

RESEARCH PAPER

Ensuring smokers are adequately informed: reflections on consumer rights, manufacturer responsibilities, and policy implications

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The right to information is a fundamental consumer value. Following the advent of health warnings, the tobacco industry has repeatedly asserted that smokers are fully informed of the risks they take, while evidence demonstrates widespread superficial levels of awareness and understanding. There remains much that tobacco companies could do to fulfil their responsibilities to inform smokers. We explore issues involved in the meaning of “adequately informed” smoking and discuss some of the key policy and regulatory implications. We use the idea of a smoker licensing scheme—under which it would be illegal to sell to smokers who had not demonstrated an adequate level of awareness—as a device to explore some of these issues. We also explore some of the difficulties that addiction poses for the notion that smokers might ever voluntarily assume the risks of smoking.

specific risks; and whether they are sufficiently clear or explicit. As a matter of general legal principle, the greater the magnitude of a risk (that is, the more likely that the adverse outcome will occur), and the more severe the consequences if the risk materialises, the more important is the obligation to disclose.

Globally each year, tobacco products, when used as intended by their manufacturers, cause the death of (currently) some five million people.³ Up to two thirds of long term users of tobacco will die from a tobacco caused disease.⁴ Tobacco thus constitutes a *prima facie* example of a consumer good for which it is imperative that questions about the communication of risk information be considered.

As we will argue, there is a huge disparity between what is known from epidemiological research about the range, extent, and probability of tobacco's harm to users, and both the communication of these harms to consumers and smokers' understandings of these harmful characteristics. The proposition that most smokers are fully or even adequately informed about the risks they take is false.

Governments regularly impose restrictions and conditions of use on goods and services when unrestricted use or provision may cause unacceptable levels of harm to either users or those exposed to the use of the product or provision of the service. This is more often the case when the harms caused are imminent (“dangerous”) rather than chronic (“unhealthy”), the latter typically requiring many years to be expressed as illness. Restrictions implemented through registration and licensing are imposed on manufacturers of consumer products, motor vehicles and their users, firearms, explosives, and the performance of dangerous work. Governments restrict access to or performance of certain occupations (for example, certification of competence to perform electrical work, building, plumbing, medical and dental procedures) and require formal assessment of medical need for access to products (access to addictive drugs such as morphine derivatives). For a product that causes such immense death and disease, the sale of, and access to, tobacco remains minimally regulated.

In this paper we first examine the notion of what a “fully or adequately informed” smoker might mean. We then consider the obligations of tobacco manufacturers to inform consumers about the risks of tobacco use and compare these with current practice. We then examine the idea of a system of smoker licensing based on

The right to information is a core platform of consumer rights.¹ Obligations to provide information to consumers about the risks created by products fall mainly upon manufacturers, and the failure to provide information is a common basis of legal liability. This failure may take the form of positively misleading or deceptive conduct or misleading or deceiving through a combination of positive acts and silence, such as where a manufacturer fails to disclose information where a consumer would have a “reasonable expectation” that, if the manufacturer knew some information likely to be seen as important to a consumer, the manufacturer would disclose it (see, for example, *Demagogue Pty Ltd v Ramensky*²).

No person can be reasonably expected to have a full appreciation of all the risks they face in every behaviour or in every circumstance in which they may find themselves. For similarly obvious reasons, the law never requires a manufacturer to disclose every conceivable risk that a product might ever create in any circumstance. Generally though, the obligation is to provide “adequate” information or warnings. As often occurs in law, “adequacy” is an imprecise concept that has to be determined in the context of all relevant circumstances. Relevant questions include whether warnings bring clearly and emphatically to the mind of a consumer the risks associated with use; whether they refer to

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smokers being able to demonstrate that they are in fact “adequately informed” about the risks of smoking. We are not necessarily proposing such a system, but we find it a useful device through which to explore some of the major policy questions that arise in debates about whether smokers are informed. We then explore some of the difficulties that addiction, initiation in childhood, and inequalities in education pose for the notion that smokers, understanding the risks of smoking, voluntarily assume them. We draw our examples mainly from Australia.

“INFORMED” SMOKERS: POLICY IMPLICATIONS

The tobacco industry has long acted to avoid, dilute, and delay the introduction of health warnings on packs, particularly when these concern specific diseases.⁵ When it was forced by legislation to do so, the cloud had a big silver lining, allowing the global industry to adopt the position that all smokers were henceforth “fully informed”. For example, the Tobacco Institute of Australia told the Australian Senate in 1995: “The tobacco industry believes that people who smoke do so fully informed of the reported health risks of smoking. ...If the public is adequately informed then the necessity or logic of further government intervention must be questioned.”⁶ However, the core assumption of the industry’s position has not been sufficiently interrogated: just what is a “fully or adequately informed smoker”? Moreover, if the concept of the fully informed smoker is seen as critical to policy about the obligations of manufacturers and the responsibilities of government, it follows that we should also ask whether it is, or should be, legal to sell tobacco to an “inadequately informed smoker”.

To our knowledge, the assumption about being able to better make an informed choice when attaining adulthood has never been made explicit in sales to minors laws. However, legal proscriptions on children voting, being conscripted into military service, gambling, and entering legal contracts and on selling tobacco to children are in part based on the premise that children are too intellectually immature to be able to make informed decisions about matters where they might be exploited or suffer harm. Adulthood, and its legal rights and responsibilities, carries assumptions about individuals being able to reasonably comprehend risks and make informed choices. But such an assumption deserves scrutiny against what is known about smokers’ understandings of the risks they face.

There are at least four important consequences for both the tobacco industry and public health policy if the “smokers are fully or adequately informed” argument is accepted uncritically. First, it allows the tobacco industry to resist future reform of pack warnings. As Philip Morris’ international CEO wrote to an Australian political leader in 1992 “Australians are aware of the warnings against smoking – one would have to be asleep in a cave for twenty years not to be aware – and a change in the existing pack warnings is thus unnecessary”.⁷

Second, it allows the tobacco industry to resist other regulatory reforms, such as those dealing with advertising and promotion, product availability (where products can be sold), packaging design, or taxation. The Tobacco Institute of Australia’s line that “if the public is adequately informed then the necessity or logic of further government intervention must be questioned” can be expected to be deployed in each of these contexts.

Third, the cornerstone of the industry’s defence to litigation in most cases brought by dying smokers has been that smokers are aware of the risks they take, via pack warnings and other widely circulated information about smoking and health, and therefore smokers should bear all responsibility for deciding to take these risks. Evidence that the community is “saturated” with information about

illnesses said to be caused by smoking and the addictive nature of nicotine (see below) is critical to such a defence, although remaining vulnerable to evidence about the industry’s dissembling conduct designed to undermine public confidence in the warnings,⁸ the reassuring messages it has sent, and continues to send, to smokers and potential smokers through its advertising including alluring packs designs,⁹ deliberate product manipulation,¹⁰ and the significance of addiction.

The fourth area of relevance is concerned with arguments about the costs and benefits of tobacco use to national economies. Industry commissioned economic reports often assume Viscusi’s “rational addiction” precepts¹¹ about significant awareness of health risks as a basis for arguing that the money outlaid by all smokers should be considered as an economic benefit, thereby allowing the “benefits” side of national cost/benefit ledgers to be boosted significantly.

WHAT IS A “FULLY OR ADEQUATELY INFORMED” SMOKER?

Four levels of being “informed” about the risks of smoking can be distinguished:

Level 1: having heard that smoking increases health risks

At the most elementary level, one can ask whether an individual has ever heard that smoking is a threat to “health” in its widest sense. Such people might be said to be “aware” that smoking is said to be harmful. Today, this level of awareness is very high in nearly all nations and sub-populations, and it is to that which the tobacco industry invariably refers when it talks about almost saturation levels of awareness. Evaluation of recent Australian quit campaigns, which highlight the harms of smoking, suggests over 88% awareness of the campaigns.¹²

Level 2: being aware that specific diseases are caused by smoking

Level 1 awareness often involves little understanding of which particular diseases are caused by smoking, while level 2 awareness involves knowing that smoking can cause particular diseases like lung cancer and emphysema. Level 2 awareness in populations is generally much lower than that for level 1. For example, in one Australian study, only 54% of smokers mentioned lung cancer, unprompted, as a smoking related illness, though the specific warning had already appeared on packs for several years.¹³ While cigarette smoking has been found to increase the risk of developing many different illnesses, most smokers in developed countries with histories of tobacco control can name only a few illnesses when given the opportunity in surveys to name as many diseases caused by smoking as they can, suggesting that many of the health risks are either unknown or not particularly salient.

Here important questions arise as to how many, and which, diseases a person should be aware of before being said to be adequately “aware” of the full range of risks engendered by smoking. In Australia, there are six different health consequences named on current pack warnings and awareness of these among smokers remains high,¹⁴ yet a 2002 US Surgeon General review and International Agency for Research in Cancer (IARC) declarations about smoking’s relation to disease found 26 other diseases not covered by the six warnings.¹⁵ Informed decision making and self regarding behaviour seem impossible without knowledge of many conditions that have not been the subject of health warnings. For example, conditions caused or exacerbated by smoking such as blindness,¹⁶ reduced fertility, deafness, and impotence substantially affect lifestyle and life decisions. Other

conditions, such as bladder cancer and colorectal cancer,¹⁷ could potentially be treated if detected early. Here, information may make the difference between survival and death.

Level 3: accurately appreciating the meaning, severity, and probabilities of developing tobacco related diseases

Being aware of claims that smoking causes particular diseases may not involve an individual having even rudimentary awareness or understanding of what these diseases mean. For example, few smokers are likely to actually know what emphysema is, how it perforates lung tissue, and what the quality of the day-to-day life of someone living with emphysema is like. Similarly, few would have seen a person (or even a photograph of a person) suffering from gangrene caused by advanced peripheral vascular disease caused by smoking, and so would have a poorly developed sense of the hideous nature of gangrene.

Similarly important is an understanding of the severity of smoking caused disease, the likelihood of surviving five years after diagnosis, the probabilities of contracting various diseases, or the relative risk of contracting a smoking caused disease when compared to other risks of life that people would rank as important. For example, when shown a list of possible causes of death which included car accidents, alcohol, asbestos, and poor diet and asked to indicate the one they were most likely to die from, only one third of smokers in an Australian study identified smoking,¹³ despite it being by far the greatest health hazard they faced on the list. A considerable proportion of smokers (28%) thought they were most likely to die from a car accident and 6% thought they would die from “toxic chemicals”. Borland has shown that a majority of Australian smokers underestimate the risks of smoking.¹⁸ Weinstein, Marcus, and Moser stated: “Smokers underestimate their risk of lung cancer both relative to other smokers and to nonsmokers and demonstrate other misunderstandings of smoking risks. Smoking cannot be interpreted as a choice made in the presence of full information about the potential harm.”¹⁹ A comprehensive list of such studies can be found in the Canadian Cancer Society publication²⁰ (commencing at page 231). Such studies indicate that many smokers have a poor understanding of the risks smoking poses to their health. Additionally, given that most harms from smoking occur later in a smoker’s lifetime, becoming manifest after often decades of use, special challenges arise in communicating the lifetime probability of acquiring such diseases.

Level 4: personally accepting that the risks inherent in levels 1–3 apply to one’s own risk of contracting such diseases

Individuals may have appreciable levels of awareness as described above, but may nonetheless mediate these through various self exempting beliefs (for example, “everything causes cancer these days”) that effectively allow for the rationalisation of continued smoking.²¹ Level 4 awareness involves smokers agreeing that their smoking poses significant risk to their *own* health. Weinstein’s review of international evidence on smokers’ recognition of vulnerability to harm concludes: “smokers do acknowledge some risk; nevertheless they minimize the size of that risk and show a clear tendency to believe that the risk applies more to other smokers than themselves... People may be quite aware of well-publicised risks and may even overestimate their numerical probability, but they still resist the idea that risks are personally relevant.”²²

In principle, an adequately informed smoker would be one who was able to demonstrate specified levels of awareness and understanding of levels 2 and 3 information, and who believed that their own smoking was likely to pose significant

risks to their health (level 4). However, operationalising what these agreed levels of understanding should be and how we would agree that adequate levels of understanding had been demonstrated present large challenges. Nevertheless, the difficulties presented by operationalising these challenges should not preclude them being subjected to serious consideration, drawing on the considerable body of evidence assembled by experts in the visual communication of risk²³ and particularly work undertaken in Canada²⁰ and Australia²⁴ in the development of more salient health warnings.

Level 2 awareness would require agreement on which diseases smokers should reasonably be expected to know were increased in risk by smoking. The conclusions of regular reviews by agencies such as the Centers for Disease Control, the US Surgeon General, and the IARC could provide a starting point here. Just as drivers in most nations must pass a detailed knowledge test about rules and road signs, and licensed firearm owners in Australia must pass a knowledge test about firearm safety, it might be possible to construct a test to establish an agreed acceptable level of awareness. Driving tests do not test probabilities of harm from vehicle travel, but such a difference need not preclude the testing of such understanding in a possible “smoker’s test”.

Establishing levels 3 and 4 awareness via such a smoker’s test would pose many more difficulties. Debates about whether smokers are adequately informed of the risks, and what the legal and regulatory consequences of the answers to these questions might be, need to be informed by evidence of actual, and not hypothesised, human behaviour. Cognitive psychology research tells us much about how people process information, form preferences, and make judgments and decisions. People use heuristics, or rules of thumb, to negotiate complexity. They “suffer from various biases and aversions that can lead to inaccurate perceptions”.²⁵ Legal and regulatory scholars have begun to engage with these findings and understand their significance in their own fields. For example, Jolls *et al* describe the task of “behavioural law and economics”, a newer school of thought that challenges many of the assumptions of traditional “law and economics” thinking, as exploring “the implications of actual (not hypothesized) human behavior for the law. How do “real people” differ from *homo economicus*?”²⁶

The ideas that we are exploring here recognise that what people understand and what information is thought, at a general level, to be “out there”, can be very different things. It acknowledges also that the *presentation* of information is highly consequential for risk perception and judgments of risk saliency and that there is no “neutral” way of simply presenting information about the risks of smoking or (say) those of road deaths. Information can be presented in bland ways that will be unlikely to cut through the myriad other messages that compete for attention in the “marketplace” of ideas. Or it can be presented in powerful and salient ways, intentionally designed and pre-tested with target audiences to increase message saliency.^{27 28}

As Tversky reminds us “Alternative descriptions of the same choice problems lead to systematically different preferences; strategically equivalent elicitation procedures give rise to different choices; and the preference between x and y often depends on the choice set within which they are embedded.”²⁹ Could a test examine what individual smokers *actually* understand? Such considerations as those above suggest that the ambition to develop standardised tests of level 3 and 4 awareness would generally be very difficult, necessitating a major period of research designed to explore the dynamics of smokers’ risk heuristics.

Nonetheless, we believe the sheer, enduring scale of the global tobacco epidemic should inspire governments to invest research and development effort into exploring possibilities

here. The regulation of consumer information, including through pack warnings, should be based on such research, rather than on insufficiently tested assertions about consumer awareness.

TOBACCO INDUSTRY'S CURRENT INFORMATION INACTION

The tobacco industry's past and current practice in communicating with its customers about health risks can be characterised as doing as little as possible, as slowly as possible, in as low a key as possible. As revealed in industry documents, the industry fully appreciates that packs are the premier site for communicating with smokers.⁸ Yet the industry in Australia has never initiated any form of communication with smokers about health risks via packs. Instead, it defers to government requirements on health warnings, waits for government reforming initiatives, and then seeks to delay and dilute the proposed changes.⁵

There is much more that the industry could do to inform smokers both via packs and through other means. Rather than wait out the 10 year cycles that have characterised three new generations of health warnings in Australia, the industry could voluntarily add new warnings to packs whenever scientific consensus was declared via major agency reports like those of the IARC. It could run public awareness campaigns citing these new findings (authorised and vetted by health authorities) and place website addresses on packs linking to the reports rather than trust smokers to discover these for themselves. It is not through lack of its own awareness that the industry fails to warn smokers about emerging new risks. Industry documents on the Master Settlement Agreement websites contain many thousands of examples of public domain scientific papers on health effects that have been in the industry's possession often for decades. In any case, even if it did not monitor developing information, lack of awareness ought to be no defence. The manufacturer that buries its head in the sand is hardly less culpable than the manufacturer that deliberately withholds information—the law recognises this through its notion of “willful blindness”. The industry has a continuing responsibility to inform itself, and to act.

In Australia, tobacco companies voluntarily publish additive and emissions data on websites,³⁰ although the ubiquitous use of the non-specific catch all term “processing aids” allows them to conceal information about any ingredient they wish not to reveal to consumers.³¹ However, as they are not publicised by the industry or listed on cigarette packs, very few smokers would be aware of these sites, nor capable of understanding the implications of pyrolysis product inhalation. Again, the industry could declare *all* the ingredients it uses in manufactured tobacco such as ammonia chemistry and any nicotine analogues,³² explain why it uses them and how they affect addiction, and inform consumers that no information is available about the health effects on humans of inhaling the combusted ingredients it adds to tobacco.

LICENSING SMOKERS

The tobacco industry commonly asserts that it wishes to sell its products only to informed adults. We have cited examples of research demonstrating that large proportions of adult smokers are poorly informed about the risks they are taking and that the tobacco industry currently does little to try and rectify this. However, the industry accepts, at least as a matter of public rhetoric, that it is not legitimate to sell to the uninformed. Further, it is inconceivable that it would try to make a virtue out of selling to the ill informed, so opposing the principle of the adequately informed smoker would present it with considerable difficulties.

What if we took the industry at its word and introduced a system of smoker licensing that required all smokers to pass a knowledge test of the sort we have outlined? Licensed smokers might be given a photo ID smart card which would be used on each occasion of purchase. This would record all purchases and not permit sales unless recorded against a licence. Purchasing limits in the smart card (say two packets per day maximum) could prevent large scale purchasing of cigarettes by licensed smokers for selling on to unlicensed smokers (particularly youth). Further, governments could experiment with financial incentives to encourage licensed smokers to surrender their cards. This would place a major obstacle in the way of relapse because without a smart card, former smokers would find it much more difficult to obtain cigarettes without re-obtaining a licence.

Objections about restrictions on civil liberties arising from purchasing limits could be countered by analogies with other restricted products such as prescription drugs, where users are only permitted to purchase defined quantities because of concerns about potential abuse and harm. Where harm is suffered not only by individuals but also by the community through passed on social costs, the justification is not only one of protecting people from themselves, but also of protecting the community against the incurring of preventable costs. Concerns about the privacy of one's smoking status being potentially abused could be countered by pointing out that life insurance companies already require clients to declare their smoking status, and that (in Australia) it is illegal for health insurance companies to discriminate on the basis of smoking status.

As for how a licensing scheme could be funded, this could be either by smokers themselves, just as driving tests and license renewal are paid for by drivers, or perhaps more appropriately by industry. Given the uniqueness of tobacco in terms of harm and addictiveness, why should the industry, which profits from its use, not be responsible for the costs of ensuring that use is limited to those deemed sufficiently informed? This seems a very small price to pay to be allowed to profit from the sale of this anomalous product.

ADEQUATE INFORMATION AND TOBACCO REGULATION

The consideration of the rationale for a smoker licensing scheme throws much light on the regulatory challenges still posed by tobacco, and assists in focusing attention on what still needs to be achieved. At the very least, we should be looking towards regulation that creates environments in which, as far as possible, smokers are adequately informed. This would entail ensuring that adequate information is actively communicated by manufacturers, the regulation of other communication likely to affect smokers' understanding of the risks such as industry marketing and attractive packaging, and constructing environments in ways that do not dilute understanding of the products' risks, such as regulating where products can be sold. By allowing tobacco products to be sold in convenience stores alongside food and confectionary, an implied message is sent to consumers that tobacco is a very ordinary, unexceptional product undeserving of the sort of regulatory regimes provided for prescription drugs (which *save* lives), firearms, explosives, and many chemicals.

DISCUSSION

Two further matters of cardinal importance need to be addressed in any consideration of any potential test of smokers being adequately informed: addiction and equity. All that we have said so far is greatly complicated by the combined facts of (often rapid) nicotine addiction,³³ and that most smokers begin smoking in childhood when they are

legally incapable of making informed decisions on important matters. The importance of adequate information presupposes that people are able to make free, self-regarding decisions based on relevant facts. But as the tobacco industry knows “the entire matter of addiction is the most potent weapon a prosecuting attorney can have in a lung cancer/cigarette case. We can’t defend continued smoking as ‘free choice’ if the person was ‘addicted’.”³⁴

Much has been written about the notion of voluntarily assuming the risks of addiction^{10 35}—that is, assuming the risks of becoming addicted before one is addicted. The notion of voluntarily assuming the risks of having one’s capacity for future voluntary activity impaired is highly problematic. For example, Loewenstein describes addiction as “one, albeit extreme, example of a wide range of behaviors that are influenced or controlled by *visceral factors*”. “Unlike currently experienced visceral factors, which have a disproportionate impact on behavior, delayed visceral factors tend to be ignored or to be severely underweighted in decision making.”³⁶ Further, because relevant information on the risks of smoking is forever evolving, much relevant information can only be learned once one is already addicted. If agreement could be reached on what constituted being adequately informed about smoking’s risks, it could only be a level applicable at a particular point in time. Being “adequately informed” is not a static “once in a lifetime” state. New information emerging 10 years after a person commences smoking today comes after they are already addicted (and their capacity for voluntary activity has been impaired). But how can one *voluntarily* assume the risks to which the new information relates once one is already addicted?

Anglo-Australian common law contains a deep rooted doctrine of “voluntary assumption of risk” (*volenti non fit injuria*). Under this doctrine, defendants have a complete defence to negligence actions if they can show that a plaintiff voluntarily assumed the risk that later materialised into injury.

The test of voluntary assumption of risk is not an easy one to meet. The person who tries to use it has to show that the plaintiff: perceived the existence of the danger; *fully* appreciated it; and *voluntarily* accepted it.³⁷ The strictness of the test, and the rationale for the strictness, were well encapsulated by Lord Justice Scott, in 1944, when he wrote:

That general maxim has to be applied with specially careful regard to the varying facts of human affairs and human nature in any particular case just because it is concerned with the intangible factors of mind and will. For the purpose of the rule, if it be a rule, a man cannot be said to be truly “willing” unless he is in a position to choose freely, and freedom of choice predicates, not only full knowledge of the circumstances on which the exercise of choice is conditioned, so that he may be able to choose wisely, but the absence from his mind of any feeling of constraint so that nothing shall interfere with the freedom of his will.³⁸

By this test, we doubt that an addicted smoker who passed a smokers’ license knowledge test could be said to be “freely” choosing to smoke, despite their tested awareness of the risks involved. Adding to the difficulty, most would have become addicted as children, when by legal definition, they could not be said to be capable of making an informed choice.

Currently, some 80% of smokers commence before age 18. They are able to easily obtain their supplies from shops³⁹ notwithstanding that sale to them is illegal. Requiring a personalised smart card that would be extremely difficult to

What this paper adds

The right to information is a fundamental consumer right. Smokers have been repeatedly shown to be poorly informed about the risks of smoking. The tobacco industry claims today’s smokers are fully informed, but refers to only superficial levels of awareness. It also fails in many ways to communicate comprehensive risks to its customers. Using the original notion of a “smoker’s licence” this paper explores how smokers might be required to pass a test that demonstrated more adequate levels of understanding of the risks they face. Difficulties in developing and implementing such a test equitably are discussed.

forge and which would allow an agreed daily limit of supply to each licensed smoker would almost certainly reduce opportunities for non-licensed children to gain open access to cigarettes, so the concept may be worth exploring for that additional advantage.

Equity

Finally, important issues of equity are relevant. Smoking is increasingly an activity of lower socioeconomic groups, with many such smokers being illiterate, poorly educated, and intellectually disabled. While smoking is less common among people with intellectual disability than in the general population^{40 41} there are still many such people who smoke. In designing any policy or regulatory responses to the problems of being adequately informed, it would be important to pay proper regard to the different levels of education that exist within the populations targeted, and to tailor responses where appropriate. Passing a test of adequate comprehension of the risks of smoking would present greater difficulties to less educated people and those with disabilities, yet tailoring such a test to a level which made passing require only rudimentary knowledge would defeat the purpose of trying to ensure truly adequate understanding among smokers. This issue is likely to be the most problematic associated with establishing any common standard of being “adequately informed”.

Conclusion

In conclusion, the rights of consumers to adequate information about the health consequences of tobacco products when used as intended should be regarded as an inviolable principle within tobacco control policy debate. The tobacco industry can scarcely defend the virtues of an ill informed consumer base. Nor should it be allowed—in order to evade this position—to assert, without empirical evidence, that smokers are adequately informed.

The money the tobacco industry makes from inadequately informed smokers is illegitimately obtained. So, too, is much of the money made from those addicted to tobacco who cannot be said to be voluntarily assuming the risks of smoking.

Regulation of tobacco and the tobacco industry should be informed by empirical evidence about what smokers actually know and understand and how they actually behave, rather than self-serving, mythological ideas of informed smokers who, knowing all the risks, freely choose to smoke.

We would welcome discussion of these ideas on *Tobacco Control*’s rapid response website facility.

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REFERENCES

- 1 **Consumers International**. Rights and responsibilities http://www.consumersinternational.org/about_CI/#rights.
- 2 *Demagogue Pty Ltd v Ramensky*, Full Federal Court of Australia, 1992, http://www.austlii.edu.au/au/cases/cth/federal_ct/unrep5858.html.
- 3 **World Health Organization**. Why is tobacco a public health priority? <http://www.who.int/tobacco/en/>.
- 4 **Doll R**, Peto R, Boreham J, et al. Mortality in relation to smoking: 50 years' observations on male British doctors. *BMJ* 2004;**328**:1519, Epub 2004 Jun 22.
- 5 **Chapman S**, Carter SM. "Avoid health warnings on all tobacco products for just as long as we can": a history of Australian tobacco industry efforts to avoid, delay and dilute health warnings on cigarettes. *Tobacco Control* 2003;**12**(suppl III):iii13–22.
- 6 **Tobacco Institute of Australia**. Submission to Senate Community Affairs Reference Committee Inquiry into Tobacco Industry and the Costs of Tobacco-Related Illness. Sydney, Australia. 7 November, 1994:5.
- 7 **Murray WH** (Philip Morris) Letter to the Hon. N. Greiner, Premier of NSW. 1992; 26 June. <http://legacy.library.ucsf.edu/tid/ijf19e00>.
- 8 **Carter SM**, Chapman S. Smoking, disease, and obdurate denial: the Australian tobacco industry in the 1980s. *Tobacco Control* 2003;**12**(suppl III):iii23–30.
- 9 **Wakefield M**, Morley C, Horan JK, et al. The cigarette pack as image: new evidence from tobacco industry documents. *Tobacco Control* 2002;**11**(suppl I):i73–80.
- 10 **Webb WH** (Philip Morris). Status of the Marlboro development programme. 7 Dec 1984. <http://legacy.library.ucsf.edu/tid/gmr98e00>.
- 11 **Viscusi K**. *Smoking: making the risky decision*. New York: Oxford University Press, 1992.
- 12 **Wakefield M**, Freeman J, Donovan R. Recall and response of smokers and recent quitters to the Australian National Tobacco Campaign. *Tobacco Control* 2003;**12**(suppl II):ii15–22.
- 13 **Mullins R**, Borland R, Hill D. Smoking knowledge, attitudes and behaviour in Victoria: Results from the 1990 and 1991 Household Surveys. In: Victorian Smoking and Health Program. Quit Evaluation Studies No 6. Melbourne: Victorian Smoking and Health Program, 1995, <http://www.quit.org.au/quit/QE6/QE6Ch1.html>.
- 14 **Commonwealth Department of Health and Aged Care**. Review of health warnings on tobacco products in Australia. Discussion paper April 2001. <http://www.health.gov.au/pubhlth/publicat/document/tobacco.pdf>.
- 15 **Scollo M**, Lal A. The causal links and associations with active and passive smoking and specific diseases and medical conditions. VicHealth Centre for Tobacco Control August 2002. http://www.vctc.org.au/health/causes_and_associations.pdf.
- 16 **Mitchell P**, Chapman S, Smith W. Smoking is a major cause of blindness. A new cigarette pack warning? *Med J Aust* 1999;**171**:173–4.
- 17 **Watson P**, Ashwathnarayan R, Lynch HT, et al. Tobacco use and increased colorectal cancer risk in patients with hereditary nonpolyposis colorectal cancer (Lynch syndrome). *Arch Intern Med* 2004;**164**:2429–31.
- 18 **Borland**. What do people's estimates of smoking related risk mean? *Psychology and Health* 1997;**12**:513–21.
- 19 **Weinstein ND**, Marcus S, Moser RP. Smokers' unrealistic optimism about their risk. *Tobacco Control* 2005;**14**:55–9.
- 20 **Canadian Cancer Society**. *Controlling the tobacco epidemic: selected evidence in support of banning all tobacco advertising and promotion, and requiring large, picture-based health warnings on tobacco packages*. Ottawa: Canadian Cancer Society, International Union Against Cancer, 2001.
- 21 **Oakes W**, Chapman S, Balmford J, et al. "Bulletproof skeptics in life's jungle": which self-exempting beliefs about smoking most predict lack of intention to quit? *Prev Med* 2004;**39**:776–82.
- 22 **Weinstein ND**. Smokers' recognition of their vulnerability to harm. In: Slovic P, ed. *Smoking. Risk, perception and policy*. Thousand Oaks, California: Sage Publications, 2001:81–96.
- 23 **Lipkus IM**, Hollands JG. The visual communication of risk. *Journal of the National Cancer Institute Monographs* 1999;**25**:149–63.
- 24 **Elliot and Shanahan Research**. *Developmental research for new health warnings on Australian tobacco products*, Commonwealth of Australia, Sept 2003. [http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/health-pubhlth-strateg-drugs-tobacco-warnings.htm/\\$FILE/warnings_stage2.pdf](http://www.health.gov.au/internet/wcms/Publishing.nsf/Content/health-pubhlth-strateg-drugs-tobacco-warnings.htm/$FILE/warnings_stage2.pdf).
- 25 **Sunstein C**. In: Sunstein C, eds. *Behavioural law and economics*. Cambridge: Cambridge University Press, 2000:3.
- 26 **Jolls C**, Sunstein C, Thaler R. A behavioural approach to law and economics. In: Sunstein C, eds. *Behavioural law and economics*. Cambridge: Cambridge University Press, 2000:14.
- 27 **Witte K**. The manipulative nature of health communication research: ethical issues and guidelines. *Am Behav Sci* 1994;**38**:285–93.
- 28 **Krugman DM**, Fox RJ, Fischer PM. "Do cigarette warnings warn? Understanding what it will take to develop more effective warnings". *Journal of Health Communication* 1999;**4**:95–104.
- 29 **Tversky A**. Rational theory and constructive choice. In: *The rational foundations of economic behaviour* (Kenneth Arrow et al. eds, 1996).
- 30 **Australian Government**. Department of Health and Aging. Australian cigarette ingredient information. May 2003. <http://www.health.gov.au/pubhlth/strateg/drugs/tobacco/ingredients.htm>.
- 31 **Chapman S**. "Keep a low profile": pesticide residue, additives, and freon use in Australian tobacco manufacturing. *Tobacco Control* 2003;**12**(suppl III):iii45–53.
- 32 **Vagg R**, Chapman S. Nicotine analogues: A review of tobacco industry research interests. *Addiction* 2005;**100**:701–12.
- 33 **DiFranza JR**, Rigotti NA, McNeill AD, et al. Initial symptoms of nicotine dependence in adolescents. *Tobacco Control* 2000;**9**:313–19.
- 34 **Knapick P**. [Memorandum to W. Kloefer]. 9 Sep 1980. Tobacco Institute. <http://legacy.library.ucsf.edu/tid/yol92f00>.
- 35 **Becker G**, Murphy K. A theory of rational addiction. *J Political Economy* 1988;**96**:675–700.
- 36 **Loewenstein G**. A visceral account of addiction. In: Slovic P, eds. *Smoking. Risk, perception and policy*. Thousand Oaks, California: Sage Publications, 2001:188–215.
- 37 *Ranieri v Ranieri* (1973) 7 South Australian State Reports 418, 429 (Sangster J).
- 38 *Bowater v Rowley Regis Corporation* [1944] 1 King's Bench Reports 476, 479.
- 39 **Staff M**, Bennett CM, Angel P. Is restricting tobacco sales the answer to adolescent smoking? *Prev Med* 2003;**37**:529–33.
- 40 **Robertson J**, Emerson E, Gregory N, et al. Lifestyle related risk factors for poor health in residential settings for people with intellectual disabilities. *Res Dev Disabil* 2000;**21**:469–86.
- 41 **Taylor NS**, Standen PJ, Cutajar P, et al. Smoking prevalence and knowledge of associated risks in adult attenders at day centres for people with learning disabilities. *J Intellect Disabil Res* 2004;**48**:239–44.