

Submission No. 34
(Plain Packaging Bill)
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INQUIRY INTO TOBACCO PLAIN PACKAGING

Submission to the Health and Ageing Committee

House of Representatives

Parliament of Australia

Canberra

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INTRODUCTION

This submission argues against the introduction of “plain packaging” for tobacco products on two grounds:

1. such a requirement violates regulatory best practices in that it is *not* supported by reliable evidence; and
2. such a requirement violates intellectual property treaties to which Australia is a party.

The submission is divided into two parts. Part 1 highlights: 1) how plain packaging runs afoul of intellectual property rights; and 2) how the weight of the scientific evidence fails to show that plain packaging will reduce smoking initiation, reduce smoking prevalence and consumption, increase changes in smoking behaviour as a result of health warnings, and increase cessation.

Part 2 focuses on the issue of health warnings, in that one of the claims advanced in favour of plain packaging is that it will result in favourable changes in smoking behaviour due to the fact that these graphic health warnings (GHW) will appear on a plain package without the “distractions” of tobacco trademarks. This submission argues that the empirical evidence about health warnings in general - and GHW specifically - fails to support this claim.

PART 1

THE WTO & INTELLECTUAL PROPERTY RIGHTS

The basic legal framework for international trade relations, including intellectual property, is currently found in the WTO and in various annexes to the Agreement. With respect to intellectual property rights, the most important of these are Trade Related Aspects of Intellectual Property Rights (TRIPS), the General Agreement on Trade and Tariffs (GATT), the Technical Barriers to Trade Agreement (TBT), and the General Agreement on Trade in Services (GATS). While the Paris Convention was ratified by virtually all countries and expanded and revised several times, it did not incorporate TRIPS (in Article 2) into the trademark rights of the Paris Convention while addressing the issues of enforcement and dispute settlement.

The basic purpose of TRIPS is contained in the preamble, which notes that there is a “need to promote effective and adequate protection of intellectual property rights, and to ensure that measures and procedures to enforce intellectual

property rights do not themselves become barriers to legitimate trade.” The preamble speaks also of the “need for new rules and disciplines concerning...the provision of adequate standards and principles concerning the availability, scope and use of trade-related intellectual property rights,” as well as recognizing that “intellectual property rights are private rights.”

A further elaboration of the purpose of intellectual property rights is found in Article 7 Objectives, as well as Article 8 Principles, which set out the reasons why such rights are so important. Article 8 states that, “The protection and enforcement of intellectual property rights should contribute to the promotion of technological innovation and to the transfer and dissemination of technology, to the mutual advantage of producers and users of technological knowledge and in a manner conducive to social and economic welfare, and to a balance of rights and obligations.” This principle of balance between the rights and obligations of intellectual property rights owners is also found in Article 8 which allows that “appropriate measures, provided that they are consistent with the provisions of this Agreement, may be needed to prevent the abuse of intellectual property rights by right holders.”

Four articles of TRIPS are relevant to the plain packaging question. First, Article 15 incorporates Article 7 of the Paris Convention and with it the foundational principle of intellectual property rights - product neutrality. Registration is not subject to any test respecting the nature of the good. The fact that tobacco trademarks are tobacco trademarks does not constitute a legitimate reason for not registering them.

Second, Article 17 addresses the exceptions to intellectual property rights. It states that “Members may provide limited exceptions to the rights conferred by a trademark, such as the fair use of descriptive terms, provided that such exceptions take account of the legitimate interests of the owner of the trademark and of third parties.” This provision suggests several impediments to plain packaging. For one thing, the exception is specifically described as “limited.” Given that plain packaging represents a total prohibition on the trademark owner’s right of use, if not registration, it could not be considered “limited.”

Also, exceptions must take “account of the legitimate interests of the trademark owner,” one of whose interests would obviously be the use of his trademark. As a recent WTO dispute panel observed, “Every trademark owner has a legitimate interest in preserving the distinctiveness, or capacity to distinguish, of its trademark so that it can perform its function. This includes its interest in using its own trademark in connection with the relevant goods and services of its own and authorized undertakings.”¹ Plain packaging would appear to infringe both of these

¹ 5EC-Protection of Trademarks and Geographical Indications for Agricultural Products and Foodstuffs, Panel Decision, USA v EC, WTO document, WT/DS174R, 15 Mar. 2005 para 7.664.

legitimate interests which the trademark owner noted in the dispute panel decision, first through undermining the trademark's capacity to distinguish, and second through eliminating its right to be used. Indeed, it would be fair to say that plain packaging, far from taking account of the legitimate interests of the trademark owner, is specifically designed to suppress those interests.

Third, Article 20 outlines the standard for regulating the use of a trademark. "Special requirements" for the use of the trademark must be "justifiable." The Article notes that "The use of a trademark in the course of trade shall not be unjustifiably encumbered by special requirements, such as the use with another trademark, use in a special form or use in a manner detrimental to its capability to distinguish the goods or services of one undertaking from those of other undertakings." TRIPS fails to define what constitutes unjustifiable, nor does it reflect a negotiating history that illuminates its meaning; one must look to the examples provided in the Article itself.

Two of the examples of unjustifiable encumbrance are clearly relevant to plain packaging. First, such packaging requires the trademark to appear in a special form prescribed by the state, not in the form designed by the trademark owner. Second, such packaging compromises the distinctiveness of trademarks by requiring that all trademarks look alike thus interfering with the trademarks' ability to "distinguish the goods and services of one undertaking from those of other undertakings." As Katz and Dearden observe:

A plain packaging measure encumbers the use of a trademark in the course of trade by special requirements. A plain packaging measure violates Article 20's obligation by prohibiting the use of all or part of a trademark (for example, designs, logos, or crests) or by imposing restrictions on the use of the trademark such as by prescribing the color of the package, or the size of the trademark, or the location of the trademark on the package. Such special requirements are clearly detrimental to the trademark's capability to distinguish the goods.²

N. Pires de Carvalho, in commenting on the meaning of the examples adduced as unjustifiable encumbrances, makes a similar point: "Loss of distinctiveness is, therefore, the common denominator of the three examples and which causes the need for scrutinizing the justifiability of special requirements. This means that the justification found by a government for imposing encumbrances on the use of a certain mark will be assessed vis-à-vis the loss of distinctiveness."³

² J. Katz and R. Dearden, "Plain packaging and international trade treaties" in J. Luik, ed. *Plain Packaging and the Marketing of Cigarettes*.

³ Quoted in Kluwer, *The TRIPS Regime of Trademarks and Designs 2006*: (133).

Plain packaging arguably runs afoul of Article 20 in a third and even more fundamental sense - it encumbers tobacco trademarks not only with unjustified special requirements but effectively suppresses the use of such trademarks entirely. This, it might be argued, is the ultimate encumbrance and one clearly not admitted under Article 20.

The fourth article of TRIPS relevant to the issue of plain packaging, and by far the most contentious one, is Article 8, the so-called public health exemption. According to Article 8, "Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socioeconomic and technological development, provided that such measures are consistent with the provisions of this Agreement." It is often argued that this Article provides a justification for plain packaging within the scope of the TRIPS intellectual property structure. Those claims are examined at length in section three.

For now it is enough to note that if Article 8 does provide an exception to intellectual property rights through permitting public health measures such as plain packaging, it does so only in carefully prescribed ways - ways which many public health measures may be unable to satisfy.

First, Article 8 requires that public health measures must be necessary to protect public health. At minimum, this requires a careful and compelling demonstration of a connection between the proposed measure - in this instance plain packaging - and protection of public health. The proposed limitation on intellectual property must be shown to result in a public health gain - not theoretically but actually. As we shall see, it is not at all clear that the evidence about plain packaging demonstrates such a connection.

But, beyond necessity, Article 8 also requires that public health measures be "consistent" with the provisions of TRIPS. This would mean at least three things. First, public health measures would need to be consistent with the protections of intellectual property established in Articles 15, 17, and 20; otherwise they would establish a fundamental incoherence within the structure of the Agreement in which central provisions were obviated. As noted above, it is not at all clear that plain packaging meets this requirement.

Second, public health measures would need to be consistent with the principles and objectives set out in Article 7 which notes that the Agreement is designed to establish a balance of "rights and obligations." Article 17 also speaks of the legitimate interest of trademark owners. It is difficult to see how a public health measure such as plain packaging, which seeks to eliminate the rights of an entire group of trademark owners, is consistent with such a balance. Indeed, it by definition erases such a balance.

Third, public health measures would need to be the least restrictive to the intellectual property rights established in TRIPS. Plain packaging as a measure designed to eliminate the right of use of an entire class of trademarks certainly appears not to be the least restrictive regulation with respect to TRIPS property rights.

The Nature of the Product Argument

Despite the clear provisions of the relevant intellectual property agreements that the nature or character of a product cannot form the basis for denying trademark protection, the champions of plain packaging, and the critics of intellectual property rights more generally, have asserted that in the case of tobacco, if not with respect to some other products, these provisions should not be upheld.

For instance, Ira Shapiro, writing about why the nature of cigarettes should exempt them from normal trade protections, observes that: “Smoking is the leading preventable cause of death and disease in the world. About half of all long-term smokers die of diseases caused by their addictive habit. The very fact that tobacco products are so lethal, set them apart from other products in commerce, and requires that they be treated as an exception to ordinary trade rules.”⁴ It is precisely because tobacco is so uniquely lethal, argues Shapiro, that “governments should be given broad latitude to enact the tobacco control measures they deem appropriate.”

Shapiro argues there are precedents for such product-specific treatments. He notes that:

Trade in weapons has been excluded from GATT and WTO rules since the trading system came into effect. Narcotics and psychotropic substances are subject to extremely strict and elaborate international controls and bilateral agreements...In the environmental arena, more than 20 treaties contain trade-related provisions. International treaties establish rules for special treatment of ozone-depleting chemicals, persistent organic pollutants... hazardous waste, and endangered species. In all these areas, nations have recognized that particular products pose a special problem warranting carefully tailored treatment rather than arbitrary application of the usual trade rules.

⁴ I. Shapiro, “Treating cigarettes as an exception to the trade rules,” SAIS REVIEW, 22: 87-96 (2002).

Indeed, Shapiro argues that the character of the product should even trump the public health exemption found in agreements such as GATT (Article 20). This is because “the notion of balancing trade and public health factors, or limiting the exceptions to open trade, should have no resonance where the product is lethal.” Shapiro also asserts that the rigorous evidence demanded for exercising the health exemption should not apply to tobacco given that the tobacco industry has “long supported biased research to exploit any degree of real or perceived uncertainty about the nature and magnitude of risk posed by active smoking, passive smoking, tobacco advertising, addiction, additives and other issues.” This essentially guts the requirement that health exemptions be rigorously demonstrated with scientific evidence and eliminates all trademark rights defenses.

Donald Zeigler echoes Shapiro’s perspective, noting that the harms to health associated with alcohol and tobacco and the right to health mean that health must take “ascendancy over trade.”⁵ He notes that, “Medical and other non-governmental organizations need to advocate for health impact assessments of trade and trade impact assessments of health regulations in advance of their nations’ concluding treaties...Ultimately we need to exclude alcohol and tobacco from trade agreements.”

Shaffer et al. echo Zeigler and Shapiro in their argument that because of the scope of tobacco-related harms, tobacco must be exempted from trade agreements and protections.⁶ They argue that “in areas where there are conflicts, the human right to health needs to be promoted and protected, even at the cost of the commercial rights of access to markets.” Trade agreements and rights, according to the authors, “directly threaten states’” abilities to protect the right to health...health should take priority over the right of corporations to compete in markets generally, and particularly in the case of tobacco products and services.”

Shaffer et al.’s position with respect to the absolute priority of certain human rights such as health over trade rights is also found in a report by the International Federation for Human Rights, which urges that the “Universal Declaration of Human Rights...prevails over any trade agreement and that it is incumbent on the WTO as well as on every WTO member to observe the fundamental principles of human rights.”⁷

The same right to health argument is found in Kingston.⁸ According to Kingston, trademark registration is judged against the criteria of the wider public interest,

⁵ D. Zeigler, “International trade agreements challenge tobacco and alcohol control policies,” *Drug and Alcohol Review*, 25: 567-579 (2002).

⁶ Shaffer et al., “International trade agreements: a threat to tobacco control policy,” *Tobacco Control*, 14: 19-25 (2005).

⁷ The World Trade Organization and Human Rights FIDH Position Paper (2001).

⁸ Kingston, “Trademark registration is not a right,” *Journal of Macromarketing*, 26: 17-26 (2006).

in this case the interest in health. When examined against this criteria, a product such as tobacco clearly does not merit registration, since “denial of trademark registration to such products would be no more than recognition that they are incapable of contributing to the public good objectives for which registration was devised.”

For Kingston:

Any legal privilege can be modified or even eliminated in the wider public interest, so that it is legitimate to speculate about the possibility of withdrawing the privilege of trademark registration from products that do not conform to the objectives for which it was introduced....given the amount of specific evidence that tobacco products are harmful to health, then it is evidently not to the public benefit that they can be manufactured in quantity to consistent standards, nor that they can be widely and efficiently distributed - the purposes for which the privilege of trademark registration was introduced...Trademark owners do not have a right to registration. And since registration is a privilege, it can be withdrawn in any case where the result that it is intended to bring about either has not been achieved or cannot be.

The essential line of argument running throughout these expositions is that underlying the specific language of intellectual property agreements is a broad principle - the public interest or public good principle - which trumps any of the specific provisions of such agreements, and most specifically voids the product neutrality obligation to register the trademark of all legal products. On this account, public health is a superior good which in any instance negates intellectual property rights. But is this really the case? I respectfully suggest that it is not, as there are several significant problems with this argument.

First, none of the exponents of this argument to deny trademark registration to certain products such as tobacco provide a principled reason as to why public health is a superior good to intellectual property rights which are non-discriminatory with respect to trademark registration. Indeed, the activists seem to believe that it is sufficient to simply elaborate the harms of tobacco use to establish the priority of public health. But this confuses two quite different things - the harms associated with tobacco use and harms associated with tobacco trademarks - which are far from the same. While it may well be true that there are significant harms associated with tobacco use, it does not follow from this that there are first significant harms associated with the use of tobacco trademarks and in turn that these harms justify denial of trademark registration.

For instance, it may be the case that tobacco use causes the premature death of half of those who use it. This however, does not mean that allowing the registration of tobacco trademarks causes the tobacco use that causes the premature death of half of those who use it. The argument about the superiority of the public health good of preventing tobacco use is simply too general and too broad to apply to trademark registration without careful and detailed reasoning. Indeed, such reasoning would be required whether or not the issue were tobacco trademark registration; otherwise the goods of public health would be accorded an unchallenged priority whenever they collided with any other right. Put more directly, public health is but one of many rights and can only be accorded preeminence in a particular instance on the basis of argument, not mere assertion.

The trademark registration argument at heart thus begs the central question at issue which is not that tobacco use is risky and harmful but whether the right to trademark registration for tobacco products is itself not only harmful but so harmful as to justify automatic denial.

This conflation is particularly obvious with Shapiro, who claims that, “Because the health consequences of tobacco use are clearly established, governments should be given broad latitude to enact the tobacco control measures they deem appropriate.” Though arguing about trade and tobacco, Shapiro fails to narrow the argument sufficiently to focus on the question at issue which is the right to trademark registration. Instead he assumes, without any evidence that because tobacco is a harm, any measure to control tobacco is a good which outweighs intellectual property rights.

This conflation runs counter to TRIPS Article 8, which provides for public health measures provided that such measures are consistent with the provisions of TRIPS and that they are necessary. As we saw in the first section, however, the public health exception is not the blanket sort argued by those who advocate denying trademark registration based on the nature of a product. It is rather one that must be carefully evidenced in a fashion that establishes not only a trademark caused harm but also a trademark-restricted remedy. The position advanced by those demanding a denial of registration allows for no such process.

The denial of registration based on the nature of the product argument fails to work in the first instance because it does not provide a reasoned account of why the public interest in health necessarily trumps the public interest in intellectual property rights, particularly when some proposed attenuation of intellectual property rights such as denial of registration does not have a compelling connection with the public interest in health.

The more extreme form of the argument, of course, is that intellectual property rights are not really human rights at all - something found in the FIDH position

paper. But this position, despite its popularity, is clearly not supportable. Several international declarations and statements - the Declaration of the Berne Union for the Protection of Literary and Artistic Works (1986); the Universal Declaration of Human Rights (1948) Article 17, which recognizes that “everyone has the right to own property alone as well as in association with others” and “no one shall be arbitrarily deprived of his property;” and the United Nations International Covenant on Economic, Social and Cultural Rights (1966) (Article 15) - all provide for intellectual property rights being construed as human rights.

As Cass observes:

The three different strands of property rights included within the set of basic rights identified by the major international human rights accords consisted of rights to ownership and control of property; rights to the fruits of one’s labor; and also the right to enjoyment of the benefits from contributions to scientific and intellectual advancement. This third strand of property rights would seem to be encompassed within the first two...While rights to intellectual property...are implicit in the other property rights recognized as human rights, international charters of human rights such as the Universal Declaration of Human Rights and the International Covenant on Economic, Social and Cultural Rights also expressly grant protection to intellectual property rights.⁹

The second problem with the denial of registration argument is that the other instances of trademark restrictions which are cited as supporting a denial of registration to tobacco products are fundamentally different from what is proposed for tobacco trademarks. Shapiro’s trade rights-related restrictions are different in two key respects. First, they are not related to intellectual property but are more generally trade-related. Second, and even more crucially, the trade-rights restrictions cited by Shapiro do not alter any right in such a fundamental respect as does a denial of product registration. Such a denial essentially means that the product ceases to have trademark rights as opposed to merely having its trademark rights regulated or restricted, as in Shapiro’s supposedly analogous examples.

Third, the nature of the product argument which is advanced on the basis of the pre-eminence of public health interests is not supported in a 2002 joint study by

⁹ Cass, *Liberty and Property: Human Rights and the Protection of Intellectual Property* WLF Critical Legal Issues Working Paper Series, No 161 (2009).

the WHO and the WTO, which specifically addressed the issue of intellectual property rights.¹⁰

Rather than accepting the position that certain products could be denied trademark registration, the study instead notes that health exceptions on trademark use must be based on the principle of “nondiscrimination” - something which clearly excludes using the nature of a product as a basis for a judgment on registration - and must also be justified as necessary and efficacious as provided for in TRIPS.

A fourth problem with the argument about denying trademark registration is that in many instances, for example, it is postured as a prospective or forward-looking position to be taken with respect to future trade agreements, as opposed to a retrospective principle, which applies to already existing trade agreements. Since tobacco trademarks are already registered, they would be excluded from any forward-looking measures respecting registration.

Fifth, the claim that tobacco products fail to fulfill the objectives of trademark registration is untrue. Kingston, for instance argues that trademark registration can be denied or presumably revoked if the registration fails to contribute to the public good requirements for which registration was created. But tobacco trademarks do clearly fulfill several of the major public good requirements of trademarks.

For one thing, they allow different products to be distinguished thus preventing marketplace confusion. For another, they are essential to the “promotion of technological innovation” cited in TRIPS Article 8 (Principles). The reason for this is that trademark owners have little incentive to accept the risks and costs of product innovation if the innovation cannot be clearly linked to a particular product - something that will not occur in a commoditized tobacco market in which all products appear the same - which is the undisputed result of plain packaging.

Given that the key innovations in the tobacco market are related to risk reduction, the end result of Kingston’s proposal would be to block the development of less risky tobacco products - a curious gain for public health.

Finally, the kind of trademark system envisioned by those arguing for denying trademark registration to tobacco and other products is an inferior intellectual property system to one which is founded on product neutrality. Indeed, this was clearly the judgment of those who established the current system. There are two reasons for this.

¹⁰ World Health Organization and the World Trade Organization, *WTO Agreements and Public Health: A Joint Study by the WHO and the WTO Secretariat* (2002).

First, a system which allows for trademark registration based on the nature of the product is an arbitrary system in which subjective and ideological judgments about product values and the hierarchy of societal values determine trademark rights. The entire point of rights is that they be placed beyond the reach of subjective and arbitrary determination. But by tying trademark registration to the nature of the product one inevitably links it to judgments, that might well reflect not only the views of a few in a particular time and place, but judgments that are not well supported. By making trademark registration contingent on product judgments one effectively challenges the notion of trademark rights.

Second, a system which establishes trademark registration based on the nature of a product ultimately works against the very public interests, such as health, that it is supposedly designed to protect. It does this by imposing its judgments about appropriate products instead of allowing the marketplace to make its own judgments. This is in sharp contrast to a non-discriminatory intellectual property system which allows trademark protections to any legal product and thus maximizes the opportunities for not only economic development but also innovation, both of which promote increases in societal wealth which is in turn strongly correlated to societal health.

Attenuated intellectual property rights, such as discriminatory trademark registration, thus work against the very economic development that both undergirds and drives improvements to societal health. As Cass observes:

Access to intellectual property and to goods and services embodying intellectual property facilitates economic development. Respecting intellectual property rights encourages owners of the rights and producers that incorporate these rights, to product greater access to the products built on them. The connection to health also should be seen in this light. Health, as already noted, is strongly correlated with increase societal wealth. Steps that encourage economic advancement will serve interests in health more securely for a longer time than short-run efforts to expropriate intellectual property.¹¹

One way of capturing the stark differences between these two types of intellectual property systems would be to engage in a thought experiment in which one would ask prospective trademark owners who knew nothing about the nature of their product or its potential value which system they would prefer, one that would protect their trademark rights irrespective of the product or one that might use a criteria to deny trademark rights. Clearly trademark owners would opt for the non-discriminatory system.

¹¹ Cass, *Liberty and Property: Human Rights and the Protection of Intellectual Property* WLF Critical Legal Issues Working Paper Series, No 161 (2009).

The “Right of Use” Argument

The second point plain packaging advocates advance against the rights of tobacco trademark owners is the right of use argument. According to this argument, WTO members have substantial freedom under the Paris Convention and TRIPS to limit the rights of trademark owners to use their trademarks. Indeed, while tobacco trademarks may be registered, their use may be completely restricted. For instance, Mitchell argues that neither TRIPs nor the Paris Convention provides a right to use trademarks. “Despite the force with which the tobacco companies have put these arguments, their reasoning confuses registration with use. These concepts are separate and distinct. TRIPS Article 15.4 and Paris Convention Article 6 *quinquies* grants the right to ‘register’ a trademark. However, there is no provision in either agreement that obliges WTO Members to grant the owner of a registered trademark, an affirmative right to actually ‘use’ that mark.”¹²

According to Mitchell, “While the shift towards plain packaging would affect the ‘use’ of tobacco trademarks, the ‘registration’ of such trademarks would remain unaffected...The fact that a trademark has been registered for a particular good does not give the owner the right to use that mark or be exempted from any regulatory limitation on the use of the mark.” While Mitchell provides a brief outline and defense of the right of trademark use argument, the leading exponent of the argument is Ben McGrady of the Department of International Health in the School of Nursing and Health Studies at Georgetown University.

McGrady rejects the nature of the product argument noting that, “A good faith interpretation of this provision [Article 15] would therefore appear to preclude a Member from taking such measures as denial or cancellation of registration in this context.”¹⁸ But he argues that “no right of use is provided for by TRIPs.” He claims that this position can be justified on the basis of a careful analysis of Article 20 of TRIPs, which he notes is made difficult by the fact that the “wording...makes it difficult to determine the exact extent to which it may limit the actions of a Member.”

According to McGrady, Article 20 might be interpreted in either a broad or narrow fashion. “At its broadest, Article 20 could constitute a rule preventing Members from prohibiting or restricting use of trademarks in any form. At its narrowest the provision could prevent members from requiring that something be attached to a trademark wherever that trademark is used.” McGrady suggests that there are three considerations which point toward the narrow interpretation.

First, the purpose of TRIPs was to provide “minimum” standards of intellectual property protection and such minimum standards do not support an expansive

¹² A. Mitchell, “Australia’s move to the plain packaging of cigarettes and its WTO compatibility,” *Asian Journal of WTO and International Health Law and Policy*, 5: 409-410 (2010).

view of Article 20. Writes McGrady, “It is clear that the provision established a standard of protection for the use of trademarks but does not unconditionally prevent a State from prohibiting or restricting the use of a trademark. In contrast, the inclusion of a limited degree of protection for the use of trademarks suggests that the intention of the drafters was not to create such an all-encompassing provision.”

Second, in the process of drafting TRIPS there was no discussion of banning trademark use. According to McGrady this “tends to support the conclusion that such a prohibition was not intended to be unlawful.”

Third, the general argument supporting intellectual property rights - their importance to innovation and competition - does not apply to trademarks since they “do not encourage innovation through creation of entirely new classes of products.” Taken together, these considerations tend to support a narrow reading of Article 20 and “weigh against the existence of a general right to use a trademark, being implied into the TRIPs Agreement or Paris Convention. The drafters of each agreement clearly made provision for basic intellectual property rights in those agreements and did not include the right of use. Since such a right is not a necessary corollary of any other provision, or of either agreement as a whole, its existence should not be implied thereby leading to the conclusion that use of trademarks may be prohibited or restricted.”

Despite the widespread citation and support that McGrady’s analysis has attracted in the tobacco control community, it is not sustainable for a variety of reasons. First, McGrady’s position is fundamentally incoherent for in allowing a right of registration but simultaneously denying a right of use it voids the entire purpose of registration, which is to establish the right of exclusive use. Indeed, McGrady would have us believe that the relevant intellectual property agreements only create the right to register trademarks but no right to use such marks. However, the purpose of the Paris Convention and TRIPs is not to establish a merely formalistic property regime which allows for a system of trademark registration but without permitting trademark use. The purpose of intellectual property rights with respect to trademarks is to establish the conditions of their use. As Bernitz notes:

It is obvious from the overall structure of both the Paris Convention and national trade mark acts that registered trademarks can be used commercially. This can be also be inferred indirectly from the very definition of the subject matter of a trade mark found in national legislation which is often formulated as a prohibition against other tradesmen from using confusingly similar trade symbols...It must also be permissible to use such registered trademarks for both tobacco and other products...This follows from the

obvious rationale of trade mark law that trademarks are registered in order to be used.¹³

The reason that there is no specific mention of trademark use within the Paris Convention or TRIPs is that the drafters understood the integral connection between registration and use and did not consider it necessary to specify the obvious.

Indeed, if we take McGrady's position to be correct, then the entire intellectual property rights framework with respect to trademarks is designed to create nothing other than negative rights for trademarks owners inasmuch as they are allowed the right to bring actions against others for unauthorized use of their trademark but unable to use the same mark themselves. "There is good reason," writes Kur, "to assume that the right to acquire a trade mark and the right to make use of it are two basically inseparable issues: if any applicant meets all of the requirements stipulated in order to obtain valid right, he regularly will be entitled to use it - if only under certain restrictions regarding the concrete way of marketing."¹⁴

Second, the requirements for trademark use found within national trademark legislation undermine McGrady's position. Most of these acts require the use of a trademark within five years of registration, suggesting that registration without use is clearly not contemplated.¹⁵

For instance, trademark registration with the U.S. Patent and Trademark Office is contingent on a bona fide intention to use the mark. As the U.S. Supreme Court has concluded "There is no such thing as property in a trademark except as a right appurtenant to an established business or trade in connection with which the mark is employed...the right to a particular mark grows out of its use not its mere adoption."¹⁶ The Court's finding goes to the heart of McGrady's strained reading of the Geneva Convention and TRIPs with his claim that a trademark holder may indeed register his mark but not use it, for it affirms that trademark rights center not in formalistic adoption - registration in the TRIPs sense - but in use.

Third, a careful consideration of Article 6 of the Paris Convention further weakens the right to use argument. Article 6 addresses the conditions under which a Member may request another Member to prohibit the use of a trademark.

¹³ Bernitz, "Logo licensing of tobacco products - can it be prohibited?," *European Intelligence Property Review*, 4: 137-139 (1990).

¹⁴ Kur, "The right to use one's own trade mark: A self-evident issue or a new concept in German, European, and international trade mark law?," *European Intelligence Property Review*, 4: 198-203 (1996).

¹⁵ Bernitz, "Logo licensing of tobacco products - can it be prohibited?," *European Intelligence Property Review*, 4: 137-139 (1990).

¹⁶ *United Drug Co. v Rectanus Co.* 248 U.S. 90, 97 (1918).

Prohibition of use only makes sense in the context of a right to use. Again, the reasons provided in Article 6 for refusing to register a trademark all relate to the ways in which not the registration of the mark but its use would create difficulties, again pointing to the fact that the Convention clearly considers use a right.

The historical background to the Paris Convention also supports the claim that the Convention was crafted to create a right not simply of registration but of use. The purpose of the Convention was to facilitate trade through the protection of industrial property, including intellectual property, by establishing what Castren calls the “living trademark right” of use. He notes that:

The incorporation of Article 6 quinquies...into the Paris Convention was based on the argument that the owner of a mark should be able to use the mark (and have it protect as well) in the marketing of his products in different countries, without being forced by the diverse national regulations to use different marks. That this was in the interest of the free movement of goods...appears from a decision of the Court of Appeal of Leipzig of 16 February 1874, from which the “telle quelle” rule originates and which also was pleaded in the concluding protocol of the Paris Conference of 1878 in order to provide for the international protection of industrial property. This historical background to the Paris Convention shows that the intent and purpose of the Convention was from the beginning in the interest of the development of world trade, to create a “living trademark right” and not only a “paper right” which manifests itself only in the right of exclusion which arise on registration.¹⁷

A similar logic to Article 6 is found in TRIPs Article 20, which sets out the ways in which a trademark might be unjustifiably encumbered, such as use with another trademark. As the article reads, “The use of a trademark in the course of trade...” All three of the unacceptable instances of encumbrance relate to infringements on the mark’s ability to function, to be used in the marketplace.

Commenting on the Convention, former WIPO Director-General G. Bodenhausen has observed that the purpose of the provisions is to allow the trademark holder to use the mark in similar ways in different countries.¹⁸

¹⁷ M. Castren, “Tobacco advertising and trade mark law in Finland,” *European Intellectual Property Review*, 2: 87-90 (1995).

¹⁸ G. Bodenhausen, *Pariser Verbandsvereinbarung zum Schutz des Gewerblichen Eigentums*, Cologne: 13 (1971).

The same point is made by Katz and Dearden: “[T]he history of this provision [Articles 6 and 7] suggests that most countries recognize their obligations under Article 7 not only to register all marks regardless of the nature of the product, but also to refrain from ‘suppressing or limiting’ the exclusive right of the owner to use the mark as long as the sale of the product is legal.”¹⁹ Again, as Kur notes:

If it is prohibited to stipulate special requirements for the way in which a trade mark may be used, it would contradict even more the intentions underlying the trade mark provisions of TRIPs to deprive a trademark owner totally of the right to make use of the mark. Whereas requirements such as use together with another trade mark can be detrimental to the distinctive character of a mark, a total ban against use would go even beyond that; it would not allow the distinguishing capabilities of a mark ever to be exercised. In other words, it would not only weaken a trade mark, but prevent it from coming to real life at all.²⁰

Fourth, the right of use argument has been explicitly rejected in WTO arbitration. In *USA v EC, EC Protection of Trademarks and Geographical Indications for Agricultural Products and Foodstuffs*, a dispute settlement panel found that trademark owners have a legitimate interest in trademark use.²¹ “Every trademark owner has a legitimate interest in preserving the distinctiveness, or capacity to distinguish, of its trademark so that it can perform that function. This includes its interest in *using* (emphasis added) its own trademark in connection with the relevant goods and services of its own and authorized undertakings.”

Fifth, the narrow interpretation of Article 20 that McGrady proposes conflicts with the clear sense of the Article. He writes that “Article 20 does not expressly state that a Member cannot prohibit or restrict the use of a trademark.” But this claim makes sense only if the drafters of TRIPs assumed that there was no right to trademark use, which we have seen is incoherent both in the context of the Agreement as well as in relation to the purpose and function of trademarks. While it is true that TRIPs does not assume that there are no possible limitations on trademark use, the purpose of Article 20 is to set out the regulatory options open to members in circumscribing trademark use - the justifiable encumbrances. If there was no presumption of a right of use, then prohibiting unjustified

¹⁹ J. Katz and R. Dearden, “Plain packaging and international trade treaties” in J. Luik, ed. *Plain Packaging and the Marketing of Cigarettes*.

²⁰ Kur, “The right to use one’s own trade mark: A self-evident issue or a new concept in German, European, and international trade mark law?,” *European Intelligence Property Review*, 4: 198-203 (1996).

²¹ *USA v EC, EC Protection of Trademarks and Geographical Indications for Agricultural Products and Foodstuffs*, WT/DS174R, 15 March 2005: 664.

restrictions on use would simply make no sense and the need for Article 20 would vanish.

Sixth, the right of use argument is challenged by what might be termed the general right to marketplace freedom. As observed above, this right to engage in commercial activities including the positive right to use one's property is enshrined in a variety of international declarations and statements, most importantly in the Universal Declaration of Human Rights (Article 17). Given the clear recognition that trademarks have standing as property, it would be more than strained to conclude that they cannot be used.

Finally, the more general economic models which argue for the value of intellectual property in general and trademarks specifically, as well as the specific language of TRIPs about the value of innovation, counter the right of use argument. McGrady denies that these models are relevant to trademarks. He claims that "unlike patents and copyrights, trademarks 'do not provide new ideas.' Rather, the "economic function of trademarks is, by giving assurance of uniform quality, to economize on consumer search costs." Trademarks encourage innovation in the sense that they encourage the improvement of an existing product or maintenance of high product quality, by virtue of the ability to signify such quality to the consumer. However, in theoretical terms, trademarks do not encourage innovation through the creation of entirely new classes of products.

McGrady's argument fails in two ways, one in general and the other specifically related to tobacco product innovation. First, it fails to take into account the way in which trademarks can facilitate competition and, through competition, innovation. According to Kur:

Every intellectual property right leads to a monopoly, which is justified because - and insofar as - it functions as an incentive for competition on a superior level. For example, patent law, by granting to the owner of a patent the exclusive right to produce article incorporating his invention, leads to a restriction of third parties' freedom to act on the level of production. On the other hand, this leads to an increase of inventive activities and thus to an augmentation of competition on the superior level of innovation. If the same schema is applied to trademarks, it appears that the justification for trademark protection - which leads to restrictions on the level of production (or communication) lies in the fact that it strengthens competition on the information level, by allowing the trade mark owner to build up information concerning the product and its special qualities and features, thus encouraging the marketing of new products. This makes it clear why from an economic point of view the active use of a trademark constitutes the central aspect of the whole matter: it is only by making use of his mark that the owner participates

in competition on the information level and thus adds his contribution to what is the ultimate goal of trade mark protection. Without use, there is no connection between the sign and specific products or services a businessman has to offer; the 'information channel' would convey nothing and thus be meaningless."²²

On this account, trademarks through their communication in the marketplace of distinctive product attributes, spur innovation and new product creation as one strategy by which competitors can increase market share.

Second, McGrady's argument fails to take into account the way in which tobacco trademarks are linked to innovation, most crucially with respect to less risky tobacco products. The enormous investment required to bring reduced risk products to market is justified in part only if such products can be identified with existing tobacco brands or new brands. Innovation makes sense only in a marketplace in which the innovation can be distinctive, hence its link with brands and trademarks. Without an ability to link a major innovation with a specific trademark the attractiveness of introducing the innovation is vastly diminished. This essential connection, however, is made impossible if existing trademarks cannot be extended to new, less risky products or new trademarks created, registered and used - which is precisely the result of a plain packaging marketplace.

Preventing trademark use through plain packaging thus significantly threatens tobacco product innovation while at the same time compromising an important component of tobacco control - harm reduction.

This section has looked at two of the arguments against intellectual property rights for tobacco trademarks that plain packaging advocates advance: the nature of the product argument and the right of use argument. In terms of the nature of the product argument, we found that the primary problem with this argument is that it fails to provide a principled reason as to why public health is necessarily a superior good to intellectual property rights. In the case of the right of use argument, we found that not only is it essentially incoherent in that it allows registration of marks but denies use, but it is also contradicted by a careful reading of the relevant parts of the Paris Convention and TRIPs.

²² Kur, "The right to use one's own trade mark: A self-evident issue or a new concept in German, European, and international trade mark law?," *European Intelligence Property Review*, 4: 198-203 (1996).

THE PUBLIC HEALTH ARGUMENT

Thus far, this submission has examined two arguments advanced by proponents of plain packaging in favor of limiting the rights of tobacco trademark owners - the nature of the product argument and the right of use argument. This submission has argued that both of these arguments are, for a variety of reasons, significantly deficient and are thus incapable of justifying the assault on trademark rights integral to plain packaging. Despite these problems, it is nonetheless still open to the plain packaging advocate to argue that plain packaging can be saved through the freedom for public health regulatory measures provided by TRIPs Article 8. It is to an analysis of this claim that we now turn.

Article 8 of TRIPs reads: “Members may, in formulating or amending their laws and regulations, adopt measures necessary to protect public health and nutrition, and to promote the public interest in sectors of vital importance to their socio-economic and technological development, provided that such measures are consistent with the provisions of this Agreement.” According to Mitchell, Article 8 need not present an obstacle to plain packaging for three reasons. First, the article must be read in conjunction with the Doha Declaration on the relationship between intellectual property and public health. According to the Doha Declaration, “the TRIPS Agreement does not and should not prevent members from taking measures to protect public health...we affirm that the Agreement can and should be interpreted and implemented in a manner supportive of WTO members’ right to protect public health.” For Mitchell, this means that WTO members are provided with “significant flexibility in enacting public health measures.”

Second, Mitchell argues that the test of necessity in Article 8 is framed by how important a member considers a given public health measure. He writes that “the more important a Member considers a particular health issue, the more likely is the measure necessary. A treaty interpreter may take into account the relative importance of values that the law to be enforced is intended to protect. The more vital or important these values are, the easier it would be to accept as ‘necessary’ a measure designed as an enforcement instrument. Given that the protection of public health is ‘vital and important in the highest degree’ and that ‘few interests are more vital’ it appears that TRIPS...should be interpreted to allow Members broad discretion in designing their policy space to respond to important health concerns.”

Again, he claims that “for the policy and scientific reasons stated in Section II above, plain packaging promotes public health by reducing the incidence of smoking and is therefore ‘justifiable.’”

Third, Mitchell muses that justifiability might well have an “evolutionary” meaning which requires using the guidelines on tobacco promotion and plain

packaging of Framework Convention on Tobacco Control (FCTC) Articles 11 and 13. For instance, the guidelines for Article 11 calls on the FCTC parties to “consider adopting measures to restrict or prohibit the use of logos, colours, brand images or promotional information on packaging other than brand names and product names displayed in a standard colour and font style (plain packaging)” on the grounds that this “may increase the noticeability and effectiveness of health warnings and messages, prevent the package from detracting attention from them and address industry package design techniques that may suggest that some products are less harmful than others.”²³

We shall return later as necessary to Mitchell’s general claim about the extent of the evidence supporting plain packaging, but for the moment three things should be noted about his arguments. First, Mitchell’s argument about the priority of health over intellectual property rights based on the Doha Declaration is challenged by the joint WTO and WHO study.²⁴ That study concluded that health exceptions to trademark rights must be based on the principle of “non-discrimination” and must also be justified as necessary and efficacious as provided for in TRIPS.

Second, Mitchell’s claim that the standard of necessary is the relaxed one of a member’s subjective judgment about the necessity of a public health measure - “the more important a Member considers a particular health issue, the more likely is the measure necessary” - is not supported by TRIPs or indeed by GATT which also provides a definition of necessary. Necessity in both instances has nothing to do with the member’s beliefs about the importance of the measure, but rather with the objective evidence about the connection between the measure and intellectual property rights and the efficacy of the measure. Health is not accorded a trump position over trademark rights without compelling evidence.

Further, Mitchell’s claim imports into the necessity test the same confusion found in the arguments of those advancing the nature of the product argument, namely the failure to distinguish between the problems occasioned by tobacco use and the problems brought about by tobacco trademarks. As we saw, the two are not the same and the requirements of the necessity provision cannot be satisfied unless it can be shown that the problem is due specifically to tobacco trademarks as opposed to tobacco in general or even tobacco promotion.

Third, there is no absolutely no provision in the TRIPs agreement for Mitchell’s “evolutionary argument” in which the FCTC guidelines, indeed, not even the treaty itself, are given a defining role in the reading of public health necessity.

²³ The Conference of the Parties to the WHO FCTC Guidelines for Implementation of Article 11 of the WHO Framework Convention on Tobacco Control on Packaging and Labeling of Tobacco Products Decision FCTC COP, November 3, 2008.

²⁴ *WTO Agreements and Public Health: A Joint Study by the WHO and the WTO Secretariat* (2002).

The proper way to read necessity is that the measure can be demonstrated to achieve a public health objective and that it be consistent with TRIPs in general as well as no more restrictive of intellectual property rights than required. This is the clear meaning of Article 8 and the so-called health exception. Indeed, McGrady concedes this point when he observes that “the requirement for measures to be ‘necessary’ will be interpreted strictly. It requires that the party introducing a measure demonstrate that the measure is effective and also that there are no less trade restrictive measures reasonably available to achieve the same result.” Moreover, Mitchell’s evolutionary argument runs afoul, too, of Article 7, which requires that “the protection and enforcement of intellectual property rights” must take account of a “balance of rights and obligations” of the property owners. Eliminating a trademark right through a public health restriction, which is the effective consequence of plain packaging, fails to meet this TRIPs objective.

McGrady’s analysis of the public health exception takes a different approach to Mitchell’s. He argues that because of the scientific uncertainty about the effects of measures such as plain packaging, that a “low threshold will be applied in determining the effectiveness of a measure.” According to McGrady, “because it is scientifically impossible to demonstrate the impact of a measure without introducing it to some degree,” the proper approach should be to find the “measure being considered effective in the case of doubt.”

McGrady claims that there are four reasons which support the claim that plain packaging meets the effectiveness requirement. First, “a number of studies suggest that plain packaging would make cigarettes less attractive and appealing.” Second, another study has shown the recall of health warnings is higher on plain packages. Third, McGrady claims that packaging has “a similar effect” as tobacco advertising, which has been shown to “significantly increase tobacco sales.”

Finally, he notes that “for the first time purchases, packaging is almost as important as the product itself.” Together, these four factors suggest that the “introduction of the measure [plain packaging] appears sufficiently related to its purpose that it could be considered likely to fulfill the effectiveness requirement.”

We shall shortly turn to McGrady’s general claim about the effectiveness of plain packaging, but it may be worth noting in a preliminary fashion three things about his four arguments. First, it is one thing to claim that plain packaging would make cigarettes less attractive and appealing - though this is contentious in itself, it is quite another to show that this results, in an environment where the only cigarettes available would be in plain packages, in less smoking or more quitting. The two are not equivalent and it is the latter that must be established to show that plain packaging is effective.

Second, McGrady's claim about the importance of packaging to first time purchases misses the essential point that most adolescent smokers experiment with single cigarettes not packaged cigarettes, and become smokers before they purchase a cigarette package. The purchase decision is thus not about becoming a smoker but rather about what brand to smoke.

Third, the low threshold argument that plain packaging should be considered effective in the case of doubt fails to take into account the fact that it is far more likely that effectiveness will be determined by looking at the preponderance of the scientific evidence, not simply the very few plain packaging studies cited by McGrady.

The common thread running throughout the positions about the public health "exemption" found in TRIPs article 8 and its relationship to plain packaging is the claim that the empirical evidence about the effects of plain packaging on smoking uptake and cessation, particularly by young people, is sufficient to justify plain packaging as a measure "necessary to protect public health." McGrady makes this point explicitly when he claims that tobacco advertising increases tobacco consumption and that packaging has a similar effect to tobacco advertising. For the most part the advocates of plain packaging ignore the other requirement of Article 8, namely that measures to protect public health be consistent with the provisions of TRIPs as we have seen that it would be very difficult if not impossible to show that a complete suppression of the right to use a trademark, as envisioned by plain packaging, would meet this test. This means that the case for the justification of plain packaging as a measure "necessary to protect public health" rests on an analysis of the strength of the evidence about two things: the harm of tobacco packaging and the efficacy of plain packaging in addressing this harm through preventing/reducing smoking. If plain packaging is to be saved under TRIPs, it can only be done on the strength of this evidence. It is therefore to an analysis of this evidence that we now turn.

The case for plain packaging being necessary for the protection of public health is built on two claims. The first of these is, as McGrady observes, that tobacco packaging as a form of tobacco advertising initiates and increases tobacco consumption in the same fashion as tobacco advertising. The second of these is that plain packaging will end the advertising function of tobacco packaging and reduce smoking initiation amongst the young, consumption among all smokers and increase quitting. We begin then with an examination of tobacco advertising in order to determine whether it in fact does initiate and increase tobacco consumption. If this is not the case in general it is highly unlikely that tobacco packages contribute to smoking uptake and increased consumption. Next we turn to a careful examination of all of the studies of plain packaging in order to determine whether these establish that plain packaging will do any of the things its proponents claim. If these studies fail to establish the efficacy of plain packaging then it is clear that it fails the necessity test of TRIPs.

None of the evidence from the tobacco market, the econometric literature, studies of advertising exposure and recall and examinations of the results of tobacco advertising restrictions provides compelling evidence of a causal connection between tobacco advertising and consumption or between tobacco advertising and smoking initiation or between restricting tobacco advertising and changes in consumption or initiation.

We have seen that that the evidence that tobacco advertising in general promotes smoking or increases consumption is not compelling. Indeed, most of the support for this position comes from studies or analyses that are highly compromised. Nevertheless, it might still be the case that tobacco packaging causes smoking, increases consumption or prevents quitting and that plain packaging can address each of these issues, in which case plain packaging might still be justified as a necessary public health measure under TRIPs. We now look at all of the plain packaging studies to determine whether these claims about efficacy can be sustained.

Starting from the position that the current international intellectual property regime does not allow for properly registered trademarks of long use to be suppressed except where it can be shown by the most exacting standards of scientific evidence that: 1) the use of the trademark, as opposed to the product itself, presents a substantial danger to public health and 2) there is compelling scientific evidence that the restriction of the trademark is not just the only way of dealing with the danger to public health but will, in fact, work, we have examined the three arguments advanced in favour of allowing tobacco trademarks to be suppressed by plain packaging. We have found that neither the nature of the product argument nor the right of use argument offered compelling reasons for the abrogation of tobacco trademarks. Most crucially, we have found, after examining all of the empirical evidence on plain packaging supporting the public health argument, that none of this evidence comes close to demonstrating that plain packaging is “necessary”, as required by TRIPS, to protect public health.

PART 2

Part 1 of this submission examined the problems that plain packaging entailed for Australia's intellectual property treaty obligations.

Part 2 focuses upon the claim that such packaging will enhance the health warnings on tobacco packages, particularly GHW, and thereby reduce smoking initiation, consumption, as well as increase quitting. This submission finds that the evidence that GHW, even in their current form, can do any of these things is decidedly slight.

GRAPHIC HEALTH WARNINGS

The idea of placing mandated warning labels on consumer products though now ubiquitous is really rather recent. For example, it was only in 1927 that the US Congress passed the Federal Caustic Poison Act that required the label Poison to be placed on dangerous chemicals like sulfuric acid. A decade later, food, drug and cosmetic warnings were required, while in the 1960s warning labels were required for over-the-counter drugs. And it was not until the 1960s as well that the proper use of such terms as Danger, Caution and Warnings were legislated.

In 1965, in the most famous instance of warnings, the United States required all cigarette packages and advertising to warn consumers that 'Cigarette Smoking May be Hazardous to Your Health,' which was followed in 1971 in the UK by a voluntary decision by tobacco manufacturers to place warnings on cigarettes. At the time of the first tobacco warnings, warnings for consumer products were extremely rare and tended to be directed to inappropriate product use or inadvertent exposure to a hazardous substance that posed an immediate as opposed to a long-term risk. Cigarette warnings were different from these warnings in two senses: They warned against risks that were neither immediate nor the result of inappropriate use.

In the two decades following the advent of cigarette warnings, as a result both of the consumer rights revolution and the creation of specialized governmental agencies devoted to safety, the environment and consumer protection, warnings multiplied on all sorts of products, many of them modeled on the original cigarette warnings. For instance, in 1988 the US passed the Alcoholic Beverage Labeling Act, which required warnings on all drink containers. Today, it is unusual to find a consumer product that does not have some sort of warning. David Stewart and Ingrid Martin, writing about this trend toward placing warnings everywhere, observe that:

The number of warnings and places and products on which they are placed has grown precipitously in the last two decades, with increasing societal concern about the hazards of using and consuming various types of products and commodities. Among commercial products that carry warnings, alcoholic beverages, cigarettes and other tobacco products, saccharin, tampons, and over-the counter (OTC) medications (especially aspirin for children) are among the more controversial. Many other products carry warnings, however. These include cleaning products, cosmetics, and other personal care products, and even popcorn. Lawn mowers, automobiles, microwave ovens, power tools, electrical appliances, and an array of other durable goods also carry warnings either on the product or in a user's manual that accompanies the product. Various service products, such as prospectuses for investment

products and rides in amusement parks also include warnings or admonitions of caution. Neither is the presence of warnings restricted to product packaging and package inserts: they also appear in the advertising for various types of products and in places where products are sold or consumed, such as grocery stores or restaurants.²⁵

It is not simply products that are the focus of warning activists. Dermatologists from the United States have joined the warning bandwagon as well, by suggesting that gruesome pictures of various types of skin cancer, along with a warning about the risks of tanning, be posted outside of every tanning parlour.

Most recently, the focus of warning activism has moved to food and drink, with both activists and governments arguing that certain foods, particularly those with high levels of salt, sugar or fat (HSSF) need to carry warnings about their alleged health risks. For example, the then-head of Britain's Food Standards Agency, Dame Deirdre Hutton, called for the introduction a colour-coded warning system for HSSF, arguing that such warnings are the best way to inform consumers about the differences between healthy food and 'junk' food.

California Attorney General Bill Lockyer initiated legal action against fast food companies to force them to post warnings about the allegedly human carcinogen acrylamide in their products, as well as suing tuna packagers for failing to warn consumers about the supposed hazards of mercury in their fish. The US Center for Science in the Public Interest has called for warnings about trans-fat and excess salt in food, and anti-obesity crusaders have demanded warnings for all fizzy drinks and fast foods. Legal action against food and drink manufacturers has also been suggested in the United States on the grounds that the manufacturers have failed to warn about the risks associated with their products.

The United States, of course, has required extensive nutritional labeling for the past decade, on the grounds that providing consumers with more information about their food would change their eating patterns and reduce obesity. These labels, however, have been purely informational, providing consumers with information about the total number of calories and the grams of fat, cholesterol, sodium, protein and carbohydrate. They are not warning labels, which join information with an authoritative admonition about the health risks of certain eating behaviours. For example, telling someone that a product has two grams of fat is quite different from warning them that eating foods high in fat increases their risk of heart disease.

²⁵ D. Stewart and I. Martin. 'Intended and Unintended Consequences of Warnings Messages: A Review and Synthesis of Empirical Research', *Journal of Public Policy and Marketing* 13 (1994): 1-19.

For growing numbers of activists, both in Europe and North America, however, informational labeling is not sufficient. They point, for instance, to the failure of ten years of nutritional labeling in the United States to make any difference in the prevalence of overweight and obesity. Instead, they believe that cigarette type warnings for a range of food and drink are justified and necessary first because certain foods, just like cigarettes, pose unacceptable health risks even in the smallest quantities, and second, because only the salience and shock value of cigarette-type warnings will change consumer behaviour. For example, in 2003, Terry Sullivan, Vice President of Cancer Care Ontario, argued that a prevention message such as a tobacco-like warning might be necessary to change eating habits. 'These are all ways in which the public can be cued and aided in the job of making health decisions,' Sullivan claimed.²⁶

The case for warning labels, to aid people in the 'job of making health decisions' appears to be based on three common sense assumptions. First, people wish to avoid disease and death. Second, once they know that a certain behaviour or product can lead to disease and death they will avoid it. Third, so providing an appropriate warning will give people the information necessary for them to change their behaviour. The reality, however, is that assumptions two and three are for many people in many instances false.

There are three principal reasons for this. First, people often miss warnings because they filter out much of the information that comes their way due to the fact that they find it neither relevant nor interesting. Second, warnings that are attended to are not processed because individuals tend to avoid information that has negative self-implications. Through a process known as cognitive re-adjustment people tend to exempt themselves as individuals who should be concerned with a warning. Seatbelt use is fine, though it isn't necessary for me. So even though someone has read and remembered a warning they also can discount its personal applicability. Finally, even warnings that are read and processed are often discounted due to what experts call 'warning fatigue' where the overabundance of warnings or the familiarity of a specific warning diminishes its effectiveness. In effect, the very ubiquity of the act of warning diminishes the power of all warnings.

The scientific evidence demonstrating these types of warning failure is extensive, though it often tends to be ignored or discounted by the public health community. For example, almost a decade after the US mandated warnings on alcohol products, neither the risk perception nor the drinking behavior of those drinkers most likely to be a risk to themselves or others had changed. As Hankin et al. noted from their research on drinking during pregnancy 'among risk drinkers, the label law clearly has *not* affected drinking behaviour.'²⁷

²⁶ CBC-TV News 16 December 2003.

²⁷ J. Hankin et al. 'The impact of the alcohol warning label on drinking during pregnancy', *Journal of Public Policy and Marketing* 12 (1993): 16.

Hankin's research is supported by other studies, including a survey from the US Centers for Disease Control and Prevention that found that the percentage of women drinking during pregnancy had actually increased since the introduction of the warnings. As the report notes 'The rate of frequent drinking among pregnant women was approximately four times higher in 1995 than in 1991'.²⁸ Again, MacKinnon et al. who followed a group of 16,661 high school students from 1989-1995, reported that 'there was no beneficial change attributable to the warning in beliefs, alcohol consumption or driving after drinking'.²⁹ Several studies has also found that heavy drinkers, while aware of the warnings, are more likely to consider them less believable and to discount them more than other drinkers. There is equally compelling evidence about the failure of food warnings. The US Department of Agriculture's Economic Research in an analysis of food labeling noted that 'labeling may not be an effective policy tool.'³⁰ There are several reasons for this. Some researchers, for instance, have found that warnings or a large list of detailed product information causes many consumers to disregard the warnings and information completely. Again, studies of consumer behaviour in food shops have found that consumers often make hasty food choices and fail to scrutinize warnings and food labels. On such study discovered that a consumer's income, not warnings or labels, was the key factor in determining which foods were purchased, and that income cancelled out the effects of information.³¹

A 2002 study, for instance, found that nutritional labeling made no difference in food density choices. As the authors observed, 'In this population, explaining the concept of energy density and providing nutritional information during meals had no overall impact on the weight of food consumed.'³²

Another study, which was conducted in a restaurant setting in the UK, found that providing information about 'health and unhealthy food' 'did not substantially affect expectations of sensory quality and acceptance, or overall energy and fat intake.' What it did succeed in doing was to decrease the number of people selecting the 'lower fat dish' by those who knew it was lower in fat. Not a terribly strong demonstration of the 'effectiveness' of food labelling.³³

²⁸ CDC MMWR 46: 346-350 April 1997 *Alcohol Consumption Among Pregnant and Childbearing-Aged Women: United States, 1991 and 1995.*

²⁹ D. Mackinnon et al. 'The Alcohol warning and adolescents: 5 year effects' *American Journal of Public Health* 90 (2000): 1589-1594.

³⁰ Elise Golan et al. 'Economics of Food Labeling' *Agriculture Economic Report* 793 (2001).

³¹ Lorna Aldrich, *Consumer Use of Information Agricultural Handbook* 1999.

³² T. Kral et al. 'Does nutritional information about the energy density of meals affect food intake in normal-weight women?', *Appetite* 39 (2002): 132-145.

³³ K. Stubenitsky et al. 'The influence of recipe modification and nutritional information on restaurant food acceptance and macronutrient intakes', *Public Health Nutrition* 3 (2000): 201-209.

A 2003 study that looked at the effectiveness of nutrition labeling and warnings in an Army cafeteria found no significant difference in the sales of the items that subjects had been warned about.³⁴ As Jayachandran Variyam of the United States Department of Agriculture noted last year, 'These findings suggest that the benefits of labeling may be small or uncertain at best.'³⁵

The danger, however, is not simply that warnings, whether for food or drinks will fail, it is also that they will be counterproductive. For example, large numbers of excessive risk-takers display what psychologists call reactance in which there is a high level of resistance to the demands of outside authority and control. For these individuals, a warning label represents an attempt to unreasonably shape their behaviour and makes them more likely to ignore rather than to heed the warning. Warning labels also highlight risk and for those attracted to risk-taking this serves to make the very thing warned about more, rather than less attractive. One saw both of these reactions to warnings in the 1980's when British teens stole the 'frightening warning' 'Heroin screws you up' from public places in order to put them up in their bedrooms.

The latest attempt to get round these well-established warning failures is with GHW, first introduced on tobacco products in Canada in 2001, which show stark images of the risks associated with unhealthy behaviour. The theory behind the pictorial warnings is that they work against warnings fatigue, indifference and even reactance, by presenting new risk information in a fear-arousing way that cannot be ignored, even by the most warning indifferent. While there is considerable evidence that warnings which are scary do not convince, the premise behind the pictures of diseased lungs, hearts and mouths is that the scarier the better in terms of changing behaviour. A good many in the health promotion community are now calling for such warnings to be extended to other products, including unhealthy foods.

This submission argues that scarier is *not* better; what we know about warnings, and more particularly about warnings that scare, coupled with the empirical evidence of how these new graphic warnings have worked where they have been tried, suggests that they will not work and will indeed be counterproductive with many of their intended populations. In this sense, championing such warnings, contradicts two of the central principles of medical ethics and the ethics of health promotion - beneficence - doing good and nonmaleficence - avoiding harm, since there is ample evidence that graphic warnings will do no good and might, in fact, cause considerable mischief. As a recent comprehensive analysis of the use of scary, graphic warnings concluded: 'This review indicates that the contribution of fear appeals to the adoption of self-protective behaviour is in doubt. Fear arousal

³⁴ A. Sproul et al. 'Does point of purchase nutrition labeling influence meal selection', *Military Medicine* 168: 556-560.

³⁵ Economic Research Service 'Nutrition labeling in the food away from home sector', USDA April 2005.

may render information concerning response efficacy and self-efficacy more salient...but it is the impact of these messages on attitude and intention formation that determine the effect of a fear appeal on precautionary action.’³⁶

Though the warnings discussed here appear on tobacco products, the reasons for their ineffectiveness are not tobacco specific, but instead derive from the natures of both the process of warning through frightening and those to whom the warnings are directed. Indeed, the same arguments could be made whether the graphic warnings appeared on a cigarette packet, a fizzy drink tin or an Internet site. All of which suggests that the ‘common-sense’ strategy of both multiplying warnings and searching for evermore powerful and ‘effective’ ones, needs carefully to be rethought.

Are Graphic Health Warnings Good Tobacco Control Policy?

- ‘[S]earching for evermore powerful warnings is fruitless. There is no ultimate deterrent in smoking, no mother of all health warnings that will finally alert smokers to the error of their ways’.

G. Hastings and L. MacFadyen
Tobacco Control 2002

- ‘[T]he observed association between warning label knowledge and subsequent increases in smoking may suggest that even if attention and recall can be improved, cigarette warning labels may do more harm than good’.

T. Robinson and J. Killen
Archives of Pediatric and Adolescent Medicine 1997

Because tobacco use is often described as an evidence shows that such warnings fail to reduce epidemic it is sometimes assumed that any either smoking prevalence or consumption among measures to reduce its prevalence are justified, youth and adults. Some tobacco control proposals, however, are counterproductive in that they might make them less unwise, wasteful, ineffective, unnecessary and likely to quit smoking, counterproductive, and for these reasons do not constitute sensible regulation.

This submission argues that the proposals for GHW on tobacco products are not an instance of sensible regulation. This is because they will fail to do what their

³⁶ R. Ruiter et al. ‘Scary Warnings and Rational Precautions: A Review of the Psychology of Fear Appeals’, *Psychology and Health* 16 (2001): 613-630.

advocates claim and at the same time they risk counterproductive consequences. This is true for four reasons. First, the scientific evidence suggests that such warnings do not increase smokers' awareness of the risks associated with smoking. Second, the evidence shows that such warnings will not reduce youth smoking initiation. Third, the evidence shows that such warnings fail to reduce either smoking prevalence or consumption among youth and adults. Fourth, there is good evidence that for certain smokers such warnings might well be counterproductive in that they might make them less likely to quit smoking.

This submission offers a critical examination of GHW on tobacco products by first examining what such warnings are alleged to do, second looking at the social science literature about the effectiveness of visual, fear-based warnings, and finally, reviewing the empirical studies of their effects, both in laboratory settings and in one country which has already adopted them.

What Graphic Health Warnings Are Meant To Do

Graphic Health Warnings consisting of a large warning text accompanied by graphic, fear-inducing images portraying the health risks associated with tobacco use were first required in Canada in January, 2001. The rationale for the Canadian introduction of GHW was that they would increase smokers' awareness of the risks associated with smoking, discourage young people from starting to smoke, and reduce smoking prevalence and consumption by both young people and adults. For example, Health Canada wrote in December 2000 that 'increasing the size and emotional content of warnings messages on cigarette packages, including the use of message enhancing pictures, has the potential to encourage more smokers to stop smoking and deter more non-smokers from starting to smoke.'³⁷

A similar sort of justification lies behind the EU's support of GHW. Speaking at a press conference in Brussels in late 2004, Commissioner David Byrne noted that 'People need to be shocked out of their complacency about tobacco. I make no apology for the pictures we are using. The true face of smoking is disease, death and horror – not the glamour and sophistication the pushers in the tobacco industry try to portray. The EU must hammer home this message to young people in its media campaign and to smokers via their cigarette packs.' Justifying GHW, Byrne noted that the Canadian experience showed that they 'can help reduce smoking.'³⁸ (As this submission documents below, this has not been the actual Canadian experience with GHW.)

Like their Canadian counterparts, EU health officials believe that GHW with their high 'emotional content' will increase a smoker's fear level and will lead either to

³⁷ Health Canada Tobacco Products Information Regulations, Ottawa.

³⁸ Press Release European Union 22 October 2004.

reduced smoking or to quitting. In the case of nonsmokers the assumption behind GHW is that the stark images of the health risks of smoking will deter experimentation or initiation. As Lee and Ferguson write about these assumptions:

‘The success of the realistic fear strategy depends on young people’s being rational information processors. It is generally believed that fear will cause arousal and the arousal will lead to interest and subsequently to better information processing. Eventually, fear will help young people think about the negative consequences of risky behavior and thus reach the intended decision-making outcomes. Therefore, when young people are shown the devastating health consequences of smoking, they may abstain from or give up tobacco habits.’³⁹

Both of these assumptions about GHW, however, are questionable as a number of European experts in risk communication have noted. For instance, Gerjo Kok and Robert Ruiter from Maastricht University in 2002 already argued that frightening people by emphasising the negative consequences of smoking was the worst way of attempting to get people to stop smoking, and called on European policymakers to ‘discontinue displaying these scary labels.’⁴⁰

Unfortunately, despite these claims for GHW, the evidence, both in the scientific literature about the effects of fear-based warnings, and in the empirical studies of the effects of GHW on smoking initiation, prevalence and consumption, suggests that GHW will not only fail to achieve any of these goals, but might well be counterproductive to tobacco control.

The Social Psychological Basis for GHW

Despite the fact that the use of fear to motivate change, whether of attitudes or behaviour, has been the subject of intense psychological research for the last fifty years, the advocates of GHW have acknowledged that there is little evidence that the use of such warnings on tobacco products has been grounded in social psychological principles that support graphically induced fear as a motivator of behavioural change. For instance, Strahan et al. noted in a 2002 literature survey of studies examining the effects of tobacco warnings ‘We did not find any articles

³⁹ M. Lee and M. Ferguson ‘Effects of Anti-Tobacco Advertisements Based on Risk-taking Tendencies: Realistic Fear vs. Vulgar Humor’, *Journalism and Mass Communication Quarterly* 79 (2002): 945-963.

⁴⁰ NRC Handelsblad 12 December 2002 quoted in Jansen et al. ‘The Scarier the Better? Effects of Adding Images to Verbal Warnings on Cigarette Packages’ in S. Carliner et al. Eds. *Recent research in information and document design* 2006 John Benjamins: Amsterdam.

that cast their findings in terms of...social psychological principles.’⁴¹ Whilst one can only speculate about such a failure, it might well arise from the fact that so much of the psychological research into fear-based warnings has suggested that such warnings fail or are counterproductive in their consequences. Indeed, there is also considerable evidence in the literature that warnings in general fail to change behaviour.⁴²

The earliest examination of the role of fear arousal and persuasion was a study by Janis and Feshbach,⁴³ who examined the effects of information about the causes of tooth decay and recommendations on oral hygiene. An illustrated lecture on dental hygiene was presented with three different levels of fear intensity, but with the same recommendations for action. The group that received the minimum fear intensity was most consistent in following the recommendations on preventing tooth decay, while the group that received the maximum fear intensity failed to change their oral hygiene. The authors concluded that ‘the overall-effectiveness of a persuasive communication will tend to be reduced by the use of a strong fear appeal’. In a subsequent study on the use of fear appeals about the harmful consequences of smoking, Janis and Terwillinger found that high fear appeals resulted in subjects developing more counterarguments against the warning and having poorer recall of the warning than with low fear appeals.⁴⁴ They concluded that ‘the more strongly fear is aroused by a warning communication, the more strongly motivated the person will become to avoid symbolic responses and thought sequences which lead him to recall or to focus his attention on the essential content of the argument and conclusions.’ (p.409)

Following Janis, Feshbach and Terwillinger’s pioneering work, numerous studies examined their hypothesis with respect to fear arousing communications in specific circumstances. In all of these using emotional, vivid descriptions and simulations of the physical consequences of failure to follow the message instructions aroused high fear.

For instance, in the 1960s Howard Leventhal and others at Yale University looked at fear-based communications using films about the risks of lung cancer and smoking.⁴⁵ The graphic films, one of which showed a lung cancer operation, were

⁴¹ E. Strahan et al. ‘Enhancing the effectiveness of tobacco package warning labels: a social psychological perspective’ *Tobacco Control* 11 (2002): 183-190.

⁴² R. McCarthy et al. 1984 ‘Product information presentation, user behaviour, and safety’ in M. Alluisi et al. Eds. *Proceedings of the Human Factors Society 28th annual meeting*: 81-85.

⁴³ I. Janis and S. Feshbach ‘Effects of fear-arousing communications’, *Journal of Abnormal and Social Psychology* 48 (1953): 78-92.

⁴⁴ I. Janis and R. Terwillinger ‘An Experimental Study and Psychological Resistances to Fear Arousing Communications’, *Journal of Abnormal and Social Psychology* 65 (1962): 403-410.

⁴⁵ H. Leventhal and P. Niles ‘A field experiment on fear arousal with data on the validity of questionnaire measures’, *Journal of Personality and Social Psychology* 32 (1964): 459-

designed to convince subjects to stop smoking and take X-rays. Leventhal found that the High Fear movie was significantly less effective in persuading subjects to stop smoking than a communication that simply used a pamphlet about the risks of smoking. He argued that the communications that aroused a high level of fear were ineffective with vulnerable groups because they increased these groups' sense both of apprehension and helplessness.

These results about the use of warnings that provoke high levels of fear arousal with smokers have been confirmed in more recent experimental work. For example, Keller and Block found that high fear appeals to smokers motivated them to elaborate on the problem—the risks of smoking, and ignore the solution.⁴⁶ This is due to the fact that the high fear warning, which encourages problem elaboration, results in the subject increasing his defensive reaction to the warning.

While Janis and Feshbach and Leventhal's analysis of the effect of fear-based communication was experimental, in part because it predated the era of health-based warnings, their thesis about the failure of fear-based warnings has been confirmed repeatedly in a variety of real-world settings. For instance, MacKinnon, in a study of the effects of fear-based alcohol warnings found that 'there was no beneficial change attributable to the warnings in beliefs, alcohol consumption or driving after drinking'⁴⁷ in a group of high school students followed from 1989-1995.

More importantly, MacKinnon found that with the alcohol warnings, those who were the heaviest users had the best recall for the warnings, yet were the least likely to heed the warning, a finding which suggests that high levels of recall - which are used in GHW research as a proxy for effectiveness - do not translate into behavioural change. Indeed, as Adler and Pittle have observed, 'A consumers' ability to recall the specifics of an information campaign does not necessarily mean that the consumer agrees with the object of the campaign...Indeed, audience attitudes may actually harden against the information conveyed in public interest messages.'⁴⁸

479, H. Leventhal et al. 'Effects of fear and specificity of recommendation upon attitudes and behavior', *Journal of Personality and Social Psychology* 2 (1965): 20-29, H. Leventhal and J. Watts 'Sources of resistance of fear-arousing communications on smoking and lung cancer', *Journal of Personality and Social Psychology* 34 (1966): 155-175.

⁴⁶ P. Keller and L. Block 'Increasing the Persuasiveness of Fear Appeals: The Effect of Arousal and Elaboration', *Journal of Consumer Research* 22 (1996): 448-459.

⁴⁷ D. Mackinnon et al. 'The alcohol warning and adolescents: 5 years effects', *American Journal of Public Health* 90 (2000): 1589-1594.

⁴⁸ R. Adler and R. Pittle 'Cajolery or Command: Are Education Campaigns an Adequate Substitute for Regulation', *Yale Journal on Regulation* 1 (1984): 159 193.

Similarly, studies of pharmaceutical warnings have found that such fear-based warnings failed to alter consumer behaviour.⁴⁹ Stout and Seago in a recent study of the effectiveness of fear-based public service announcements found that even a high level of threat failed to produce behavioural change,⁵⁰ and several studies of fear-inducing HIV prevention campaigns (using tombstone and grim reaper images) have also found them to be ineffective in changing behaviour.⁵¹ And, in one of the few studies to examine the effects of fear-based cigarette warnings (using the US Surgeon General's warnings) on the actual smoking behaviour of adolescents, Robinson and Killen found a 'significant increase in smoking from baseline to follow-up among those teenagers with greater knowledge of the warning labels on cigarette packages...These associations are unlikely to be due to increased exposure to warning labels among smokers because the analysis controlled for the baseline level of smoking.'⁵² This led them to conclude that 'warning labels are, at best, ineffective for this target audience'. Indeed, they found that even if adolescent attention to the warning and recall of them might be increased, 'cigarette warning labels may do more harm than good.' (p. 271-272).

There have, of course, been some students of the warning process who have argued that arousing fear can be persuasive and bring about behavioural change. For example, in a meta-analysis of the effectiveness of fear appeals that examined over 100 studies, Witte and Allen claim that individual differences do not have an effect on people's responses to fear appeals.⁵³ Fear appeals, they suggest, can be effective provided that public health officials increase 'references to the severity of the threat and references to the target population's susceptibility to the threat,' and link these to information about how individuals can avoid the threat – so-called high efficacy messages. (p. 606). Indeed, Witte and Allen specifically endorse GHW by noting that 'Vivid language and pictures that describe the terrible consequences of a health threat increase perceptions of severity of threat.' (*ibid*)

Despite these claims, however, the experimental evidence showing the failure of fear-based warning continues to accumulate, in part because contra Witte and Allen it is not the severity of the threat that is most relevant for changing

⁴⁹ L. Morris and D. Kanouse, 'Consumer reactions to the tone of written drug information', *American Journal of Hospital Pharmacy* 38 (1981): 667-671, F. Dwyer 'Consumer Processing and use of Supplemental Drug Label Information', *Advances in Consumer Research* 10 (1978): 22-26.

⁵⁰ P. Stout and T. Seago 'Response To Threat Appeals In Public Service Announcements', *Proceedings of the conference of the American Academy of Advertising* 1995: 78-86.

⁵¹ See L. Sherr 'Fear arousal and AIDS: do shock tactics work', *AIDS* 4 (1990): 361-364, K. Rigby et al. 'Shock tactics to counter AIDS: The Australian experience', *Psychology and Health* 3 (1989): 145-159, M. Ross et al. 'The effect of a national campaign on attitudes toward AIDS', *Care* 2 (1990): 339-346.

⁵² T. Robinson and J. Killen 'Do Cigarette Warning Labels Reduce Smoking?', *Archives of Pediatric and Adolescent Medicine* 151 (1997): 267-272.

⁵³ K. Witte and M. Allen 'A Meta-Analysis of Fear Appeals: Implications for Effective Public Health Campaigns' *Health Education and Behaviour* 27 (2000): 591-615.

behaviour but the individual's sense of being vulnerable to the threat. [Something that smokers often lack.] A recent meta-analysis by Milne et al. found that the severity of threats, and the efficacy of possible responses to the threat have only small effects on behaviour.⁵⁴

For instance, a recent study on the effects of fear appeals by Ruiter et al. notes that the recent experimental evidence shows that 'the effects of fear appeals on precautionary motivation are inconsistent'⁵⁵ (p.15), suggesting that Witte and Allen's support for using fear-based warnings in public health campaigns is misplaced.

In their study, Ruiter et al. measured the response of subjects, based on their need for cognition, to a fear-based message on breast cancer that was followed by a persuasive message that recommended breast self-examination. The researchers found that individual differences in the need for cognition - that is, the need for evidence, information, actively engaging in evaluating the strength of arguments and comfort with rational processes - made a difference in the effectiveness of fear-based warnings. Only subjects who have a high need for cognition reacted to the fear warning in a properly adaptive way through taking steps to control the danger - in this case engaging in breast self-examination. Subjects with a low need for cognition were much less ready to act on the fear-based warning and more likely to control their fear rather than the danger. As Ruiter et al. note 'Among people low in need for cognition, presenting threatening information did not result in greater acceptance of the recommended response.' (p.20)

Several studies have also linked low need for cognition with impulsiveness, which is also associated with risk taking and rebelliousness.⁵⁶ According to Eysenck for example, impulsiveness is linked to a dislike of thinking and reasoning. In their studies impulsiveness is associated with little interest in thinking about health or concern for personal health.

These findings about the way in which the need for cognition affects the effectiveness of fear appeals are directly relevant to what we know about the smoking population. Inasmuch as this population is increasingly composed of individuals with low needs for cognition, it is likely that these individuals will react to fear-based warning GHW by attempting to control their fear rather than processing the warning and seeking to control the danger. In effect, the GHW will

⁵⁴ S. Milne 'Prediction and intervention in health-related behavior: A meta-analytic review of protection motivation theory', *Journal of Applied Social Psychology* 30 (2000): 106-143.

⁵⁵ R. Ruiter et al. 'Danger and Fear Control in Response to Fear Appeals: The Role of Need for Cognition', *Basic and Applied Social Psychology* 26 (2004): 13-24.

⁵⁶ M. Ferguson et al. op cit, S. Eysenck and H. Eysenck 'The Place of Impulsiveness in a Dimensional System of Personality Description', *British Journal of Social and Clinical Psychology* 16 (1977): 57-68.

have no effect on their understanding of the risks of smoking or on their smoking behaviour.

As Ruiter et al. observe about the practical implications of their research for warning policy: '[F]ear-arousing information can easily be followed by emotional reactions instigating denial or avoidance of the presented information, which may interfere with the adoption of the recommended action. This finding raises doubt about the renewed interest in fear arousal that we particularly witness in health education practice in The Netherlands. Examples with respect to this renewed interest are commercials that show traffic accidents with bloody and deadly consequences, and the enlarged and now clearly visible printing of health warnings on cigarette packages...Obviously, program developers presume that fear arousal directly motivates people to safer behavior. Our findings with regard to defensive responses, however, suggest that fear arousal should be used with greater caution and preceded by extensive pilot testing.' (p. 23).

Ruiter's analysis is supported by a recent research project supported by the UK's Economic and Social Research Council by Paschal Sheeran of Sheffield University.⁵⁷ Sheeran reviewed a range of strategies designed to change intentions and behaviour that had been the subject of studies during the last 25 years. The review was designed to answer the critical question about interventions, namely 'Does changing attitudes, norms and self-efficacy cause changes in intentions and behaviour?' Two of Sheeran's findings suggest that there is not a compelling social psychological basis for GHW. First, Sheeran found that the least effective strategy in prompting behaviour change was arousing feelings of regret and fear in subjects, which GHW are designed to do. Secondly, Sheeran reported that interventions involving self-efficacy produced both greater intention change and behaviour change than other types of intervention involving attitudes or norms. This is particularly significant when considering the effectiveness of GHW, since there is considerable evidence that many smokers have low self-efficacy, and fear-based GHW can inhibit smoking reductions because they decrease an individual's confidence (self-efficacy) in their ability to quit. (See the discussion of Self-Esteem and Self-Efficacy at page 19).

Why Fear-Based Warnings Fail

i. Fear control rather than danger control

The reasons for the failure of these emotional, fear-based warnings stem from an early insight of Leventhal, who noted that fear messages evoke two parallel responses in a subject. The first process, a rational one, is danger control in which

⁵⁷ P. Sheeran 'Does changing attitudes, norms or self-efficacy change intentions and behaviour?', Economic and Social Research Council September, 2006.

the subject recognises and appraises the danger and considers ways to avoid it. The second process, fear control, is less rational and centers on the emotional aspect of the warning. In fear control the individual focuses on ways to control his fear rather than on ways to control the danger. This may involve such fear-control behaviours as resting, drinking or eating. Commenting on the failure of Leventhal's subjects to stop smoking and take X-rays, even after seeing the gruesome lung cancer film, Sternthal and Craig note that, 'Vivid pictorial representations may simultaneously activate fear control processes. The individual may eat, relax or engage in some other behaviour to cope with the emotional response...If emotion is strong, a person may engage in cigarette smoking to reduce emotion and inhibit danger control.'⁵⁸ In some instances, which looked at the effect of graphic warnings on smoking, the subject's focus on fear control increased their sense of apprehension and helplessness without resulting in any attempts to deal with the danger.⁵⁹

Types of Fear Control

Avoidance

Fear-based warnings then are likely to fail because their target audience is attending more to fear control than danger control, a process psychologists refer to as maladaptive coping responses.⁶⁰ The fear control responses take several forms according to researchers. One response is to simply avoid processing the danger information because of its negative implications. In this case, the needs of fear control overwhelm the rational functions of danger control so that the person fails to recognise the subject of the warning as dangerous. As Gina Agostinelli notes, 'Compelling evidence abounds on how people avoid processing information that has negative self-implications and even fail to recognize familiar stimuli that are threatening.'⁶¹ (p. 112)

Defensive Processing

Another fear-control response is termed defensive processing. Here a subject argues with the warning, produces effective counter-examples and rejects its

⁵⁸ F. Sternthal and C. Craig 'Fear appeals: revisited and revised', *Journal of Consumer Research* 7 (1974): 22-34.

⁵⁹ H. Leventhal and P. Niles, 'A field experiment on fear arousal with data on the validity of questionnaire measures', *Journal of Personality* 32 (1964): 459-479.

⁶⁰ P. Rippeetoe and R. Rogers, 'Effects of Components of Protection-Motivation Theory on Adaptive and Maladaptive Coping With a Health Threat', *Journal of Personality and Social Psychology* 52 (1987): 596-604.

⁶¹ G. Agostinelli and J. Grube 'Tobacco Counter-Advertising: A Review of the Literature and a Conceptual Model for Understanding Effects', *Journal of Health Communication* 8 (2003): 107-127.

conclusions.⁶² Essentially, defensive processing works much like the inoculation process in which the vaccine stimulates the body to create antibodies to resist the disease. In defensive processing the individual faced with a threatening warning mobilises information that serves to refute the information conveyed in the warning, allowing him to 'defend' himself against what the warning suggests. The warning then, rather than serving to change behaviour, instead serves as an 'antibody' which inoculates the subject against the effect of the warning itself.

Liberman and Chaiken, for instance in a 1992 study found that 'with a threatening message, increased personal relevance may...increase motivation to arrive at or defend a preferred conclusion or to reject an undesirable one.' Despite the supposed rationality of the message, 'People do sometimes,' they note, 'strongly prefer a particular conclusion, whether because of a health threat, a threat to self-interest, or simply reactance against an influence attempt.'

Defensive processing is particularly evident in individuals who have prior knowledge and experience with a hazard. The effect of such knowledge is to tame the danger by reducing its imminence, credibility, specificity and personal relevance. Inasmuch as individuals have confronted it before without mishap, they are inclined to believe they can do so in the future. As Tanner et al. observe: 'For example, a person who has driven for 20 years without wearing a seatbelt and has never had an injury caused by an accident is likely to have a large repertory of coping responses, such as 'I won't have an accident' or 'I'm very careful when I drive' or 'I don't need a seatbelt because I took a defensive driving course.' (p. 43).

The effect of such defensive processing is to negate the warning's effectiveness through the way in which it is processed and remembered. Describing the consequences of this response to a fear-based warning Agostinelli writes that 'Threatening information can induce defense biases that also affect how it is constructed, interpreted, remembered, and evaluated such that negative self-implications are avoided.' Several studies found that whether the warning was

⁶² See R. Petty and J. Cacioppo 'Effects of forewarning of persuasive intent and involvement on cognitive responses and persuasion', *Personality and Social Psychology Bulletin* 3 (1979): 173-176; R. Petty and J. Cacioppo 'Issue involvement can increase or decrease persuasion by enhancing message-relevant cognitive responses', *Journal of Personality and Social Psychology* 37 (1979): 1915-1926; B. Calder and B. Sternthal 'Television Commercial Wearout: An Information Processing View', *Journal of Marketing Research* 17 (1980): 173-186 Pechmann and Stewart, 1988; R. Petty and J. Cacioppo, 'The elaboration likelihood model of persuasion' in I. Berkowitz Ed *Advances in Experimental Social Psychology* Vol 19 New York Academic Press pp 123-203 1986 'The elaboration likelihood of persuasion' *Advances in Experimental Social Psychology* 19: 193-205; J. Tanner et al. 1991 'Protection motivation model: a normative model of fear appeals' *Journal of Marketing* 55: 36-45 ; A. Liberman and S. Chaiken, 1992 'Defensive processing of personal relevant health messages' *Personality and Social Psychology Bulletin* 18; 669-679.

about smoking, tetanus shots or seat belts, as the individual's vulnerability to the warning increased, its persuasiveness declined.⁶³ As Witte and Allen (2000) observe, 'For high-relevance participants (those at risk for harm by the health threat, the defensive systematic processing was even more pronounced.'

Thus, even though the fear-based warning might increase the subject's feelings of vulnerability to the risk, defensive processing of the warning served systematically to negate that sense of personal vulnerability.

This process is especially evident in smokers. For instance, over time smokers cognitively readjust their smoking related beliefs particularly with respect to the credulity of smoking risks in general and in terms of their own vulnerability, both as a result of smoking and of seeing warnings. This readjustment makes them more likely both to selectively attend to warnings and to discount them. Agostinelli, for instance, writes about a 'male smoker exposed to a counter-advertisement suggesting that smoking causes impotence [as GHW do]. He may feel threatened by such a message, decide it is stupid, and tune it out.'

In a 2002 study for the EU of the fear-based, graphic tobacco warnings, the European Health Research Partnership and Centre for Tobacco Control found ample evidence of defensive reasoning on the part of smokers confronted by such warnings.⁶⁴ For instance, one focus group participant commenting on the impotence warning, noted 'You've just got to laugh at these things—wives tales.' As the researchers observed 'Respondents in all countries found the image humorous and often appeared to find it difficult to take the intended message seriously.' (p. 38).

Similarly, with the mouth disease warning, the researchers found a large element of rationalization and defensiveness among smokers 'who argued that such dental disease would be the result of bad oral hygiene generally, and not smoking specifically.' As focus group participants noted: 'The thing is if you have got teeth like that it is not 'cos you are smoking. It's 'cos you are not really taking care of them. All of us smoke and we dinnae exactly look like that, do we?' 'Tobacco is not the simply cause of all this. With proper hygiene you can prevent this even if you smoke.' (p. 36).

Other participants in the study showed similar instance of defensive processing in response to the fear-based warnings. For instance, one commented that 'Using

⁶³ Levanthal and Niles, 1964; Levanthal, R. Singer, 1965 *The Effects of Fear-arousing Communications on Attitude Change and Behaviour*, unpublished doctoral dissertation University of Connecticut; L. Berkowitz and D Cottingham, 'The interest value and relevance of fear-arousing communications', *Journal of Abnormal and Social Psychology* 60 (1962): 37-43.

⁶⁴ Cancer Research UK *Research into Labelling of Tobacco Products in Europe* Report submitted to the EU Commission 15 September 2001.

that guideline, they should also go after the cars as well, they also kill.’ Another, in response to the GHW noted that ‘traffic accidents kill, too.’ (p. 27).

Reactance

A third fear control response, closely related to defensive processing, is psychological reactance, also referred to as the ‘boomerang effect’. Psychological reactance occurs when the subject perceives the fear-based warning as threatening his freedom and then moves in the opposite direction from that proposed by the warning.⁶⁵ These findings of reactance are, as Brehm and Brehm note, consistent across many studies and show that warnings from an authoritative source, with a dogmatic tone and which demand compliance harden a subject against the warning and reduce compliance. For instance, Bushman and Stack in their 1996 study of reactance to warnings about violent television programmes write that: According to reactance theory, when an individual’s freedom to engage in a particular behavior is threatened or eliminated, the individual will experience psychological reactance, defined as the unpleasant motivational state that consists of pressures to re-establish the threatened or lost freedom. The more important the freedom is to the individual, the greater is the reactance when the freedom is threatened or eliminated. One method of re-establishing the freedom is to engage in the proscribed behavior. (p.208).

Bushman and Stack found that high-reactance individuals were especially interested in viewing the very programmes that the warning cautioned against.

Commenting on the risks associated with warning induced reactance, Stewart and Martin observe that: ‘Warnings that produce psychological reactance, serve as signals for risk-taking opportunities, or make a product more attractive may produce behaviour that is exactly the opposite of that intended by the placement of the warning, at least among certain groups of individuals. Such effects are clearly unintended, but their consequences, under some circumstances, can make the use of warning messages less desirable than no message at all.’⁶⁶ (p.13). Indeed, as we shall see, these counter-productive consequences of GHW raise the question of whether the use of these ‘warning messages’ is less desirable than no message at all.’

⁶⁵ M. Clee and R. Wicklund ‘Consumer Behaviour and Psychological Reactance’, *Journal of Consumer Research* 6 (1980): 389-405; S. Brehm and J. Brehm ‘Psychological Reactance: A Theory of Freedom and Control’, New York Academic Press 1981; J. Sensenig and J. Brehm ‘Attitude Change From an Implied Threat to Attitudinal Freedom’, *Journal of Personality and Social Psychology* 8 (1968): 324-330; B. Bushman and A. Stack, ‘Forbidden fruit versus tainted fruit: Effects of warnings labels on attraction to television violence’, *Journal of Experimental Psychology: Applied* 2 (1996): 207-226.

⁶⁶ D. Stewart and I. Martin ‘Intended and unintended consequences of warnings messages’, *Journal of Public Policy and Marketing* 13 (1994): 1-19.

Numerous studies have found that one of the most reliable predictors of smoking uptake is rebelliousness.⁶⁷ If smokers, particularly young smokers are rebellious, then they are highly likely to be reactant to the attempts to control or influence their behaviour through warnings. Indeed, their reactance will work against the warning and make them more likely to continue smoking.

For instance, a recent study by Miller et al. reports that reactant behaviour, which they define as ‘the tendency to resist adult control, to engage in superficial, oversimplified thinking, to emulate adult behaviours...to feel invincible; and to rebel against authority’⁶⁸ is one of the most important factors in predicting adolescent smoking behaviour.

The importance of reactance in fashioning adolescent smoking prevention measures is also highlighted in a study by Grandpre et al..⁶⁹ Grandpre found that explicit anti-smoking messages increased the reactance of 10th grade students. As they write: ‘Whereas younger message recipients may be accustomed to, or more tolerant of, behavioural restrictions, adolescents are less receptive to messages targeting behavioural changes... Adolescents simply do not like having their choices limited and their options clearly delineated.’ Strong, explicit anti-smoking messages, notes Grandpre, ‘may even boomerang and have negative effects on adolescents’ health behaviours.’

For instance, Lee and Ferguson discovered in a recent study using fear warnings, that the more rebellious the young smokers were, the less likely they were to quit smoking after seeing a fear-based smoking communication.⁷⁰ Noting that adolescents were more prone to accept health risks than older people, they caution that ‘health messages designed to persuade them to reduce risk-taking behaviors must recognize their risk-taking tendencies or reasons. Otherwise, the messages may backfire and reinforce the unhealthy behaviour. For example, some might take risks to be rebellious. Scare tactics might trigger their rebellious tendencies.’ (p. 946). Based on their findings they concluded that ‘Even though the high-rebellious participants reported more interest in the ads, the higher in rebelliousness they scored, the less likely they were to quit smoking after viewing

⁶⁷ T. Jex and T. Lombard ‘Psychosocial Factors Associated with Smoking in Air Force Recruits’, *Military Medicine* 163 (1998): 222-225, I. Lipkus et al. ‘Personality Measures as Predictors of Smoking Initiation and Cessation in the UNC Alumni Heart Study’, *Health Psychology* 13 (1994): 149-155, M. Ferguson et al. ‘Communicating with Risk Takers: A public relations perspective’, *Public Relations Research Annual* 3 (1991): 195-224.

⁶⁸ Miller et al. ‘Identifying Principal Risk Factors for the Initiation of Adolescent Smoking Behaviours: The Significance of Psychological Reactance’, *Health Communication* 19 (2006): 241-252.

⁶⁹ Grandpre et al. ‘Adolescent Reactance and Anti-Smoking Campaigns: A Theoretical Approach’, *Health Communication* 15 (2003): 349-366.

⁷⁰ M. Lee and M. Ferguson ‘Effects of Anti-Tobacco Advertisements Based on Risk-taking Tendencies: Realistic fear vs. vulgar humor’ *Journalism and Mass Communications Quarterly* 79 (2002): 945-963.

the realistic fear ads...The traditional method of inducing fear by seriously portraying the consequences of smoking might not be as effective for targeting highly rebellious risk takers.' (p. 956).

ii. Oversimplification & Exaggeration

But fear-based warnings also fail for a variety of reasons additional to a focus on fear control rather than danger control. For instance, fear-based warnings, because of their high emotional content and their emphasis on danger, are often oversimplified or exaggerated and it is this exaggerated quality that causes them to fail to convince their intended audience. This failure, known as the Reefer Madness Response after the 1936 film in which the dangers of drug use were exaggerated, is produced by the tendency of fear-based appeals to suggest risks that have no credible basis in the subject's daily experience. For instance, Sherif and Hovland note that for a person to accept a piece of information the information must be close enough - within what they call the 'Latitude of Acceptance' to the person's current beliefs.⁷¹ Views that were outside of the subject's latitude of acceptance were likely to be rejected as improbable.

Smokers, for instance, understand the common and easily understood diseases most often identified as risks of smoking. Warnings about these risks are not so far removed from smoker's experiences as to lack credibility. On the other hand, smokers have no daily experience of the diseased lungs portrayed in GHW, and the use of these warnings is likely to be outside the smoker's latitude of acceptance, and thus much more likely to be rejected as improbable.

Writing about the preference for simplistic and overly rationalistic models as the basis for adolescent smoking prevention, Lloyd and Lucas note that: 'the complexity of the decision-making process concerning the adoption of health-related behaviours must not be underestimated. Much health promotion activity has been predicated on somewhat simplistic interpretations of influential social-psychological models, in which such decisions are interpreted as logical and straightforward. An individual's motivation for engaging in a given behaviour is not simply the opposite pole of his or her motivation for avoiding that behaviour. Motivations for and against engagement are commonly very different psychological structures...It is also important for the successful modification of beliefs that the risks should not be exaggerated for the sake of emphasis, nor be excessively oversimplified.

The consequence of such exaggeration may be a reduction in credibility of future messages brought about by a perceived discrepancy between health messages and people's own experiences. In any programme or intervention it is essential to

⁷¹ M. Sherif and C. Hovland *Social Judgement: Assimilation and contrast effects in communication and attitude change*, Yale University Press: New Haven CT 1961.

produc[e]...Information that is direct enough to be appropriate to the medium used, without translating probability data into messages that may be interpreted as implying inevitability and which may be contrary to most people's experience.'⁷² (p. 185).

For example, research has shown that simplistic fear-based warnings that predict dire consequences from ignoring the warning, are discounted because the consequences fail to occur in the short term.⁷³ As Stewart and Martin write 'Such effects are most likely to occur when failure to heed a warning cannot be connected directly and immediately to potential consequences. This is frequently the case for many potential hazards that occur over the long term and are probabilistic in character. Each time the behaviour is enacted without the adverse result, the credibility of the warning system may be reduced.' (op cit)

As Breznitz found, such diminished respect for fear-based warnings is particularly true for tobacco warnings. He observes: 'in spite of information to the contrary, one smokes a cigarette and nothing happens unlike the result of swallowing bleach or not using protective gloves when handling toxic chemicals...One smokes another cigarette and still nothing happens. Thus, in the absence of any clear signals that may indicate the danger involved, these threats turn out subjectively to be false alarms.' (p. 282).

This sort of 'alarm failure' can be observed in a qualitative focus group study on tobacco warnings by the European Health Research Partnership and Centre for Tobacco Control Research for the European Commission.⁷⁴ Summarising the result of their qualitative research, the report found that fear warnings tended to be rejected because of their 'radical generalisations'. As one focus group participant noted: 'Few people my age fall ill because of tobacco.' (p. 27).

iii. Self-Esteem and Self-Efficacy

Fear-based warnings also fail with groups that have low self-esteem and low self-efficacy. Studies of warnings in relation to self-esteem have found that while high self-esteem individuals react to the warning by focusing on controlling the danger, low esteem individuals focus instead on controlling the fear and ignoring the danger.⁷⁵ The greater the fear-based threat, the higher the acceptance of the threat in high self-esteem individuals, and the lower the acceptance in low self-

⁷² B. Lloyd and K. Lucas *Smoking in Adolescence: Images and Identities*, Routledge: London 1998.

⁷³ S. Breznitz *Cry Wolf: The Psychology of False Alarms*, Hillsdale NJ Lawrence Erlbaum and Associates 1984.

⁷⁴ *Research into the Labelling of Tobacco Products in Europe*, 2002.

⁷⁵ Tanner et al. 1991 op cit.

esteem subjects⁷⁶. Inasmuch as smokers, particularly young smokers, have low self-esteem, there is a strong likelihood that such warnings will fail to work.

Similarly, work on self-efficacy suggests that an individual's sense of capability to act conditions their reaction to fear-based warnings. Individuals with high self-efficacy react rationally by acting to control the danger highlighted by the warning. But individuals with low self-efficacy - the individual's estimate of his ability to address the danger - tend to focus on the fear and feel incapable of dealing with the danger itself.⁷⁷ Individuals with low self-efficacy fail to address the subject of the warning because they see themselves as ineffective, and instead focus solely on dealing with their fears. Low self-efficacy often results from failures in previous attempts to deal with the danger in the recommended way, for instance, in the case of Leventhal's subjects, stopping smoking and getting an X ray. As McGuire observed, failure to heed a warning tends to further ingrain the subject's behaviour by establishing a pattern of unsuccessfully coping with the danger.⁷⁸ And as Sternthal and Craig (1974 op cit) note such a pattern is difficult to break in that subjects who fail to act on a warning will increasingly feel 'hopelessly inadequate and thus pursue a self-following prophecy.'

Effectively, frightening the individual with low self-efficacy reduces the chances that the warning will be heeded, creating a boomerang effect. 'If people believe that they cannot cope with a threat, write Self and Rogers (1990 op cit) increasing the level of threat decreases intentions to adopt the recommended response. Thus, people actually planned to consume more alcohol, exercise less, and avoid precautions against STDs. The conditions producing this deleterious effect are beliefs people have that they are incapable of protecting themselves because the coping response is ineffective and/or they cannot perform the response.' (p. 356).

As Robinson and Killen (1997 op cit) observe in analysing tobacco product warnings and young smokers, 'high fear messages may actually inhibit reductions in smoking by decreasing a person's perceived ability to quit.' (p. 271).

⁷⁶ J. Dabbs and H. Leventhal 'Effects of varying the recommendations in a fear-arousing communication', *Journal of Personal and Social Psychology* 4 (1961): 525-531, N. Kornzweig, *Behavior change as a function of fear-arousal and personality*, unpublished doctoral dissertation Yale University (1967); H. Leventhal and G. Trembly 'Negative emotions and persuasion', *Journal of Personality and Social Psychology* 36 (1968): 154-168.

⁷⁷ P. Rippetoe and R Rogers 'Effects of components of protection motivation theory on adaptive and maladaptive coping with a health threat', *Journal of Personality and Social Psychology* 52 (1987): 596-604. C. Abraham et al. 'Exploring teenagers' adaptive and maladaptive thinking in relation to the threat of IVC infection', *Psychology and Health* 9 (1994): 253-272.

⁷⁸ W. McGuire 'Personality and attitude change: an information-processing theory' in A. Greenwald et al. Eds. *Psychological Foundations of Attitudes*, Academic Press NY 1968.

Thus, this failure of fear-based warnings in relation to low self-efficacy is particularly relevant to smokers. First, low self-efficacy is an important risk-factor for smoking initiation, a fact that suggests that fear-based warnings would have little impact on preventing smoking uptake. Second, smokers who have a history of unsuccessful quit attempts might find their failure to comply with the fear-based warnings further reduces their self-efficacy, thus reinforcing their smoking. Third, fear-based warnings that emphasis the addictive properties of smoking are likely to further enhance the feelings of helplessness typical of smokers with low self-efficacy. For example, J. Eiser et al. found that the most important predictor of smoking cessation was confidence in one's ability to quit.⁷⁹ Lower confidence, and crucially, less behavioural change was closely linked to considering oneself 'addicted'.

The same point was made by Lloyd and Lucas in their study of adolescent smokers. They write 'regular smokers claimed that they themselves were addicted. This latter observation supports Regis's (1990) assertion that an overemphasis on the addictive properties of cigarettes may be counterproductive: expected, as well as actual, addiction is used by adolescents and adults alike as a rationalisation for continuing to smoke.' (p. 165).

Addiction talk, with its clear implications of powerlessness, thus works against the very type of attitudinal and behavioural change that fear-based warnings are designed to promote. As the EU research on fear-based warnings concluded 'The majority of the messages focus on the behaviour of the individual and ways in which they should modify or change their behaviour. Consequently, many smokers perceive them to be blaming and a personal attack on their lack of willpower while not recognizing the difficulties associated with cessation.' (p. 33).

iv. Lack of New, Relevant Information

Fear-based warnings also fail to work when the message being conveyed is already clearly understood and fails to provide new information. As Harvard University's Kip Viscusi of Harvard noted in his research on the effectiveness of warnings, for warnings to effect behavioural change they must provide information that is not previously known and is useful.⁸⁰ Viscusi's research confirms earlier work,⁸¹ which suggested that warnings are ineffective in changing behaviour with familiar products when they fail to convey information that the individual finds novel and

⁷⁹ J. Eiser et al. 'Trying to Stop Smoking: Effects of Perceived Addiction, Attributions for Failure and Expectancy of Success', *Journal of Behavioural Medicine* 8 (1985): 321-341.

⁸⁰ K. Viscusi and W. Magat *Learning about Risk: Consumer and Worker Responses to Hazard Information* Cambridge Harvard University 1987; *Hazard Warnings in Reforming Products Liability* Cambridge Harvard University 1991.

⁸¹ Horst et al. *Evaluation of the potential effectiveness of warning labels on alcoholic beverage containers*, Pala Alto Ca Failure Analysis Associates 1988.

relevant. Despite the claims that smokers do not understand the risks of smoking and that GHW convey new information, the empirical evidence suggests that this is not the case. Not only do smokers overestimate the mortality risks associated with smoking,⁸² but having grasped the fact that smoking can kill, they are uninterested in and inattentive to a detailed knowledge of the particular ways in which this might occur. This is not peculiar to smokers. For instance, it is difficult to believe that risky behaviour with respect to AIDS would change appreciably by including in AIDS prevention materials graphic pictures of the individual diseases caused by AIDS. This is because once subjects understand the possibly fatal risks associated with an activity or product, the precise ways in which death might ensue fail to have a further impact.

The failure of GHW to convey new and relevant information to smokers can be found in the comments of the EU focus groups where participants rejected the warnings as 'patronizing and 'worn out',' clearly indicating that they failed to convey new information about smoking of relevance to smokers. Again, evidence from Canada indicated that 98 percent of adult smokers were aware of the harmful consequences of smoking and only 3 percent of adult smokers failed to recall correctly one of the current package warnings, indicating that smokers clearly understood smoking-related risks.⁸³

Despite the universal appreciation of smoking-related risks, especially amongst smokers, proponents of fear-based warnings refuse to accept that smokers understand the risks of smoking. Instead, they propose that if only additional, more frightening information about the risks of smoking is presented to smokers, than they will act more 'rationally'. R. Borland and D. Hill, for example, take this position in writing about the impact of Australia's new warnings. 'It is true that in Australia almost everybody has heard about dangers of smoking...but this does not mean that they know and believe all the information that is central to making rational decisions about whether or not to smoke. The data clearly indicate that what knowledge they have is not very salient...or there is a reluctance to admit it, or both.'⁸⁴ (p. 325). While this might be true, it fails to address the evidence that fear-based warnings do not change smokers' reluctance to address the health risks of smoking.

Writing about the repetitive nature of tobacco warnings, Hastings and MacFadyen argued that 'repeating this to a population that knows it, two thirds of whom already want to quit, is of questionable value. To return to our initial example, there comes a point where the theatre-goer shouting 'fire' is reduced to the irritation of a malfunctioning alarm. Furthermore, searching for evermore

⁸² See Viscusi *Smoking: Making the Risky Decision*, Oxford, New York 1992 and *Smoke-Filled Rooms: A Postmortem on the Tobacco Deal*, University of Chicago 2002.

⁸³ Health Canada, Environics Research Wave Surveys, 2000.

⁸⁴ R. Borland and D. Hill, 'Initial impact of the new Australian tobacco health warnings on knowledge and beliefs', *Tobacco Control* 6 (1997): 317-325.

powerful warnings is fruitless. There is no ultimate deterrent in smoking, no mother of all health warnings that will finally alert smokers to the error of their ways.’⁸⁵ (p. 74).

This problem of failing to provide new and relevant information is amplified by research that shows that increased familiarity with products over time lessens the perceived hazard associated with them and this familiarity in turns reduces the attention to a warning.⁸⁶

v. Health-based deterrents are ineffective

Fifth, fear-based warnings fail with adolescents and others because they tend not to be influenced by health-based deterrents. Lloyd and Lucas in their UK-based study of adolescent smoking note this failure: ‘A further problem with the traditional knowledge-attitude-behaviour formula so often employed in health promotion is that it assumes that a risk to physical health is necessarily a deterrent...[T]he possibility that young people view health as least ambivalently should also be considered. From the 1950s’ James Dean to the 1960s’ Jimi Hendrix, from the 1970s’ Sid Vicious through to the 1990s’ Kurt Cobain and beyond, teenage heroes have been characterized by ‘unhealthy,’ risk-taking behaviour. There is an undeniable appeal in the image of the artist, actor or musician whose lifestyle is fast, chaotic and exciting. Across five decades of teenage culture, appearing ‘fashionably wrecked’ by such behaviour has only served to heighten charisma and desirability.’ (p. 185-186).

The failure of fear inducing messages based on health effects is well-known in areas outside of smoking prevention. Hale and Dillard in writing about why such warnings go wrong note that: ‘The impact of age on the persuasiveness of fear appeals also helps to explain why so many fear appeals to promote better health are ineffective. Televised public service messages to decrease driving under the influence of alcohol or drug abuse are frequently targeted at adolescents. Those messages frequently employ fear appeals, but fear appeals are unlikely to influence the young people at whom they are aimed. We can imagine living rooms across America where parents of adolescents find a public service announcement compelling, but where the target of the appeal...is unaffected by it.’⁸⁷

⁸⁵ G. Hastings and L. MacFadyen ‘The limitations of fear messages’, *Tobacco Control* 11 (2002): 73-75.

⁸⁶ S. Godfrey et al. ‘Warnings Messages: Will the Consumer Bother to Look’, Proceedings of the Human Factors Society 27th annual meeting (1983): 950-954, G. Robinson, ‘Human Performance in Accident Causation: Toward Theories on Warnings Systems and Hazard Appreciation’, Proceedings of the 3rd International System Safety Conference 55-59.

⁸⁷ J. Hale and J. Dillard ‘Fear Appeals in Health Promotion Campaigns’ in E. Maibach and R. Parrott Eds. *Designing Health Messages: Approaches from Communication Theory and Public Health Practice* Sage, NY 1994 p. 22.

For instance, in a recent study of the impact of fear appeals, de Hoog found that not only do fear appeals fail to affect behaviour, but that however significant the risk to health might be, it was unlikely to change behaviour if individuals did not feel vulnerable to the risk.⁸⁸ She writes that: 'Whereas the emphasis of health education campaigns has frequently been on depicting the severity of health consequences, as well as on stressing the response efficacy of the recommended action, we have found that although these factors affected attitudes, they failed to have much of an impact on intention and behavior. Intention and behavior were solely determined by vulnerability. This suggests that however severe a health risk, and however effective the protection offered by the recommendation, unless we can persuade individuals that they are vulnerable to the health risk, they are unlikely to take protective action.' (p. 32).

Yet, the evidence suggests that it is this very absence of health risk vulnerability that characterizes many young people to whom warnings are directed. Indeed, Lloyd and Lucas in their study of adolescent smokers in the UK found that young smokers, based on their own experience and the observation of other smokers, did not feel vulnerable to the health risks of smoking. Writing about these young smokers they note that 'Regular smokers described lifelong smokers they knew who appeared to be healthy and well. These individuals were offered as an illustration of the discrepancy between the message, as they saw it, and their own experiences.' (p. 167).

As Robinson and Killen note in a study of the paradoxical effects of warning labels on adolescents, 'warning labels are intended to reduce smoking behaviour by frightening people with the health hazards of smoking. However, adolescents are generally not influenced by interventions that focus only on more distal, health-related outcomes.' (p. 271).

Nor are these reactions confined to adolescents. As Eiser notes: 'The possibility exists that many people engaging in unhealthy behaviour see the costs to their health as outweighed (at least in the short term) by benefits in other domains. The message here is that health researchers should be wary of imposing their own value system on their subjects' responses. Many health-related behaviours may actually be predicted better from values other than 'health'...In short, such findings allow the possibility that many substance users are doing what, up to a point, they want to do, but that what they want to do is not necessarily to stay healthy.'⁸⁹

⁸⁸ N. de Hoog et al. 'The Impact of Fear Appeals on Processing and Acceptance of Action Recommendations' *Personality and Social Psychology Bulletin* 2005 31: 24-33.

⁸⁹ J. Eiser and P. Gentel, "Health Behaviour as a Goal-directed Action", *Journal of Behavioural Medicine* 11 (1988): 523-535.

vi. Impaired Credibility

Sixth, fear-based warnings fail because their source is perceived to lack credibility. The persuasiveness of fear-based warnings is determined by the subject's judgement as to the threat's genuineness, severity and likelihood, but all of these are contingent on his judgement about the warning's credibility, which is linked to the authority of its source. If the warning is judged to come from a less than credible source, than its claims about a hazard's genuineness, severity and probable occurrence are discounted.

The EU warnings research specifically examined the issue of fear-based warning credibility and found that the warning's credibility was severely compromised by the fact that its source was the government. 'Smokers did not respond well,' they write, 'to regulatory bodies as a possible source of messages.' As one subject noted, 'But they don't take an active part in helping people to stop. What they are is just making laws and Acts and rules. It's all political.' (p. 40). Summarising the compromising effects of the government as a source of fear-based warnings, the EU researchers conclude that 'Smokers in all countries generally perceived government and regulatory bodies to lack empathy with their needs which made it easier for them to reject the message.' (p. 41-42).

vii. The High Cost of Compliance

Fear-based, graphic warnings fail because consumers determine that even allowing for the reality of the risks described, the costs of avoiding the risks are too substantial. The rational-knowledge-based assumption on which warnings are founded - that informing, providing knowledge about risks, leads to behavioural change - is in fact not supported by the evidence. In effect, as part of the warning process consumers perform a cost-benefit analysis in which the costs of complying with the warning are weighed against the benefits, both present and future, derived from risks.⁹⁰ As the cost of responding to the fear appeal increases, changes in attitude, intention and behaviour decrease. Commenting on the ways in which compliance costs defeat fear appeals, Hale and Dillard write that: 'Response costs refer to negative outcomes that results from complying with a

⁹⁰ Dwyer, 1978 op cit; P. Wright and B. Weitz, 'Time Horizon Effects on Product Evaluation Strategies', *Journal of Marketing Research* 14 (1977): 429-443; S. Godfrey et al. 'Warnings: Do They Make a Difference', Proceedings of the Human Factors Society 29th annual meeting (1985); D. Fruin et al. 'Protection motivation theory and adolescents' perceptions of exercise', *Journal of Abnormal Social Psychology* 22: 55-69, D. Floyd et al. 'A meta-analysis of research on protection motivation theory', *Journal of Applied Social Psychology* 30 (2000): 4070429, S. Milne et al. 'Prediction and intervention in health-related behaviour: A meta-analytic review of protection motivation theory', *Journal of Applied Social Psychology* 30 (2000): 106-143, S. Moore and E. Gullone, 'Predicting Adolescent Risk Behavior Using a Personalized Cost-benefit Analysis' *Journal of Youth and Adolescence* 25: 343-359.

message recommendation. In Fruin et al's (1992) study of exercise to reduce risks of cardiovascular disease, response costs included lost time and physical discomfort associated with exercising. In Witte's (1992b) study of risk behaviours and AIDS, response costs of wearing condoms might have included lost spontaneity. In Hale et al's (1993) study of risks from ultraviolet radiation, several participants would not use a sun block every day because its application was inconvenient.'⁹¹

For example, in an experiment involving college students, Godfrey et al. found that the cost of compliance with a warning (in this case about a broken door) determined compliance rates. In a situation where the cost of compliance was high, there was no statistically significant change in behaviour.

This failure to heed a warning is not due to the fact that the warning has not been understood. There are numerous studies that have shown that individuals clearly understood the risks associated with a behavior but chose to continue anyway.⁹² As Eiser observed 'many people engaging in unhealthy behaviour see the costs to their health as outweighed (at least in the short term) by benefits in other domains.' Nor is the failure to heed a warning an instance of irrational behaviour. Because many risks are both uncertain and distant, the failure to follow a warning cannot be judged as irrational, though it is frequently portrayed in this fashion by some in the public health community. Rather it can be plausibly construed as evidence simply of a different appraisal of the values present in any situation involving risk and uncertainty. Judgements about risk are, at the end of the day, idiosyncratic. As Stewart and Martin note: 'Despite well-known information about potential dangers, consumers continue to use products and engage in behaviours that are unsafe, at least at some level. The argument that 'if people just knew better, they would change their behaviour' is not supported by common experience, Neither is it supported by empirical studies...It also may be the case that consumers understand and accept the content of the warning, but choose not to act on it after evaluating the costs and benefits of complying or not complying.

A consumer may decide that the risks associated with smoking are not sufficient to give up whatever benefits they believe they derive from this activity. Likewise, a consumer may deliberately take a greater dosage of an analgesic than is recommended because he or she desires the benefit of a stronger dose. It may also be the case that the costs of inconvenience of compliance are perceived to be greater than the risk posed by the product. For example, a consumer might find it inconvenient to wear protective glasses when using a power tool for a very brief period. Finally, a consumer might decide that the immediate benefits of consumption of a given product are sufficiently desirable that a low probability of

⁹¹ J. Hale and J. Dillard 'Fear Appeals in Health Promotion Campaigns' in E. Maibach and R. Parrott Eds *Designing Health Messages: Approaches from Communication Theory and Public Health* 1994 Sage p. 78.

⁹² Godfrey et al.; op cit Eiser and Gentel, 1985 op cit.

harm that may occur at some point in the distant future is discounted. Thus, he or she may continue to drink heavily because he or she enjoys the immediate relief from tension provided by alcohol and considers the risk of health impairment to be small.' (p. 10).

Studies have shown that smokers make similar tradeoffs in terms of the costs and benefits of warning compliance. For example, Beltramini found that smokers who believed that cigarettes posed a risk to their health were more inclined to believe the package warnings than those who did not, and there was no connection between smoking behaviour and the warning's believability.⁹³ Smoking status did not reduce warning credibility. Clearly there was acceptance of a hazard, but without change of behaviour. In the EU survey on the GHW, for instance, smokers complained that the warnings seemed to downplay the costs of compliance, which obviously were a salient consideration for them in the decision to stop smoking.

viii. The Forbidden Fruit Effect

Finally, fear-based graphic warnings fail because of what psychologists term the forbidden fruit effect. There is considerable empirical evidence that certain individuals are attracted to proscribed and risky products and activities.⁹⁴ Highly charged, emotional warnings act to advertise these products and activities and make them more attractive to these individuals than they would otherwise be. Stewart and Martin note that: 'A source of excitement for some people, both individually and within certain cliques, the transgression of restrictions imposed by law and taboo in a society...Warnings may draw attention to risks that members intentionally choose to take, When asked about their reasons for risk taking, these individuals often indicate that risk taking is a means to other goals such as social acceptance or a thrilling experience. Warnings can represent a signal of opportunities for risk taking in such circumstances.' (p. 12).

⁹³ R. Beltramini 'Perceived Believability of Warning Label Information Presented in Cigarette Advertising', *Journal of Advertising* 17 (1988): 26-32.

⁹⁴ D. Taylor 'Accidents, Risks, and Models of Explanation', *Human Factors* 18 (1976): 371-380; M. Hyland and J. Birrell 'Government health warnings and the boomerang effect', *Psychological Reports* 44 (1979): 643-647; K. Schneider 'Prevention of Accidental Poisoning Through Package and label Design', *Journal of Consumer Research* 4 (1977): 67-74; H. Urzic 'The Impact of Safety Warnings on Perception and Memory', *Human Factors* 28 (1984): 677-682; P. Feingold and M. Knapp, 'Anti-Drug Abuse Commercials', *Journal of Communication* 27 (1977): 20-28; L. Snyder and D. Blood 'Alcohol Advertising and The Surgeon General's Alcohol Warnings May Have Adverse Effects on Young Adults', *Journal of Applied Communication Research* (1992 February): 3753; B. Bushman and A. Stack, 'Forbidden Fruit versus Tainted Fruit: Effects of Warnings Labels on Attraction to Television Violence', *Journal of Experimental Psychology Applied* 2 (1996): 207-226; M. Clee and R. Wicklund 'Consumer Behavior and Psychological Reactance', *Journal of Consumer Research* 6 (1980): 389-405.

Taylor, for instance, finds that certain personality types are drawn to activities that are designated as high risk because of the thrill attached to risk-taking itself.⁹⁵ Bushman and Stack (op cit), in an analysis of warnings about television violence, found that the warning itself increased interest in viewing the violent content. Snyder and Blood in a study of young adult consumers' reaction to alcoholic beverage warnings found that the presence of the warning led the young drinkers to not only rate the benefits of drinking more highly but report more frequent intentions to drink.⁹⁶ Boddewyn found a correlation between adolescent risk-taking propensities and curiosity about the risks of smoking.⁹⁷

In an extensive examination of the types of personality drawn to risk, Ferguson et al. describe three risk-taking profiles -impulsive risk takers, rebellious risk takers, and unconventional risk takers - for whom the forbidden fruit effect is particularly strong. ⁹⁸Each of these types of risk-taker would not only be attracted to a risk that is highlighted by a warning, but, more importantly, highly unlikely to attend to, process or act on the warning. For instance, according to Ferguson et al. each of these risk-taking types is likely to be a smoker, and each is likely to be impervious to most warnings about smoking. As they note the reasons for this vary by risk-taker type: 'Impulsive risk takers are much more difficult to reach. They do not like to think and we expect that they may process information heuristically...Rebellious risk takers...are not going to respond to experts solving their problems...These risk takers do not want to be told what to do: they want to be in charge. Of all the risk-taking predispositions, getting the attention of and persuading the unconventional risk taker will be one of the most challenging goals...These risk takers...do not care about their health, and they do not have confidence in a source as widely respected as the Surgeon General. These risk takers seem to value unconventionality.' (p.220).

Warnings for these individuals thus run the risk of being counter-productive since they both heighten the attractiveness of the risk - the forbidden fruit - while at the same time failing effectively to mitigate its consequences.

⁹⁵ D. Taylor 'Accidents, Risks and Models of Explanation', *Human Factors* 18 (1976): 371-380 1976.

⁹⁶ L. Snyder and D. Blood 'Alcohol Advertising and The Surgeon General's Alcohol Warnings May Have Adverse Effects on Young Adults', a paper presented to the International Communication Association Annual Conference Chicago 1991.

⁹⁷ J. Boddewyn *Why Do Juveniles Start Smoking?* New York International Advertising Association, 1986.

⁹⁸ M. Ferguson 'Communicating with Risk Takers: A Public Relations Perspective', *Public Relations Research Annual* 3 (1991): 195-224.

The Psychological Evidence about Fear-based Warnings

A review of the relevant psychological literature clearly shows, as Strahan et al. observed, that the graphic, fear-based tobacco product warnings are not grounded in social psychological principles. Indeed, the psychological evidence suggests why the use of graphic, fear-based warnings is likely to fail to accomplish the objectives claimed for such warnings in terms of increasing smokers' understanding of the risks of smoking and reducing smoking initiation, consumption and prevalence. Graphic, fear-based warnings are likely to fail to change either smokers' knowledge or behaviour because they may:

- ❖ evoke fear control rather than danger control responses;
- ❖ elicit defensive message processing;
- ❖ promote reactance;
- ❖ be oversimplified and exaggerated;
- ❖ tend not to work with individuals who have low self-esteem and low self-efficacy;
- ❖ often fail to provide new, relevant information;
- ❖ falsely assume that risks to health serve to deter;
- ❖ not be credible;
- ❖ exact too high a cost to comply;
- ❖ serve to make smoking appear more, rather than less attractive with certain groups.

Additionally, the psychological literature on reactance and forbidden fruit suggests that such warnings might not simply fail to prevent or reduce smoking but might rather initiate or increase it.

Empirical Studies of the Effectiveness of GHW On Tobacco Products

Writing in 1995, Barwick, Bergham, and Burns in a report for the New Zealand government, noted that: 'It has not proved possible to establish any direct relationship between the provision of health warnings and health information on tobacco products and changes in actual or intended smoking behaviour...It does not seem to be currently possible to empirically establish either that health warnings and information definitely do,

or do not, influence smoking behaviour.’⁹⁹

While those comments might have been true in 1995, they are certainly not true a decade later. Since the introduction of graphic, fear-based health warnings in Canada in January, 2001 there has been considerable evidence that, as the psychological research suggests, such warnings both fail in their purposes and are possibly counterproductive.

Canada’s GHW Experience

According to Health Canada’s own data,¹⁰⁰ confirmed against a pre-GHW baseline, the results of the introduction of GHW in Canada were that:

- ❖ there was no statistically significant decline in smoking incidence of adolescents
- ❖ there was no statistically significant decline in adolescent consumption - indeed, one year after the introduction of GHW, occasional adolescent smoking and occasional adolescent consumption were both *higher* than before GHW
- ❖ there was no statistically significant increase in the number of adolescents who attempted to quit smoking

⁹⁹ H. Barwick, P. Bergham, and J. Burns *Smoke-Free Issues: Analysis of key issues in shaping proposed amendments to the Smoke-Free environments legislation* Prepared for New Zealand Ministry of Health.

¹⁰⁰ Health Canada Commissioned Environics Wave Surveys 2001-2002; Wave Studies of Consumer Behaviour and Attitudes to Smoking, Environics Research Group Ltd for Health Canada. For comparable results, see also: Liefeld Report 1999-2000 *The Relative Importance of the Size, Content and Pictures On Cigarette Package Warning Messages* University of Guelph; Canadian Cancer Society 2001 Study; Environics Research *Evaluation of New Warnings on Cigarette Packages* 2001; The Hammond et al. Study 2003-2004; N. Gospodinov and I. Irvine ‘Global Health Warnings on Tobacco Packaging: Evidence from the Canadian Experiment Topics’ *Economic Analysis and Policy* 4 2004; the Pfito and Chebat Neuro-Imaging Study, 2006; *Distorting the Canadian GHW Experience: New Zealand 2004-2005*, Ministry of Health Review of the Smoke-free Environments Regulation 1999: labeling of tobacco products, tobacco product content regulation, disclosure by tobacco companies, regulation of product descriptors Consultation document 2004. Similar results are found in the following Dutch studies: The C. Jansen et al. Study 2006 (C. Jansen et al. op cit); N. de Hoog et al. ‘The Impact of Fear Appeals on Processing and Acceptance of Action Recommendations’ *Personality and Social Psychology Bulletin* 2005 31: 24-33; N. de Hoog 2005 *Fear Arousing Communications and Persuasion: The impact of vulnerability on processing and accepting fear appeals* 2005 Optima Grafische Communicatie, Utrecht.

- ❖ there was no statistically significant decline in the number of adolescents who believed that smoking was not a health problem
- ❖ there was no statistically significant change in adult smoking prevalence
- ❖ there was no statistically significant change in adult consumption, either among occasional or regular smokers
- ❖ there was no statistically significant increase in the percentage of adult smokers who claimed to have tried to quit smoking
- ❖ there was no statistically significant change in the numbers of adult smokers who believe that smoking is a major source of disease
- ❖ there was a decrease in the number of adult smokers who look at the warnings several times a day
- ❖ there was only a small minority of smokers who claimed that GHW were effective in encouraging themselves to either smoke less or quit, even though a majority of smokers believed that GHW were more effective in encouraging smokers to quit or smoke less
- ❖ there was an increase in the number of both smokers and nonsmokers who never look at or read the warnings.

Despite the claims advanced by the proponents of GHW about their effectiveness in increasing smokers' awareness of the risks of smoking and reducing smoking initiation, prevalence and consumption, the evidence, both from social psychology and from empirical studies (one of which was commissioned and paid for by the national government which introduced GHW), of their effects in real world settings, indicates that such warnings are not sensible regulation for them, in fact, accomplish none of these objectives.

Indeed, using a cost benefit analysis, it appears that GHW provide no benefits for either smokers or nonsmokers, while at the same time threatening serious costs in terms of smoker concentration on fear, as opposed to danger avoidance, defensive processing, and reactance, as well as feelings of low self-esteem and self-efficacy, while at the same time possibly making tobacco products appear more attractive to certain individuals.

In addition to these previous studies, five recent studies - one conducted for the US Food and Drug Administration - provide further evidence of GHW failure.

Recent Studies on Graphic Health Warnings

1. Leshner et al “When a fear appeal isn’t just a fear appeal: The effects of graphic anti-tobacco messages” *Journal of Broadcasting and Electronic Media* 2010 (54): 485-507.

This study looked at two elements used in graphic anti-tobacco warnings - fear and disgust - in a student population, in order to determine how such warnings are processed and how effective they might be in changing behavior. The study found that when fear and disgust were combined in the same message, as recommended in GHW, there were the “beginnings of cognitive overload.” Subjects, in fact, shifted resources away from encoding and processing the warning message. The author concludes that, “Trying to make a message more fearful by including negative graphic images may result in the viewer cognitively shifting resources away from encoding key points.”

2. Gygax et al “Relevance of health warnings on cigarette packs: A psycholinguistic investigation” *Health Communications* 2010 (25): 397-409.

This study again examines the way in which adolescents process tobacco warnings. The authors found that graphic supplements to written warnings did not have “any impact,” throwing doubt on whether the message will have “an impact upon attitude changes or healthy behaviors.”

3. Nonnemaker et al “Experimental study of graphic cigarette warning labels” Final Results Report Centre for Tobacco Products Food and Drug Administration Washington December 2010.

This study, which was prepared for the FDA by RTI International, provides further evidence that GHW do not affect smoking behavior. The purpose of the study was to “develop graphic images to accompany the nine warning statements and to conduct a series of studies to assess the relative efficacy of the graphic warning labels...at conveying information about various health risks of smoking and at encouraging smoking cessation and discouraging smoking initiation.” Even ignoring the significant methodological issues which surround this study (for example, using subjects’ intentions to quit or likelihood of smoking one year in the future as reliable measures of behavioral change) the study provides no evidence that GHW work to encourage smoking cessation or discourage smoking initiation, which is their clearly stated purpose. Though the authors state that the warning images elicited “strong emotional and cognitive responses,” as numerous critiques of GHW have pointed out, this is an irrelevant measure of effectiveness if there is not a behavioral outcome. And, indeed, as the authors admit, “The graphic cigarette warning labels did not elicit strong responses in terms of intentions related to cessation or initiation.”

4. Deloitte, *Tobacco packaging regulation: An international assessment of the intended and unintended impacts*, May 2011.

This study concluded that after examining health warnings size in a cross-country panel that it could not "find a statistically significant direct relationship between health warning size (text and graphic) and licit consumption." (p. 18)

5. Miller et al. "Smokers' recall of Australian graphic cigarette packet warnings and awareness of associated health effects, 2005-2008," *BMC Public Health* 2011 (11): 238.

This study repeats the problems of earlier surveys that failed to show any change in smoker behaviour after being exposed to larger GHW. Enhanced risk information is ineffective unless it makes a difference in smoking behaviour, which all of these studies fail to demonstrate. Two years post-implementation the warning with the highest recall was, "Smoking causes lung cancer," which was already a fact known by almost 100 percent of smokers. Thus, the new GHW only 'succeeded' with a warning that was already universally known, not with some new risk of smoking message.

The final problem with enhanced GHW on plain packaging is that the policy rests on three assumptions, none of them true:

1. individuals, especially young people, underestimate the risks of smoking;
2. it is possible to increase current risk perceptions of smoking; and
3. an individual's risk perception of smoking affects their smoking uptake.

All of these assumptions are open to significant question.

We begin with the question of whether it is in fact true that people underestimate the risks of smoking. Given that tobacco displays are currently ubiquitous, the risks of smoking should be both widely and substantially underestimated. The empirical evidence, however, suggests that this is not the case, particularly with respect to young people. For instance, Slovic et al, in a report on risk perception commissioned by the Canadian government, found that 'cigarette smoking elicited the greatest percentage of responses in the 'high-risk' category'.¹⁰¹ In fact, according to Slovic et al, cigarette smoking was perceived as the highest health risk by every age group in Canada. In subsequent research, Slovic has found similar risk perceptions for smoking. For instance, Slovic and others reported that cigarettes received the highest rating for negative outcomes of any product or

¹⁰¹ P Slovic et al *Health-Risk Perception in Canada* Department of National Health and Welfare Ottawa Canada 1993.

activity.¹⁰² Again, in another experimental study, Slovic and colleagues found that smoking was rated as the most risky activity or product.¹⁰³

Similar results are found in the UK. Goddard, in her study on why young people begin to smoke, found that virtually all of her subjects had a clear idea about the health risks of smoking. For example, 92 percent of the students reported that if they were a regular smoker at age 15 they were 'less likely to feel really healthy'. Moreover, this was not simply a general feeling of ill-health: it was linked specifically with smoking-associated risks - lung cancer and chronic obstructive lung disease. Eighty-seven percent reported that if they smoked at age 15 they were more likely to 'start to get lung cancer', while 79 percent thought that they would be more likely to 'get out of breath'. As Goddard notes, these results show that 'the overwhelming majority of pupils had extremely negative attitudes toward smoking'. Again, it was not simply that the students understood the risks associated with smoking, Goddard's results also showed that they cared intensely about those risks. For example, 97 percent reported that they 'cared a lot' about 'feeling really healthy' and 94 percent cared a lot about 'starting to get lung cancer'.

Goddard's results thus show that not only are the risks of smoking understood, they are understood in terms of quite specific health risks. They also show that it is not just that these risks are understood; they are also considered very important to the overwhelming majority of young people.

More recent evidence from the UK also shows how well young people understand the risks of smoking. In her analysis of smoking in England in 2006, Fuller found that 'almost all pupils thought smoking causes lung cancer' (98 percent). Ninety-seven percent believed that it 'harm unborn babies', 96 percent thought that it 'can harm nonsmokers' health' and 94 percent thought that it 'can cause heart disease'. Moreover, these percentages have 'remained at similar levels since the early 1990s', which suggests that even in an environment with tobacco advertising, as opposed to simply displays of cigarettes, there was a near universal understanding of the risks of smoking. Indeed, on five specific smoking-related health risks, over 80 percent of Fuller's subjects agreed that each was a risk of smoking. Nor is the understanding of the risks of smoking confined to only serious illnesses. Eighty-six percent of Fuller's subjects believed that smokers were liable to 'get more coughs and colds than non-smokers'. Additionally, 84 percent believed that smoking made one 'worse at sports'.¹⁰⁴

¹⁰² A Benthin et al 'Adolescent health threatening and health enhancing behaviour' *Journal of Adolescent Health* 1995 17: 143-152.

¹⁰³ M Finucane et al 'The affect heuristic in judgment judgments of risks and benefits' *Journal of Behavioral Decision-Making* 2000 13: 1-17.

¹⁰⁴ E Fuller *Smoking, drinking and drug use among young people in England in 2006* National Centre for Social Research: London 2007.

In addition to Fuller's analysis, the recently published Liverpool Longitudinal Study on Smoking also examines the question of young people's knowledge of the health risks of smoking.¹⁰⁵ The authors report that, 'It is clear that the young people demonstrated a very strong knowledge of the health risks related to smoking. Throughout the years all participants spoke widely and in-depth of the health problems associated with smoking. Responses focused both on changes to a person's physical appearance and overall fitness and on the illnesses caused by smoking, including cancer, heart disease, lung disease, chest infections and premature death'. In particular 'the overwhelming majority of people in all qualitative data collected felt that smoking was more harmful to young people than older people'.

Of course, it might be argued that regardless of these reports, individuals, particularly young people, still underestimate the actual risks of smoking. But the evidence once again suggests that this is not true. Kip Viscusi of Harvard University, for example, has extensively researched the differences between the perceived versus actual risks of smoking, both in the United States and in Europe.¹⁰⁶ Viscusi computes the actual risk of smoking by using the total lung cancer and death risk estimates from the US Surgeon General. Using these figures, the life expectancy loss from smoking ranges from 3.6 to 7.2 years. The risk of dying from lung cancer because of smoking is between 6 and 13 out of 100 and the risk of dying from any disease because of smoking is between 18 and 36 out of 100. Similar estimates come from the Office on Smoking and Health at the Centers for Disease Control and Prevention, which reported in 1996 that 'on average, smokers die nearly seven years earlier than nonsmokers'.¹⁰⁷

Using these figures as the actual risk of smoking, Viscusi then compares consumers' perceived risk of smoking. Based on a national sample from the United States, Viscusi reports that in response to the question, 'out of every 100 smokers, how many of them do you think will get lung cancer because they smoke?' the average response was 47 people. This clearly exaggerates the risk of getting lung cancer from smoking, which suggests that rather than underestimating the risks of smoking, individuals overestimate those risks.

Other surveys and researchers have found similar responses. For instance, a 1999 telephone survey conducted for the Annenberg Public Policy Center of the University of Pennsylvania with 2,002 young people aged 14-22 and 1,504 adults aged 23-95 asked 'Out of every 100 cigarette smokers, how many do you think will

¹⁰⁵ S Woods et al *The Liverpool Longitudinal Study on Smoking: Experience, beliefs and behaviour of adolescents in Secondary School 2002-2006* John Moores University 2008.

¹⁰⁶ K Viscusi 'Public Perception of Smoking Risks' in C Jeanrenaud and N Sogeu ed *Valuing the Cost of Smoking* Kluwer: Boston 1999.

¹⁰⁷ US Centers for Disease Control *Cigarette smoking-related mortality* Washington DC 1996.

get lung cancer because they smoke?’¹⁰⁸ The mean response was roughly 56. Paul Slovic asked a slightly different question: ‘Out of 100 people who smoke half a pack a day, how many do you think will eventually develop a life-threatening illness from smoking?’ The mean results were 50 for adult smokers and 56 for teen smokers.

Equally important is the fact that these overestimates of smoking risks are not just confined to the risks from lung cancer. Viscusi, for instance, asked people not just about their risk of getting lung cancer from smoking but about the total mortality risks from smoking. His question of ‘Among 100 smokers how many of them do you think will die from lung cancer, heart disease, throat cancer, and all other illnesses because they smoke’ elicited a mean response of 42 from smokers, again exceeding the Surgeon General’s estimate of 18-36.

Moreover, these overestimates of smoking risk are roughly constant across all segments of society, regardless of educational level. According to Viscusi non-secondary school graduates put the perceived risk of dying from smoking-induced lung cancer at 52.6 out of 100 smokers, compared with 47 for those with a university degree.¹⁰⁹ Where the overestimates are not constant, however, is with respect to age. Numerous surveys have shown that young people consistently overestimate the risks of smoking across a range of factors, such as its addictiveness, the risks of dying, the risks of lung cancer, the difficulty of quitting, and the harmfulness of even occasional smoking. For instance, in the Annenberg survey, smoking respondents aged 14-17 believed that 53 out of 100 smokers would have heart problems because they smoke, compared with 46 out of 100 for smoking respondents aged 18-22. Smokers aged 14-17 believed that out of 100 smokers 53 would die from a smoking related disease compared with 48 out of 100 for smokers aged 18-22. Ninety- four percent of smokers aged 14-17 agreed that smoking every day would be very or somewhat risky compared with 86 percent of older smokers.

Finally, these results by Viscusi and others are not simply US-specific. They have been replicated in other settings. For example, Antonanzas et al report that an analysis of risk perceptions of smoking in Spain parallels ‘those found in the United States’.¹¹⁰ Not only was there ‘substantial risk awareness in Spain, but also a tendency to overestimate risks’.

The empirical evidence therefore suggests that individuals, both smokers and nonsmokers, are clearly aware of the risks of smoking, not simply in general but also in terms of specific smoking-related diseases. Both smokers and nonsmokers

¹⁰⁸ P Slovic ‘Cigarette Smokers: Rational Actors or Rational Fools?’ in P Slovic ed *Smoking: Risk, Perception and Policy* Sage: Thousand Oaks CA 2001.

¹⁰⁹ K Viscusi *Smoked Filled Rooms* University of Chicago Press: Chicago 2002.

¹¹⁰ F Antonanzas et al ‘Perception of Smoking Risks in Spain Part 1’ *Journal of Risk and Uncertainty* 2000 21.

report that smoking is associated with the highest risk of any product or activity. Moreover, the evidence also suggests that not only are smokers and nonsmokers, adolescents and adults aware of the risks of smoking but that they substantially overestimate these risks. These facts suggest that given the almost universal recognition of the risks of smoking, the severity of those risks, and the extent of those risks, it is impossible to increase population risk perceptions of smoking, to make smoking, in effect, appear more risky.

These facts also bear on the issue of whether smokers suffer from an ‘information deficit’, that is whether they lack the requisite information about the risks of smoking that would allow them to make a rational decision about whether to smoke. It is frequently claimed that smokers do not make informed decisions about smoking because they do not know the risks of smoking. The evidence about smokers’ understanding of the risks of smoking and their overestimates of these risks tends to refute the claim that they smoke because they are uninformed or misinformed about the risks of smoking. Indeed, it suggests that smokers exhibit a different set of risk-value preferences from nonsmokers, not that they lack risk information or are irrational.

Similar differences about risks are found in other areas where individual decisions fail to match ‘rational’ expectations. For example, Variyam and Blaylock analysed differences in nutrient-content knowledge and diets in the United States.¹¹¹ They found that body mass differences were an outcome of tastes and preferences and were not due to differences in information about the risks and benefits of certain diets. For example, they report that ‘smokers are nearly as informed about health and nutrition as nonsmokers, yet smokers tend to prefer a less healthful diet’. This suggests that smokers might well have a consistently different way of valuing risk that operates across a range of different contexts. Just as they understand the risks of smoking but choose to smoke, so they understand the risks of a less healthy diet but choose to eat differently.

But even if smokers and nonsmokers alike do understand the risks of smoking and these risks are already so widely perceived and believed to be so severe that it is impossible for their extent and severity to be increased, might it not still be true that an individual’s perception of the risks associated with smoking affects smoking initiation, especially in adolescents? This, after all, is Pollay’s claim about POP tobacco advertisements and displays, that they diminish the risk of smoking and increase its likelihood.

Once again, the empirical evidence suggests that this is not the case, both in general and more specifically with respect to tobacco displays. First, Romer and Jamieson examined whether young people who understand the risks of smoking are less likely to experiment with smoking than those who do not understand the

¹¹¹ J Variyam and J Blaylock ‘Unlocking the mystery between nutrition knowledge and diet quality’ *Food Review* US Department of Agriculture: Washington DC May-August 1998.

risks or do not perceive smoking to carry a high risk.¹¹² Subjects were asked about the overall risks of smoking, the immediate harms of smoking, the mortality of smoking, the risks of smoking versus alcohol and drugs, and whether the risks of smoking have been exaggerated. Despite these additional risk measures, Romer and Jamieson report that 'overall risk perception was not related to cigarette trial'. Clearly, even deficiencies in understanding the risks of smoking do not make it more likely that a young person will become a smoker.

Second, Wakefield et al (2006) in their study of tobacco displays found that such displays did not significantly affect young people's perceptions of the risks and harms of smoking. They report that there were no statistically significant differences between the students who saw the photograph of a shop filled with tobacco advertising and tobacco displays and those who saw the shop with no tobacco displays. For instance, when asked whether teenagers who smoke seem healthy, the average response was 4.5 (on a scale of 1 strongly agree to 5 strongly disagree) for both students who saw no tobacco displays and those who saw displays. Those reporting the highest degree of disagreement (4.6) with the claim that teenagers who smoke seem healthy were those seeing the shop with tobacco advertising. Again, there were no statistically significant differences in the perceived harm of smoking between students who saw the shop with no cigarettes and those who saw the shop with cigarette displays and with cigarette advertising. More students who saw the shop with cigarette displays and advertising disagreed with the statement that smoking less than 10 cigarettes a day is not dangerous than students who saw the shop with no cigarettes displayed. As Wakefield et al note, 'we found no consistent effects of cigarette advertising or display on...the likelihood of positive attributes being ascribed to smokers or overall harm from smoking'.

Thus Pollay's claim about the display of cigarettes causing smoking through leading individuals, particularly young people, to underestimate the risks of smoking are completely without empirical support. It is refuted, first, by the fact that even in an environment with widespread tobacco advertising, not simply tobacco displays, smokers and nonsmokers rate smoking the most risky activity. It is refuted, secondly, by the fact that smokers and nonsmokers, both young and old, not only understand the risks of smoking, but overestimate those risks. It is refuted, thirdly, by the fact that smokers and nonsmokers, despite the presence of tobacco advertising and displays, have a specific understanding of the individual disease risks associated with smoking. Fourth, it is refuted by the evidence that shows that perceptions about smoking risks do not lead to adolescent smoking. Finally, it is refuted by experimental evidence in which young people's risk perceptions of smoking and beliefs about smokers' health were not influenced by either tobacco advertising or tobacco displays.

¹¹² Romer and Jamieson 'The role of perceived risk in starting and stopping smoking' in P Slovic ed *Smoking: Risk, Perception and Policy*.

Given this lack of both conceptual and empirical backing, it is unlikely that GHW are a legitimate tobacco control measure.

CONCLUSION

The evidence about health messages and risks suggests that the entire assumption that plain packages are needed to convey larger GHW warnings is false, since it is abundantly clear that smokers already have the risk information that they need. Indeed, in many instances, smokers over-estimate the risk of smoking. This means that space for enhanced GHW *cannot* serve as a justification for plain packaging, as claimed by its advocates.