Ethics of Implicit Persuasion in Pharmaceutical Advertising

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Abstract

Direct to Consumer Advertising of Prescription Pharmaceuticals (DTCA) is a controversial practice permitted only in the United States and New Zealand. Central to why all other nations ban DTCA is concern about its capacity to impart complete, balanced, and accurate information that guides effective consumer decisions. Yet the debate has, thus far, paid scant attention to how implicit or unconscious persuasion in DTCA might influence consumer attitudes toward advertised drugs. In this chapter, one means of implicit persuasion, evaluative conditioning, is argued to have deleterious effects on the autonomous agency.
that DTCA viewers bring to medicine choices and on the wider doctor-patient relationship. These effects suggest implicit persuasion should be given much greater consideration in the development of public policy on the marketing of pharmaceuticals.

Introduction

Direct to Consumer Advertising of Prescription Pharmaceuticals (DTCA) is legal in only two nations, the United States and New Zealand. Two primary concerns underpin the decision of all other countries to outlaw the practice. First, prescription drugs have significant potential to cause harm. Prescription status – a requirement that a doctor authorize and oversee use of a drug – is predicated on, among others, a need to safeguard against drug side effects and toxicity (Brass 2001). Prescription status implies, therefore, that the drug carries heightened risk compared to, for example, medications that can be sold over the counter at a pharmacy.

The second concern is that any (legal) decision to take a prescription medicine occurs within the confines of the doctor-patient relationship. That relationship is governed by well-established ethical and legal principles. Prominent among them is a duty to respect and promote patient autonomy, that is, self-governance. That duty demands patients give free and informed consent to medical treatment, including prescription medicines. Respect for autonomy stresses the integrity of the information that patients rely on to make medical decisions. It is known that exposure to DTCA influences patients’ requests for drugs and, as a result, doctors’ prescribing behavior (Mintzes et al. 2003). Hence, the quality of product information provided by DTCA can wield formidable influence on the doctor-patient relationship.

Opponents argue that DTCA harms by promoting excessive and sometimes inappropriate pharmaceutical use (Hasman and Holm 2006). In support, there is substantial evidence for the persuasive force of DTCA. On one estimate DTCA returns around $US4 for every dollar spent by pharmaceutical manufacturers (Mintzes 2009). Further evidence suggests that increased sales of advertised medicines are driven by patient requests. People who view DTCA are more than twice as likely to make brand-specific drug requests compared to those in jurisdictions without DTCA (Mintzes et al. 2003). Doctors honor those requests in over 50 % of cases (Kravitz et al. 2005). Yet there is doubt whether improved public health results. Kravitz et al. (2005), for example, showed that patient requests for a brand-specific drug were met in 55 % of instances where the drug was not a recommended treatment, specifically, antidepressants for adjustment disorder. And in a meta-analysis, Gilbody et al. (2005) concluded that while DTCA increased drug prescriptions, no study showed evidence of overall public health benefit.

Opponents further argue that the persuasive intent of DTCA leaves informational integrity as a secondary concern. Advertisers are, on this view, motivated to provide inadequate, incomplete, imbalanced, or misleading drug information if, in so doing, the drug is presented in a more favorable light (Hasman and Holm 2006). This concern is heightened in the United States by the absence of any requirement
for regulators to vet DTCA pre-release. Rather, ads are subject to post hoc scrutiny only if a complaint is made (Food and Drug Administration 2012). The result, opponents argue, is an impoverished understanding among DTCA viewers that militates against autonomous choices and informed consent.

DTCA proponents typically counter that advertising is an important means of promoting awareness of both diseases and their treatment (Hasman and Holm 2006). This is held to be of special significance for the socioeconomically disadvantaged for whom advertising, especially of the broadcast variety, is a primary source of medical information. It is also argued that DTCA acts as a reminder function that enhances compliance of existing patients with their medication regime (Mintzes 2006). Proponents further argue that DTCA bans are an unjustified constraint upon free speech. These grounds formed the basis for legal action challenging the constitutional validity of Canada’s prohibition of DTCA (Priest 2007). That process was terminated, however, before any judicial decision was reached.

Yet, to date, the debate has largely ignored consumer psychology research that increasingly shows how advertising persuades outside of awareness. These subtle forms of persuasion may impact the attitudes viewers come to hold about advertised drugs, while escaping current regulation. Further discussion of unconscious or “implicit” persuasion requires some clarification of terms. There are three prominent accounts of implicit persuasion (Chartrand 2005). First, the individual may be unaware of the persuasive stimulus. In subliminal advertising, for example, frames in a commercial are presented too briefly to be consciously processed. Second, the individual may be unaware of the process by which persuasion occurs. As will be detailed, this form of implicit persuasion can occur even when all stimuli are supraliminal, that is, above the threshold of consciousness. Finally, individuals may be unaware of the attitudes that they come to hold as a consequence of the persuasive process. This third possibility is predicated on a dual theory of attitudes (Wilson et al. 2000). On this view, people hold conscious or explicit attitudes that they can report, but also implicit or unconscious attitudes of which they are unaware. People may report, for example, explicit attitudes of racial impartiality yet be gauged, on measures such as the Implicit Association Test, to hold implicit attitudes consistent with racial prejudice (Greenwald et al. 1998).

The following discussion focuses on the second category; implicit persuasion where the individual is unaware of the persuasive process. Subliminal persuasion is not addressed because of uncertainty about its real world effectiveness (Vargas 2008) and because it is almost universally prohibited. Nor are implicit attitudes considered, primarily because of controversy over what implicit measures actually assess, and the degree to which they predict subsequent behavior (van Ravenzwaaij et al. 2011). The focus is, therefore, on persuasion using supraliminal stimuli where the resulting attitude can be reported by the individual, yet where the mode of persuasion remains hidden. The importance of this category is that it covers techniques that are permissible within current regulations and detectable on relatively uncontroversial measures.

A number of techniques fit this classification. For example, the mere exposure effect (Zajonc 1968) describes how repeated viewing of a neutral stimulus can
cause people to like the stimulus. Consistent with mere exposure, repeated viewing of advertised products increases both familiarity with and liking of those products (Fang et al. 2007). Priming describes how advertisements act as hedonically charged cues that enhance the product’s mental accessibility and activate striving for them (Chartrand et al. 2008). Framing effects occur when identical information is presented in different ways, causing divergent attitudes to the target object. For example, the description “95 % fat-free” generates greater liking than does “5 % fat” (Kahneman et al. 2000).

Perhaps one of the best researched techniques in this category is evaluative conditioning, a variant of classical Pavlovian conditioning. Evaluative conditioning results from the pairing of a neutral stimulus, for which no special feelings are held, with a valenced stimulus, one that elicits either positive or negative feelings (Jones et al. 2010). With repeated pairing, the feelings and consonant attitude held toward the valenced stimulus pass to the neutral stimulus. In the case of a positive valence stimulus, the result is a positive attitude toward the previously neutral stimulus. In advertising, for example, images of happy smiling people may be used to condition positive attitudes toward a novel product, for example, a new brand of shampoo.

In the language of Pavlovian conditioning, the valenced image is termed the unconditioned stimulus, because it elicits positive feelings with no need for further manipulation. The neutral object, the shampoo, is the conditioned stimulus that takes on the positive valence of the unconditioned stimulus. The resulting positive attitude is the conditioned response.

In what follows, evaluative conditioning is used as a paradigm case of implicit persuasion in DTCA to examine the consequences for the autonomy with which consumers make choices about medicines, their capacity for agency in relation to those choices, and the subsequent impact on the doctor-patient relationship.

Empirical Evidence for Implicit Persuasion via Evaluative Conditioning in DTCA

In this section, evidence is summarized for the persuasive potency of evaluative conditioning, its operation in DTCA, and its implicit nature.

Evaluative conditioning has been demonstrated toward a range of conditioned stimuli including words (De Houwer et al. 1994), odors (Rozin et al. 1998), and human faces (Walther 2002), using various valenced unconditioned stimuli, among them, images (Pleyers et al. 2007), music (Eifert et al. 1988), and candy (Brunstrom and Higgs 2002). While concerns have been voiced that conditioning effects are difficult to replicate (Rozin et al. 1998), a recent meta-analysis of 214 evaluative conditioning studies concluded it to be a robust phenomenon (Hofmann et al. 2010).

In a typical study, Sweldens et al. (2010) used positive valence images to condition positive attitudes toward novel brands of Belgian beers. Smaller images of branded beer bottles were superimposed over a variety of larger positive images, including people water-skiing, sailing, and cuddling. Positive images were sourced from the International Affective Picture System (IAPS), a database where the
valence of each image has been systematically calibrated (Lang et al. 2008). Participants exposed to positive images reported more positive attitudes toward the beers than did those exposed to neutral valence images, for example, people reading a newspaper or napping on a subway.

While evaluative conditioning is strongly supported by research in social psychology, proof of its operation in DTCA faces some empirical hurdles. First, a “process pure” evaluative conditioning experiment involves repeatedly pairing a conditioned stimulus with unconditioned stimuli whose valence is known. Varying the valence of the unconditioned stimulus and noting consonant alterations in the induced attitude permit ascriptions of persuasive potency to the unconditioned stimulus. Yet, as De Houwer (2009) has noted, real world ads pair the product, the conditioned stimulus, with a variety of valenced stimuli including imagery and music, and also with propositional informational content. The multiplicity of attitude influences is an impediment to discerning the relative contribution of conditioning against other persuasive content.

Yet, as Biegler and Vargas (2013) have argued, there exist both conceptual and empirical rationales to accept the existence of evaluative conditioning in DTCA. First, imagery in DTCA relates closely to the positive valence pictures featured in the IAPS. For example, an ad for Lipitor (Pfizer 2010) features a man petting a dog and leaping from a jetty before swimming in a sparkling mountain lake. It is not coincidental that cute animals and majestic natural scenery figure prominently in the most positive valence images of the IAPS. There is also a database of sounds whose valences have been calibrated, the International Affective Digitized Sounds (IADS) (Bradley and Lang 2007). The most positive valence sounds include the music of Bach and Beethoven, people laughing, and a baby cooing. Uplifting music and the sounds of people enjoying themselves abound in pharmaceutical commercials. For example, an ad for the asthma inhaler Advair (GlaxoSmithKline) has children laughing after blowing bubbles and hitting a piñata at a sun-drenched outdoor party. Guitar music in a major key provides a soaring backdrop.

There is strong prima facie evidence for the existence of positive valence unconditioned stimuli in DTCA. Further, many commercials repeatedly present images of branded drug boxes and logos, which plausibly comprise the conditioned stimulus. The conclusion that evaluative conditioning will occur is compelling. Indeed, in an extensive review, Schachtman and colleagues concur that:

> [In the case of paired events during advertisements, if the individual changes his or her behavior (attitude change, interest in purchasing the item) in the presence of the product or brand (the conditioned stimulus) as a function of pairings of this conditioned stimulus with an affective stimulus (the unconditioned stimulus), then this behavior can be said to be a conditioned response (Schachtman et al. 2011, pp. 481–482).]

An experiment conducted by Smith et al. (1998) provides a supporting empirical rationale. On their construal, a commercial’s positive valence elements, including imagery and sound, can combine to elicit positive affect. On this view, multiple stimuli of similar valence can comprise the unconditioned stimulus. Consistent with
this view, Smith et al. (1998) found commercials that elicited broadly positive affect also induced the most positive attitudes toward the featured product.

A remaining question is whether evaluative conditioning is applicable to pharmaceuticals. It might be argued, for example, that pharmaceuticals are not “neutral” stimuli and, therefore, may not be ideal conditioned stimuli. In fact, there is evidence that many connote drug treatments negatively (Benkert et al. 1997). If so, pharmaceuticals may evince differential susceptibility to conditioning compared to say, shampoo, or dishwashing liquid. Addressing this concern, Biegler and Vargas (in preparation) demonstrated positive evaluative conditioning toward a hypothetical influenza drug using valenced imagery from the IAPS. This study suggests that traditional conditioning techniques are indeed applicable to pharmaceuticals, albeit in relation to one category.

To sum, there is good evidence that evaluative conditioning is a robust effect that is operative in DTCA. But is its operation implicit, that is, outside awareness? To support this claim, it is necessary to look more closely at the conduct of evaluative conditioning experiments. A number of the studies cited earlier that successfully conditioned positive attitudes also included demand awareness checks (Brunstrom and Higgs 2002; Rozin et al. 1998; Walther 2002; Sweldens et al. 2010). These measures test to see if participants became aware of the investigators’ hypothesis during the experiment. The danger is that awareness may cause participants to behave in line with what they assume to be the “demands” of the experimenter. No study, however, reported significant awareness of the intent to condition attitudes. Admittedly, these experimental cohorts differed from the real world public who view DTCA. Many participants were business or psychology undergraduates. However, these individuals can be expected to have a relatively sophisticated understanding of experimental psychology. Given their broad ignorance of the conditioning process, it is plausible that members of the general public would evince equivalent or lesser awareness of evaluative conditioning in DTCA.

Consumer Autonomy and Justified Beliefs About Material Facts

To understand the potential impact of implicit persuasion, exemplified by evaluative conditioning, on consumer autonomy, it is first necessary to mount a plausible theory of autonomy. The contemporary literature expounds many competing theories. Prominent among them are Hierarchical (Frankfurt 1971; Dworkin 1988), Life Plan (Young 1986), Historical (Christman 1991), Reasons-Responsive (Fischer and Ravizza 1998), and Relational (Mackenzie and Stoljar 2000) accounts. These theories are merely alluded to because the intention is to emphasize a commonality in each that has relevance for the current argument. While each account advances varying specifications for the kinds of desires that best underpin ascriptions of autonomy, each is dependent upon the agent holding a sound epistemology. Thus, it is largely uncontroversial that, should an agent wish to pursue decisions or actions that accord with deeply held desires, goals, or values, a grasp of pertinent facts is a necessary tool.
Perhaps the realm of medical ethics and informed consent has focused most attention on the epistemic requirements for autonomous choice. It is widely held that for patients to make fully informed and autonomous medical decisions, they must understand facts material to the treatment in question. Faden et al. (1986) provide insight into the nature of material facts. They argue that facts are material if they “would be viewed by the actor as worthy of consideration in the processes of deliberation about whether to perform a proposed action” (Faden et al., p. 303). Material facts are, therefore, those the individual considers important in making their decision about treatment. This “particular patient” standard of materiality is supported by legal precedent. In the Australian case Rogers v. Whitaker (1992), a woman sought a largely cosmetic surgical procedure to an eye that had been blinded in a childhood accident. The surgeon failed to warn her of the risk that surgery could rob her of sight in the functioning eye. This idiosyncratic complication, known as sympathetic ophthalmia, has a probability of 1 in 14,000. The complication occurred, and the judge commented that, objectively low odds aside, the patient’s view that the risk was material was definitive.

Yet Faden and colleagues also make clear that for autonomy to be deduced, patients must not simply understand material facts, but also believe them (Faden et al., p. 311). Understanding that the physician asserts one’s toe is gangrenous, for example, does not satisfy an autonomy standard if one remains committed to the belief the toe is just dirty. Here, understanding does not guarantee the fact of a gangrenous toe will be given due weight in the ensuing deliberations. But if belief is to be the relevant benchmark for autonomy, then epistemology offers two further potential standards: justified or true belief. True belief holds intuitive appeal – it seems obvious that a prospective patient must hold an accurate view of, say, the nature and site of an operation for autonomous consent to be proffered. Yet the true belief standard has drawbacks. A person with dementia may hold beliefs that alternate between the true and the fictional. If consent is obtained when the true belief is held, ought this to be seen as a moment of lucidity? Or is neurological deterioration merely throwing up vague semblances of reality? This is an example of “epistemic luck” which many philosophers eschew as grounds for legitimate knowledge.

In contrast, a justified belief standard emphasizes the reliability of the belief-forming process, where such a process enhances the likelihood that true beliefs will result. Goldman and Olsson (2008) provide an illustrative analogy. They describe a pair of scenarios in which a driver must negotiate two forks in the road to reach a town. In the first scenario, the driver has a reliable satellite navigation unit that, as expected, gives the correct direction at the first fork. In the second scenario, the driver has an unreliable navigation unit that, by chance, gives the correct direction at the first fork. Goldman and Olsson argue that, while drivers in both scenarios may hold a true belief about the correct direction at the first fork, the driver’s belief in the first scenario carries greater epistemic value. That superior value stems from the fact that a reliable navigation unit heightens the
probability of a correct decision at the second fork, and ultimately reaching the desired destination. As the authors put it:

[T]he conditional probability of getting the correct information at the second crossroads is greater conditional on the navigation system being reliable than conditional on the navigation system being unreliable (Goldman and Olsson 2008, p. 28).

This “conditional probability” thesis has relevance for autonomy in that most medical choices require not just one, but a suite of decisions in relation to a range of contingencies. For example, the decision to use a particular medication will require weighing its therapeutic efficacy against its side effects. The decision may also demand a comparison between the medication and alternative medicines, non-pharmacological therapies, or indeed no treatment at all. Should each belief derive from a reliable process, for example, a reading of evidence-based plain language information leaflets, there is a heightened probability of a true belief issuing at each juncture. By contrast, should the belief-forming mechanism be unreliable, a true belief may issue by chance in relation to one contingency, but the prospects are poor that outcome will be repeated. The result is a corruption of the deliberative process.

There are strong reasons to hold that evaluative conditioning in DTCA and other implicit persuasive techniques comprise unreliable belief-forming mechanisms that foster unjustified beliefs about pharmaceuticals. Moreover, many such beliefs will pertain to facts that are plausibly material to viewers with the relevant illness, such as the drug’s safety and efficacy. Given a justified belief standard for autonomy, evaluative conditioning and related techniques pose a threat to autonomous drug choices. This threat is elaborated now.

Implicit Persuasion and Consumer Autonomy

Evaluative conditioning in DTCA is an inherently unreliable progenitor of beliefs about drug facts. To see this, it is first necessary to outline how evaluative conditioning influences belief. Evaluative conditioning employs valenced unconditioned stimuli to modify attitudes to a neutral conditioned stimulus. On a “tripartite theory” of attitude structure, the resulting attitude comprises affective, cognitive, and behavioral elements (Bizer et al. 2003). On this view, the transfer of positive valence from unconditioned to conditioned stimulus is accompanied by consonant beliefs about, and behavioral intentions toward, that stimulus. For example, if images of people enjoying themselves were used to condition positive attitudes toward an automobile, the tripartite theory predicts those attitudes to encompass positive beliefs about, and positive intentions toward, that stimulus. For example, if images of people enjoying themselves were used to condition positive attitudes toward an automobile, the tripartite theory predicts those attitudes to encompass positive beliefs, for example, that its components are of higher quality, and positive intentions, for example, a favorable disposition to purchase it.

There is empirical evidence of the impact of evaluative conditioning on belief. For example, Krosnick et al. (1992) used valenced imagery to condition positive and negative attitudes toward images of a woman studying and shopping. Participants conditioned to hold positive attitudes believed the woman to be friendlier, kinder, fairer, and more honest. Extending this research, Biegler and Vargas
(in preparation) found that participants conditioned (with positive imagery) to hold positive attitudes toward a hypothetical pharmaceutical believed it to be significantly safer, more effective, and more beneficial than did participants conditioned (with negative imagery) to hold negative attitudes toward the pharmaceutical.

Yet, it must be remembered that while the valence of an image used as an unconditioned stimulus influences belief about the conditioned stimulus, that valence bears no substantive relationship with characteristics of the conditioned stimulus. For example, the most positive valence image in the IAPS features three puppies perched expectantly on a wall. Should favorable beliefs emerge toward a co-presented pharmaceutical as a result of pairing with that image, there is no basis to conclude that such an effect will promote true beliefs. This is especially so should valenced stimuli be used with the intention of promoting favorable beliefs, at the expense of their veracity.

It may be countered that DTCA contains negative valence content and that positive conditioning plausibly corrects for this. For example, there is a requirement for extensive disclosure of side effects ranging from, for example, nausea and headache to life-threatening effects such as throat swelling or liver failure. Further, there is evidence that negative terms can act as unconditioned stimuli that can produce negative attitudes (De Houwer et al. 1994). On this view, positive imagery may be a necessary epistemic antidote.

It is conceded that such an effect may occur. The issue, however, is whether evaluative conditioning promotes true beliefs across a range of decisional instances. A person considering use of a medication, for example, an antidepressant, will be exposed to multiple advertisements for a range of drugs. Should evaluative conditioning occur in every ad, there is little chance that it will engender accurate beliefs in each case. It must be remembered that the primary intention of the technique is to persuade, not instill true belief, and so the latter will occur only haphazardly.

The relevance for autonomous choice is that such an unreliable influence upon beliefs about salient properties such as drug effectiveness and safety will surely lead to unjustified beliefs. And given that such properties are material to most who consider using a medication, autonomous choice is set back. Specifically, because unreliable belief-forming mechanisms heighten the chance of holding false beliefs, there is a lessened probability that drug choices will be in accord with the agent’s values. Given the intense efforts in recent years to ensure that patients’ decisions reflect a robust standard of autonomy, this effect of DTCA must give cause for serious circumspection about its permissibility, at least in its current form. That conclusion, however, faces an important objection that stems from the impact of recent psychological research on conceptions of human agency.

**Implicit Persuasion and Agency**

The argument thus far assumes a picture of human agency that sees agents as capable of rational deliberation and choice under conditions of sufficient information and absence of coercion or hidden persuasive factors. But what if this is hardly ever the case? And what if this picture of agency is mistaken?
One contemporary response to the concerns raised above about the effects on patient autonomy of implicit persuasion in DTCA is a skepticism about rational agency itself. This skepticism arises from a vast array of psychological data – some already referred to – demonstrating that we are largely unaware of many rapid and automatic influences on individual choice, judgment, and belief. These data suggest that, notwithstanding our beliefs to the contrary, individuals really have little idea of why they make the choices they do. Bargh and Chartrand (1999), for example, say:

Most of a person’s everyday life is determined not by their conscious intentions or deliberate choices but by mental processes that are put in motion by features of the environment and that operate outside of conscious awareness and guidance (Bargh and Chartrand 1999, p. 462).

For example, when subjects in a shopping mall were asked to make a choice between identical items on a stand, they showed a marked preference for the item on the right. But when asked to provide reasons for their choice, no subject mentioned this. Instead they produced explanations that focused on the supposed superior features of the product they chose (Nisbett and Wilson 1977, reported in Carruthers 2005, pp. 142–143).

According to a dual process model of cognition, many judgments that people make are the product of automated processing that occurs beneath the level of awareness. Indeed skeptics about the traditional picture of rational autonomous agency claim that reasoning is not for what we think it is for. It is not a vehicle for arriving at truth and securing autonomy in decision-making. Jonathan Haidt (2001, 2012) argues that its main function is to generate post hoc justifications for the intuitive judgments a person makes and to secure social agreement.

A skeptical view of the scope and role of conscious reasoning seems to make it more urgent to regulate persuasion in pharmaceutical advertising that operates below awareness, produces favorable product attitudes, and is not based on information. But there are at least two reasons to doubt this would make measurable difference to the quality of people’s decisions. First, as Bargh and Chartrand (1999) note, the environmental influences on choice are numerous and varied. Our judgments have been found to be influenced by the weather (Schwarz and Clore 1983), by mood (Yuen and Lee 2003), by whether we are sitting at a clean or dirty desk (Haidt and Bjorklund 2008), and even by reading a report which uses plural rather than singular pronouns (Gardner et al. 1999). Positive imagery in advertising may have some influence on the beliefs people hold and the decisions they make. But it does not obviously follow that it makes their decisions worse or less autonomous than they would have been in the absence of such imagery. This is because the decision-making process is subject to many other unconscious influences which are likewise irrelevant to the properties of the product being evaluated.

Second, processing of purely propositional information is also subject to a range of cognitive and motivational biases which lead to incorrect beliefs. Persons are capable of more effortful and explicit controlled processing which can correct some of the biases to which we are subject. Kahneman (2011), however, argues that the controlled processing system is “lazy” and prefers to accept the deliverances of the
automatic system rather than to interrogate them. Jonathan Haidt (2012, pp. 83–88) surveys a range of evidence to support the view that when we do reason, the search for evidence is biased toward the conclusion we want to reach. Motivated reasoning, as it is known, selectively directs our attention to a subset of relevant information (Kunda 1990). Haidt argues that often a single piece of supporting evidence is sufficient to give us permission to believe what we want. For the purposes of considering the ways in which patients might process information in pharmaceutical advertising, two studies cited by Kunda (1990) stand out. First, subjects diagnosed as having a (fictitious) enzyme deficiency rated the condition less serious and the test less accurate than did subjects diagnosed as not having it (Ditto et al. 1988). Second, Kunda (1987) conducted a study in which subjects read a fictitious study claiming that caffeine was risky for women. Women with a high caffeine intake found the science less persuasive than women with a low caffeine intake or men. “Only subjects who stood to suffer serious personal implications if the article were true doubted its truth” (Kunda 1990, p. 489).

But even without such motivational influences on information processing, there is evidence that controlled effortful processing may not be the best way to arrive at important decisions.

Conscious thought has shortcomings that can prevent sound decision making. First of all, conscious thought can lead to suboptimal weighting of the importance of aspects of different choice alternatives. In addition, because consciousness has low capacity, conscious thought often leads people to take into account only a limited subset of information at the expense of other information that should be taken into account when making a decision (Dijksterhuis and van Olden 2006, p. 628).

Lisa Bortolotti (2011) cites evidence suggesting that attitudes and choices arrived at via reason-giving are less optimal with respect to expert opinion and more vulnerable to evidence manipulation than those made without giving reasons (e.g., Wilson and Schooler 1991). This kind of evidence has been taken by both Jonathan Haidt (2001, 2012) and John Doris (2009) to show that the picture of persons as rational reflective agents is just false. It follows that reasoning (at least individually) is not a particularly reliable way to arrive at conclusions about what we have reason to do.

Thus, persons may not be the kinds of agents that they are assumed to be and careful reflection may not be a reliable way to get at the facts relevant to a decision. Further, decisions may be influenced by multiple and random persuasive factors in the environment of which individuals are not and cannot be aware, no matter how hard they try. From this, it might be argued that evaluative conditioning and other forms of implicit persuasion in DTCA do not leave patients in a worse epistemic and agential position than before. This may be especially the case given that mandated presentation of negative side effects in DTCA could lead to inflated assessments of risk.

Individuals have been found to overestimate the risk and prevalence of certain conditions. In addition to the powerful influence of framing effects on assessments of the risk and benefit of policies and actions – a scenario framed in terms of lives lost is evaluated more negatively than an identical scenario framed in
terms of lives saved (Tversky and Kahneman 1981) – the alarmist bias holds that “the worst possible scenarios loom large in people’s minds, distorting their risk perceptions and their behaviours” (Kuran and Sunstein 1999, p. 706). As noted earlier, evaluative conditioning might correct such a distortion of risks and leave the patient in a better epistemic position than would the presentation of propositional content alone.

But evidence about the limits of rational agency and the need to counter irrational assessments of risk made by patients exposed to DTCA cannot constitute an argument for permitting implicit persuasion in DTCA. Rather it seems to constitute an argument against permitting DTCA at all.

Maybe in some cases, knowing the true reasons for, or causes of, our choices is not important. The fact that consumers tend to choose products on the right side of a display, and not because they are superior in the ways the consumer might reason, does not really matter. But, in many instances, getting it right does matter and so being aware of cognitive limitations and factors that shape deliberation outside awareness might be rather important. Choosing the medication most appropriate to a medical condition is something agents surely have reason to do and, as already argued, this choice ought to be responsive to facts about the medication and not to irrelevant features of an advertisement. However, given that human agency is systematically vulnerable to epistemically misleading influences, there is a need to consider what policies and practices support good decision-making, that is, decision-making in accordance with material facts.

One approach to the problem is social design. We can introduce nudges of various sorts to move us toward better decisions (Thaler and Sunstein 2009). Such nudges are common in health-related areas. They can include regulatory measures such as price signals, plain packaging of dangerous products, and warning labels. They also include government-sponsored advertising campaigns – for example, highlighting the dangerous effects of speeding, smoking, or excessive drinking. Such sponsored health campaigns, of course, often use similar persuasive techniques to those discussed here. They pair positive imagery with positive choices and negative imagery with dangerous choices. Do they undermine consumer agency or autonomy in so doing? If it can be argued that this use of implicit persuasion is benign because it nudges the consumer into a more accurate appreciation of the material facts relevant to a decision, could the same argument be available to pharmaceutical companies?

The obvious response to such claims is that there is no evidence that DTCA leaves us in a better epistemic and agential position and reasons to think that it does not. Whereas government health campaigns are motivated by paternalistic considerations, the goal of pharmaceutical advertising is neither paternalistic nor concerned with support for epistemic agency. Companies are motivated to increase sales and improve profits for shareholders. DTCA does so in part by implicit persuasive techniques and in part by providing explicit information that the evidence suggests consumers will be ill-equipped to evaluate. Its proponents claim that it enhances our agency by bringing more options to consumer attention. But if these options cannot be properly evaluated, consumers may be worse off.
A second approach to better decision-making is a reliance on experts. The account of the limitations of human agency and decision-making is at odds with an ideal of rational autonomous decision-making that is dominant in philosophy and bioethics. However, there are exceptions to this picture. Expert decision-making conforms more closely to ideals of agency in that it is less subject to the kinds of biases and distortions that plague the nonexpert, and more responsive to reasons and evidence. Lisa Bortolotti (2011) cites the following features of expertise identified by Hutton and Klein (1999). Experts in a domain are better able to perceive patterns; through years of experience, experts acquire the ability to perceive relevant features of the situation; their performance is virtually error-free; they display superior memory in their domain of expertise, have a deeper understanding of the problem to solve (e.g., they catch on to the causal mechanisms); they have a better understanding of their own limitations and an ability to catch themselves when they commit errors. It is important, however, to note that decision-making by experts does not usually require explicit reflection; it may be for the most part automatic or intuitive. Further, experts are by no means immune to the kinds of biases detailed here (Drew et al. 2013).

It should be apparent that many, or even most patients are not expert agents with respect to their medical condition or to pharmacology. If their decision-making in this important area is to count as autonomous, their agency must be supported by someone who is an expert and is bound to consider their best interests. Medical practitioners and pharmacists are the most appropriate candidates for this role. Pharmaceutical companies and advertisers are not.

At this point, proponents of DTCA may point to the important fact that a patient may become aware of a product for their condition via advertising, yet be unable to access it without a prescription. So their choice or preference must be discussed with a medical practitioner and their prescription must also be filled by a pharmacist. There will be an expert gatekeeper, and so their agency will receive appropriate scaffolding. It is appropriate then, to consider whether this is the case. How might the persuasive effects of DTCA on consumers impact the doctor-patient relationship?

### Implicit Persuasion and the Doctor-Patient Relationship

A number of empirical studies have shown that DTCA significantly increases inappropriate prescribing (e.g., Mintzes et al. 2002; Murray et al. 2003; Gilbody et al. 2005). This increase seems largely because doctors working in DTCA environments face greater demands from patients for inappropriate medication, and because many doctors report that they find it difficult to resist such demands. As will be detailed, there is good reason to think that evaluative conditioning intensifies the impact of DTCA on inappropriate prescribing through such mechanisms. DTCA of pharmaceuticals also arguably undermines ethical medical practice in more subtle ways, as the impact of DTCA threatens to redefine therapeutic doctor-patient relationships as consumer relationships.
What do we know about the impact of pharmaceutical DTCA on doctor-patient relationships? Pharmaceutical companies invest heavily in DTCA, because, as noted above, it significantly increases sales. However, its mechanisms of influence over clinical practice have not been well understood as there was, historically, little systematic empirical research to substantiate various claimed effects of DTCA on doctor-patient relationships. More recently, however, a number of large-scale empirical studies have investigated those questions. For example, Murray et al. (2003) found that 74% of the 535 US doctors they surveyed had seen patients in the previous 12 months who discussed DTCA drug information with them. Forty-eight percent of those patients were doing so because they wanted a change in medication, which in almost half of cases the doctor regarded as clinically inappropriate. The study also found that doctors “often seem to acquiesce to [clinically inappropriate] requests so long as the patient is not harmed” (Murray et al. 2003, p. 521). The researchers concluded that “DTCA results in patients making almost as many inappropriate requests as appropriate ones (Murray et al. 2003, p. 521).” In their 2004 study of patients, Murray and colleagues found that 161 of the 226 respondents who said they had discussed DTCA at a medical consultation requested a specific intervention or medication after viewing DTCA (Murray et al. 2004). Seventy of these respondents reported not receiving that intervention or medication from their doctor, despite requesting it (Murray et al. 2004, pp. 13–15). These findings raise ethical concerns about DTCA undermining patient autonomy in decisions about medicines, and jeopardizing beneficent action by doctors toward patients.

Similar concerns are raised by Mintzes et al. (2003). They surveyed 78 primary care physicians and 1,431 patients in Sacramento and Vancouver1 about patient requests for specific drugs after exposure to DTCA for those drugs. The study found that 7.2% of the Sacramento patients requested DTCA-advertised drugs, compared with 3.3% of Vancouver patients (Mintzes et al. 2003, pp. 408–409). These findings are notable because patients’ self-reported exposure to pharmaceutical DTCA was significantly higher in Sacramento than in Vancouver. Further, once a patient requested a drug, both the US and Canadian physicians were likely to fulfill such requests, but were particularly likely to do so when the request was for one or more DTCA drugs. The researchers reported that “In Sacramento 80% of patients who requested prescriptions received them, as compared with 63% in Vancouver. . . . Indeed, for patients requesting DTCA drugs, the odds of receiving a prescription. . . . were 16.9 times those of patients who did not request a medicine” (Mintzes et al. 2003, p. 409). The researchers concluded that: “If DTCA opens a conversation between patients and physicians, that conversation is likely to end.

1Although DTCA of prescription pharmaceuticals is prohibited in Canada, there has nevertheless been a proliferation of “reminder” or “branded” advertisements on television by Canadian pharmaceutical companies. These ads mention a brand name of a drug without specifying what condition the drug treats (see Silversides 2001) and are tolerated by Canadian regulators. Canadians may also view DTCA via US-based cable TV and the Internet.
with a prescription, despite frequent physician ambivalence about treatment choice. And the greater the patient’s exposure to advertising, the more likely such a conversation will occur” (Mintzes et al. 2003, p. 412).

The first systematic review of the benefits and harms of DTCA concluded that, overall, “Direct to consumer advertising is associated with increased prescription of advertised products and there is substantial impact on patients’ requests for specific drugs and physicians’ confidence in prescribing” (Gilbody et al. 2005, p. 246). The same study corroborated the view that physicians often capitulate to patient demands for the advertised drug, despite physicians’ misgivings about the drug in question. The strong influence of DTCA on patients making “brand-specific requests” following exposure to DTCA is also supported in the study of antidepressant requests cited earlier (Kravitz et al. 2005). The researchers trained actors to perform standardized patient roles to investigate the effects of patients’ DTCA-based requests (and particularly brand-specific requests) for antidepressant drugs on doctors’ prescribing behavior. Of 149 of these patients presenting with depression, 27% of those who requested a specific brand of antidepressant received that drug. Of 149 patients presenting with adjustment disorder, for which medication is not a recommended treatment, 36% of those patients had their brand-specific request fulfilled. The researchers concluded that “Brand-specific requests had a differentially greater effect in adjustment disorder compared with major depression. This supports the hypothesis that DTC advertising may stimulate prescribing more for questionable than for clear indications” (Kravitz et al. 2005, p. 2000). The authors also comment that “If patients can sway physicians to prescribe drugs they would otherwise not consider, physicians may not be the stalwart intermediary that the law assumes” (Kravitz et al. 2005, p. 2000). So, patients in DTCA environments seem to become more demanding of their doctors regarding prescription pharmaceuticals, and doctors often seem to give in to the pressures they feel from patients to prescribe a particular drug (see also Spurgeon 1999).

The effects of DTCA on inappropriate prescribing seem magnified when DTCA employs techniques such as evaluative conditioning to condition favorable attitudes toward the advertised drug. As argued in the first section, DTCA using evaluative conditioning undermines patients’ ability to take an informed view about what medicines are best for them (see also Biegler and Vargas 2013). But there is also evidence that evaluative conditioning in DTCA influences patients to make brand-specific requests from their doctor.

A May 2012 study randomized 140 US undergraduate students to view either an actual TV commercial for a sleeping pill or read and hear a transcript of the ad’s voiceover and printed statements (Biegler et al. unpublished study). The ad utilized positive valence imagery consistent with that used in evaluative conditioning studies. It also included a list of side effects, some of which are potentially serious. One dependent measure gauged the likelihood the participant would request the sleeping pill from a doctor if insomnia were experienced. Responses were recorded on a 7-point scale where 1 = extremely unlikely to request and 7 = extremely likely to request the pill from a doctor. Ad viewers’ average rating of their likelihood of
requesting the sleeping pill was 4.47, compared with 4.13 (i.e., just above neutral) for transcript viewers. This difference was marginally significant, $F(1, 136) = 3.67$, $p = .057$. However, this difference was entirely driven by participants who were not native English speakers ($n = 51$); the marginal effect of ad condition on participants’ likelihood of requesting the sleeping pill from their doctor depended on whether they were native English speakers, $F(1, 136) = 6.16$, $p = .01$. Non-native English-speaking ad viewers’ average rating of their likelihood of requesting the sleeping pill from their doctor was 5.24, compared with 4.10 (just above neutral) for non-native English-speaking transcript hearers.

These findings support the persuasive power of the commercial’s “non propositional content,” that is, music, imagery, and voiceover tone, for example, that does not comprise an explicit claim about the drug. Nonpropositional content was differentially more persuasive for those less able to evaluate the ad’s explicit, propositional claims. The findings buttress the ethical concerns already raised about the capacity of some DTCA viewers to accurately gauge an advertised medicine’s properties and whether their subsequent requests for those drugs (often met by doctors) are in their best interests. Proponents cannot simply assume that DTCA is an unqualified good in terms of raising patient awareness of (and compliance with) medication, regardless of what method of advertising is used.

There is also good reason to hold that DTCA distorts the therapeutic nature of doctor-patient relationships. That is, DTCA threatens to redefine doctor-patient relationships as consumer relationships by altering the proper governing conditions of those relationships. Those governing conditions are demonstrated by what doctors prioritize in their clinical decisions, and by their reasons for prioritizing those considerations. For instance, a doctor who regularly prescribes drugs because they are demanded by patients responding to DTCA, whether or not the drug is optimal, demonstrates a consumer relationship rather than a therapeutic relationship with those patients (see Oakley 2012, 2014). The use of evaluative conditioning in DTCA heightens these concerns. This is because its persuasive potency will likely increase the frequency of such patient requests. Moreover, data on the resistance to extinction of evaluative conditioning suggests its presence in DTCA will make it more difficult for doctors to counter patients’ ad-driven medication preferences (see Vansteenwegen et al. 2006).

These effects of DTCA are salient for policymakers tasked with helping professional medical associations meet their goal of preserving the therapeutic orientation of doctor-patient relationships. That goal faces the challenge of increasing commercialization of medical practice at a time when patients are becoming more forthright and assertive in relation to their health care. Thus, the Australian Medical Association’s Code of Ethics advises that doctors should “Recognize that an established therapeutic relationship between doctor and patient must be respected” (Australian Medical Association 2006, Sect. 1.1.14). Allowing DTCA of prescription pharmaceuticals in countries such as the United States and New Zealand seems to have shifted many doctors’ governing conditions from upholding patients’ best interests, to meeting patients’ brand-specific drug requests even when the request has questionable clinical merit.
Policymakers should be wary of the potential for DTCA to redefine doctor-patient relationships as consumer relationships. In return for being granted a monopoly of expertise on the provision of key goods, doctors are expected to have certain professional character traits. Doctors should be guided by a disposition to serve their patients’ best interests and to prioritize patient welfare in their decisions. Doctors make a commitment on joining the medical profession to display a certain kind of professional character, one that, among others, maintains therapeutic rather than commercial relationships with their patients (see Oakley 2014). Even if DTCA were deemed beneficial on the grounds of health outcomes (though the cited evidence makes this unlikely) or perhaps by appeal to freedom of speech, its erosion of the therapeutic doctor-patient relationship is too great a moral cost to pay.

Conclusion

Research in social psychology increasingly shows that advertising persuades subtly, often outside of awareness. Evaluative conditioning is a well-researched implicit persuasive technique that plausibly operates in DTCA. There are good reasons to suppose that evaluative conditioning leads to more positive attitudes toward the advertised drug, and that such attitudes encompass inflated beliefs about drug safety and efficacy. Of grave concern, however, is that the positive imagery deployed to produce such conditioned beliefs bears little substantive relationship with properties of the advertised drug. Given the materiality of these drug properties for people contemplating pharmacological treatment, such an unreliable influence on belief will likely undermine their justification, and antagonize the autonomy of resulting medical decisions.

It is recognized that much recent empirical work in psychology and theorizing in the philosophy of agency raise serious questions about the extent to which conscious deliberation influences ultimate choice. Yet, as outlined, this work may not undermine the case against implicit persuasion in DTCA. Rather, given the augmented role for automatic processing in human choice making, greater efforts should arguably be made to prevent this system from being corrupted. Reduced exposure to implicit techniques such as evaluative conditioning presents as one means by which that end might be realized.

Nor is it sufficient to place the burden of preserving patients’ autonomous choices on the physician gatekeeper. While the presence of that learned intermediary may mitigate heteronomous decision-making, strong evidence suggests it does so imperfectly. Physicians are vulnerable to pressure and persuasion from patients motivated, sometimes by wishful thinking, to realize their goal of pharmacological treatment.

On each of these counts, the emerging evidence of implicit persuasion as a driver of advertising effectiveness should counsel caution about DTCA. This should give reassurance to those many countries who outlaw DTCA. By contrast, the United States and New Zealand must widen their regulatory ambit to cover implicit persuasion in DTCA and encourage more research to delineate its effects.
Cross-References

▶ Beyond Dual-Processes: The Interplay of Reason and Emotion in Moral Judgment
▶ Ethics of Neuromarketing: Introduction
▶ Neuromarketing: What Is It and Is It a Threat to Privacy?
▶ Using Neuropharmaceuticals for Cognitive Enhancement: Policy and Regulatory Issues

References


Biegler, P. & Vargas, P. Feeling is believing: Evaluative conditioning and regulation of pharmaceutical advertising (in preparation).

Biegler, P., Vargas, P., & Oakley, J. Persuasive effects of non-propositional content in a prescription sleeping pill commercial (Unpublished study).


