefits as well as costs of advertising and therefore are more likely to advocate allowing true claims.

An issue which arises in discussing 'true' claims is the standard of truth. Many claims about product characteristics are uncertain and their validity is probabilistic. Many health claims are of this sort: it is not certain whether or not some claim is true. The proper standard of proof in this case is a cost-benefit test. That is, health claims would be allowed if the expected value (in terms of health outcomes) is positive. If there is some chance that a drug might save lives and if it has relatively insignificant side-effects, then a claim might be allowed even if there is a relatively small probability of its being true. The FDA often seems to require a higher standard, under which a claim would not be allowed unless there were perhaps a 95 percent chance that it is true. This would deny consumers much valuable information (Calfee and Pappalardo, 1989).

Urban and Mancke (1972) discuss federal regulation of aging claims regarding US whiskey. They show that the regulation (which required that whiskey be aged in new, rather than reused barrels in order to claim to be 'aged') had the effect of benefiting manufacturers of barrels, producers of traditional US 'heavy' whiskey, and importers, and harming producers of US light whiskey and consumers.

Schneider, Klein and Murphy (1981) show that the 1971 ban on cigarette advertising on television in the US did not reduce and may have increased cigarette consumption, but that information regarding the risk associated with smoking did lead to long term reductions. Mitchell and Mulherin (1988) find that the ban led to an increase in stock prices of cigarette manufacturers, presumably because the ban made entry more difficult.

6. Advertising by Lawyers

There have also been explicit studies of advertising by attorneys. The FTC found that whenever there was a significant difference in price of a particular legal service as a function of advertising restrictiveness, prices were higher in cities where there was greater restriction of advertising (Jacobs et al., 1984; see also Cox, Deserpa and Canby, 1982), and Calvani, Langenfeld and Shuford, 1988). Hudec and Trebilcock (1982) discuss the case of Canada and also suggest much less regulation than has been traditional.

The organized bar has historically favored advertising restrictions. Advertising by attorneys provides benefits to consumers and to some attorneys, but overall attorneys lose money from such advertising. Posner, for example, indicates that advertising is more important for new entrants and that prohibition of advertising is a part of the traditional attorney cartel (Posner, 1993). That such bans on advertising are consistent with the self interest of attorneys is obvious from the FTC study, which shows that reduction on restrictions on advertising lead to lower prices for attorney services. The evidence indicates that 'legal clinics' offer higher quality service than traditional lawyers (McChesney and Muris, 1979; Muris and McChesney, 1979). The general issue is also discussed in McChesney (1985) and the Supreme Court cases are summarized in McChesney (1996).

7. Remedies

Some remedies for deception which have been used or proposed are, in increasing order of severity, cease and desist orders, corrective advertising, consumer redress and fines. In order to evaluate these remedies, it is useful to set forth a theory as to the goal of the remedy. The ultimate goal is of course maximization of consumer welfare and this can be achieved if it does not pay for firms to engage in acts which are likely to lower welfare. Policies should therefore be aimed at making sure that harmful acts do not pay.

What is relevant is that a remedy provide the correct amount of deterrence. For the types of activities discussed in this paper, it is possible to have either

underdeterrence or overdeterrence. Underdeterrence is the situation in which whatever penalties exist are too low, so that too much deception occurs. Overdeterrence occurs when penalties are too high. While it may appear that it is impossible to have 'too little' deception, it is nonetheless possible to overdeter deceptive advertising. This is because, as indicated at many points in this paper, the line between deception and useful information is not always clear and one result of overdetering deception through excessive penalties would be the suppression of provision of information that many consumers will find useful. On the general issue of optimal deterrence, see Becker (1968), Posner (1993, Chapter 7) and Polinsky and Shavell (1979). For an application based on the FTC see Nash (1991). For a discussion of overdeterrence of 'white collar crime' see Rubin and Zwirb (1987). Advertising is discussed in *ibid.*, pp. 904-905.

The traditional FTC remedy for deception was a cease and desist order which required the firm to stop the offending ad. In general, such orders include language forbidding the practice in question in the future, and are enforced by fines. This remedy appears relatively mild and therefore unlikely to overdeter, although there is evidence dealing with the stock market effects of these orders which indicates that they may be much more costly than is apparent (Peltzman, 1981; Mathios and Plummer, 1989). This may be in part because such orders contain 'fencing in' provisions that may apply to additional advertising for other products or claims, although the capital market effects are still larger than seems reasonable. The Magnuson-Moss FTC Improvements Act of 1975 has given the Commission broader powers, including the power to enforce rules with monetary penalties and also the power to seek redress for fraud under some circumstances (for a discussion of FTC remedies, see Muris, 1991). The Commission has relied heavily on the theory of optimal deterrence in computing fines, and the economists are deeply involved in these computations.

For most deception cases, the Commission still relies on cease and desist orders. In most cases, this is the appropriate remedy. As indicated above, a determination that an ad is deceptive is difficult, and many ads may be innocently written and later interpreted as being deceptive. Even when using their best efforts, firms will sometimes err and produce an ad which is later held to be deceptive. Since this is so, any penalties more severe than an order to stop could easily cause firms to reduce the amount of potentially actionable material in their ads; this would be done by simply reducing the information content of the ads, and relying instead on puff or image advertising.

Another remedy is 'corrective advertising', requiring the advertiser to pay for advertising to counter the deceptive advertising. This remedy may be inappropriate since most evidence indicates that the effects of advertising are short lived (Ehrlich and Fisher, 1982; McAuliffe, 1987, p. 69; Thomas, 1989) and therefore the effects would likely have dissipated before the corrective ad would appear. The only purpose of a corrective ad would therefore be additional

deterrence, but if desired this can be achieved more efficiently through direct methods. Heald (1988) discusses remedies in private civil suits where the courts have ordered losing defendants to pay large damages based on the cost to the defendants of the deceptive advertising, in theory to be used by winning plaintiffs to finance corrective advertising. He finds these payments excessive, leading to overdeterrence. Singdahlsen (1991) is also concerned with overdeterrence.

The FTC has powers to name advertising agencies as well as advertisers in complaints for deception. If agencies have skills in assuring that ads are not illegally deceptive, then finding them liable would seem to increase the ability of the Commission to deter deception. However, advertisers have contractual agreements with agencies. Therefore, if advertisers want agencies to help them comply with the law they can contract for these services, as shown in the Coase theorem. It would even be possible for an advertiser to contract with an agency for indemnification by the agency in the event of liability. More generally, it would not be efficient for agencies to determine the truth or degree of substantiation for each ad they produce. Imposing liability would increase the costs of advertising since agencies would be forced to make an independent investigation of each ad.

For those acts which are to be punished by a fine, it is important to use the correct fine. First, it is appropriate to restrict the use of fines to true fraud (deception where the firm is consciously attempting to deceive) since this reduces the chances of overdetering provision of true information. Second, the correct fine is one which is just equal to the (expected) harm caused by the deception. Such a fine will provide firms with the correct incentives. Since some who engage in deception will not be caught, the actual fine must be greater than the observed harm for those who are detected. If, for example, one offender of three is detected, then the fine must be equal to three times the harm caused by those who are punished. In this case, the probabilistic value of the fine to someone considering violation will just be equal to the harm his act will cause, and the result will be that firms will not undertake acts which impose net harms on consumers. As indicated above, this is the exact goal of deterrence. (For a discussion of computation of probabilities, see Feinstein, 1990, and Nash, 1991.) Altrogge and Shughart (1984) found that FTC fines in advertising cases transfer money from small to large firms, consistent with the literature on rent seeking.

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