

## GOING TOO FAR? EXPLORING THE LIMITS OF SMOKING REGULATIONS

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I. RISKS ARISE FROM CHRONIC EXPOSURE.....	1609
II. IS TOBACCO SMOKE ANY MORE TOXIC THAN SMOKE FROM OTHER SOURCES OF BURNT BIOMASS? .....	1612
III. WHAT PROBLEMS WOULD ARISE FOR PUBLIC HEALTH POLICY IF AN ABSOLUTE ZERO TOLERANCE POLICY WAS ADOPTED FOR SECONDHAND SMOKE? .....	1614
IV. PSYCHOGENIC EXPLANATIONS OF CLAIMED HARMS FROM LOW-LEVEL SHS EXPOSURES.....	1617

It is customary in my home country of Australia at the opening of conferences to invite representatives of the original Aboriginal landowners to welcome delegates. A common way of doing this is to perform a “smoking ceremony” where eucalyptus leaves are burned.<sup>1</sup> This causes clouds of smoke to billow throughout the auditorium.<sup>2</sup> These ceremonies are also performed outdoors,<sup>3</sup> the site of a new frontier in some nations of efforts to outlaw public smoking.<sup>4</sup>

The smell of burning eucalyptus always transports me to my childhood, growing up in a small country town where I would often sleep around campfires with friends, returning home with my clothes and hair thick with the smell of smoke. I have since learned

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1. See, e.g., Howard Spencer, *Watagan Leaves Used In Bridge Smoking*, BUSH TELEGRAPH MAG., Winter 2007, at 5, available at <http://www.dpi.nsw.gov/au/about-us/news/bush-telegraph-magazine/winter-2007>.

2. *Id.*

3. See *id.*

4. Eric Weiner, *The First Nonsmoking Nation: Bhutan Banned Tobacco. Could the Rest of the World Follow?*, SLATE., Jan. 20, 2005, <http://www.slate.com/id/2112449>.

that these adventures exposed my lungs to large volumes of smoke particles, the great majority of which are indistinguishable to those contained in secondhand cigarette smoke.<sup>5</sup> However, I do not subscribe to a worldview that automatically places risks to health, however small, above every other consideration. Consequently, I do not believe that sitting around campfires, nor lighting them in suitable locations, should be banned as a health hazard.

Many will have visited cosy country restaurants and resorts where open log fires create an ambiance that transports us back to childhood memories of winter comforts and a somehow more authentic world. Well-flued fires send most smoke up the chimney, but as anyone entering a room where a log fire has burned the night before knows, considerable smoke also escapes into the room, impregnating carpets and furniture.<sup>6</sup>

I commence with these images because they provide salutary perspective on the debate about secondhand tobacco smoke (SHS). We focus this symposium on whether policy and advocacy for the regulation of SHS might sometimes go “too far.” Many people are comforted by the smell of camp and log fires, even seeking out such exposures. But the same people will sometimes become outraged by the occasional fleeting exposure to tobacco smoke. While nearly identical in terms of their noxious content,<sup>7</sup> both forms of smoke have entirely different *meanings*. If radically different concerns about inhaling essentially the same zoo of noxious particles were all that mattered here, we would have to conclude that many people can be irrational. But outrage about some forms of smoke and open acceptance of other forms is very explicable to sociologists as risk perception.<sup>8</sup> Among the many key

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5. Nigel Bruce, Rogelio Perez-Padilla & Rachel Albalak, *Indoor Air Pollution in Developing Countries: A Major Environmental and Public Health Challenge*, 78 BULL. WORLD HEALTH ORG. 1078, 1081–84 (2000), available at <http://www.who.int/docstore/bulletin/pdf/2000/issue9/bul0711.pdf>.

6. See generally Ms. Builder, *Make Fireplace Smoke-Free*, DETROIT FREE PRESS, Aug. 26, 2007, at RE4 (“More than half of fireplaces cause some smoky conditions inside homes, and it is difficult to totally rid the room of the smoky odor.”).

7. Compare Luke P. Naeher et al., *Woodsmoke Health Effects: A Review*, 19 INHALATION TOXICOLOGY 67, 69–73 (2007), with J. Fowles & E. Dybing, *Application of Toxicological Risk Assessment Principles to the Chemical Constituents of Cigarette Smoke*, 12 TOBACCO CONTROL 424, 426–28 (2003).

8. See Karl Dake & Aaron Wildavsky, *Theories of Risk Perception: Who Fears What and Why?*, in RISK 42 (Edward J. Burger, Jr. ed., 1993) (1990) (“The most widely held theory of risk perception we call the knowledge theory: the often implicit notion that people perceive technologies (and other things) to be dangerous because they *know* them to be dangerous.”).

determinants of meaning and outrage<sup>9</sup> are whether a noxious agent is seen as voluntary or coerced, natural or artificial, and whether the risk has been amplified by lots of media attention.<sup>10</sup> We do not read much about the dangers of inhaling campfire smoke, smoke from incense, smoke from candles, or smoke from cooking, but we read a lot about the dangers of SHS.<sup>11</sup>

“Going too far” in condemning SHS connotes several undesirable features in policy. It can imply a questionable departure from the evidence base, a loss of proportionality, and the abandonment of important ethical principles in the development of public health policy. A careless attitude to matters of such importance can have repercussions that will be regretted and which do not stand up to close ethical audit.

Prohibitions on personal behaviours, like public smoking, can be justified by two related ethical principles: John Stuart Mill’s famous articulation of the right to interfere with the liberty of people to harm others and the commonwealth justification<sup>12</sup> whereby the protection of the welfare rights of a large number of people sometimes requires the abrogation of the liberties of a smaller number of people.<sup>13</sup> An example of this occurs with requirements that non-immunised children stay away from school during infectious disease outbreaks.<sup>14</sup>

Paternalism can be ethically justifiable when enacted in the interests of those incapable by virtue of legal immaturity or mental incapacity to act in their own interests.<sup>15</sup> But “[p]aternalism is most

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9. See generally Simon Chapman & Sonia Wutzke, *Not in Our Back Yard: Media Coverage of Community Opposition to Mobile Phone Towers—An Application of Sandman's Outrage Model of Risk Perception*, 21 AUSTL. & N.Z. J. PUB. HEALTH 614 (1997).

10. *Id.* at Tables 1 and 2.

11. See generally K. Clegg Smith, M. Wakefield & E. Edsall, *The Good News About Smoking: How Do U.S. Newspapers Cover Tobacco Issues?*, 27 J. PUB. HEALTH POL'Y 166 (2006).

12. See Lawrence O. Gostin, *Health of the People: The Highest Law?*, 32 J.L. MED. & ETHICS 509, 510 (2004) (“Consequently, people may have to forgo a little bit of self-interest in exchange for the protection and satisfaction gained from sustaining healthier and safer communities.”).

13. See Philip Cole, *The Moral Bases for Public Health Interventions*, EPIDEMIOLOGY 78, 78–83 (1995) (discussing paternalism and moral justifications enforced by state police power by doing the greatest good for the greatest number of people).

14. *E.g.*, N.H. REV. STAT. ANN. § 141-C:20-c (LexisNexis 2006) (stating that children with a legal exemption from mandatory immunization for diseases shall not attend school threatened with outbreak of such diseases).

15. Cole, *supra* note 13, at 80 (“Paternalism . . . can be moral in dealing with children and with adults who are unable to make an informed judgment.”).

odious when used as a justification for limiting the choices that adults make”<sup>16</sup> when they put only themselves at risk. Occasionally, paternalism is justified via the argument that the infringement of liberty involved is very trivial and the gains to health are very great, as is the case with mandatory seat-belt use.<sup>17</sup>

In debates about outdoor smoking bans, paternalistic arguments are often evident, but rarely explicit. Health care facilities which ban smoking outdoors often justify their actions in terms of normative role-modeling.<sup>18</sup> This is ethically unproblematic when it comes to staff members who are contractually obligated to observe their employers’ policies. But it represents ethically muddled thinking when it comes to patients and visitors to public hospitals. Public hospitals are not somehow “owned and controlled” by health authorities. If patients and visitors are not harming others by smoking outdoors, they ought not be coerced into signing up to the normative health promotion values of a hospital simply because they require hospital care or are visiting someone who does.

Almost all smokers regret having taken up smoking<sup>19</sup> and many gratefully support paternalistically-motivated policies designed to discourage their smoking.<sup>20</sup> But we do not evaluate the ethics of public health by the willingness of people to give up their autonomy, nor with the efficiency or success of commandments to obey laws or directives.<sup>21</sup> Morality is always inexorably about respect

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16. *Id.* at 81.

17. Claire Andre & Manuel Velasquez, *For Your Own Good*, <http://www.scu.edu/ethics/publications/ie/v4n2/owngood.html> (last visited Mar. 26, 2008).

18. Simon Chapman, *Banning Smoking Outdoors is Seldom Ethically Justifiable*, 9 TOBACCO CONTROL 95, 96 (2000).

19. Geoffrey T. Fong et al., *The Near-Universal Experience of Regret Among Smokers in Four Countries: Findings from the International Tobacco Control Policy Evaluation Survey*, 6 NICOTINE & TOBACCO RES. 341, 341 (Supp. 3 2004).

20. Stacy Carter & Simon Chapman, *Smokers and Non-Smokers Talk About Regulatory Options in Tobacco Control*, TOB. CONTROL, 2006, [http://tobacco.health.usyd.edu.au/site/supersite/contact/pdfs/TC2006\\_Carter.pdf](http://tobacco.health.usyd.edu.au/site/supersite/contact/pdfs/TC2006_Carter.pdf).

21. See Chapman, *supra* note 18, at 96 (“Restrictions on smoking certainly do reduce smoking frequency and may also promote cessation. However, while this is an undoubted positive benefit, it cannot be used as a front end justification to restrict smoking. It is a fortunate byproduct of bans introduced because of Millean based concerns about stopping smokers harming others. The decision to bring benefit to oneself is a decision that should be up to the individual, not for others to impose.”) (internal citations omitted).

for the autonomy of individuals to act freely, providing their actions do not harm others.<sup>22</sup>

To me, “going too far” in SHS policy means efforts premised on reducing harm to others, which ban smoking in outdoor settings such as ships’ decks, parks, golf courses, beaches, outdoor parking lots, hospital gardens, and streets.<sup>23</sup> It is also the introduction of misguided policies allowing employers to refuse to hire smokers, including those who obey proscriptions on smoking indoors while at work.

I emphasise that I am very supportive of the prevention of smoking in crowded, confined outdoor settings such as sports stadia, in most outdoor dining sections of (particularly small) restaurants, and in unblocking the entrances to buildings by having smokers move further away. In outdoor stadia, the concentration of smokers and their sardine-can proximity to others can result in significant prolonged SHS exposure over many hours.<sup>24</sup> Moreover, a great many people find it unpleasant to sit beside a smoker for many hours. As such, I support a ban on smoking in stadia as a way of preventing a public nuisance, even before matters of health risk are considered. I apply the same reasoning to my support of not allowing smokers to colonise the high-demand outdoor sections of restaurants. Policies that meaningfully segregate smokers from others are a reasonable civil society response to the unpleasantness of being enveloped in SHS while eating outdoors.

#### I. RISKS ARISE FROM CHRONIC EXPOSURE

The evidence used to justify the restriction of smoking in public settings has always rested on a bedrock of studies concerning the relationship of chronic diseases like lung cancer, respiratory, and cardiovascular disease to prolonged and repeated exposures in domestic and indoor occupational settings, generally over many

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22. JOHN STUART MILL, ON LIBERTY 147 (Currin Shields ed., 1956) (1859) (“But with regard to the merely contingent or, as it may be called, constructive injury which a person causes to society by conduct which neither violates any specific duty to the public, nor occasions perceptible hurt to any assignable individual except himself, the inconvenience is one which society can afford to bear, for the sake of the greater good of human freedom.”).

23. Chapman, *supra* note 18, at 95.

24. See, e.g., James Repace, *Measurements of Outdoor Air Pollution from Secondhand Smoke on the UMBC Campus*, June 1, 2005, at <http://www.repace.com/pdf/outdoorair.pdf>.

years (although much less time with infants).<sup>25</sup> Added to this are studies which show that even brief exposures to SHS can produce measurable changes in coronary flow velocity<sup>26</sup> and distensibility of the aorta,<sup>27</sup> to name just two. However, these studies of acute exposure, most recently reviewed by the United States Surgeon General,<sup>28</sup> typically define “brief” exposure to SHS as lasting between fifteen to thirty minutes<sup>29</sup>—considerably more than the typical encounter with SHS in a park, beach, or street. In addition, all of these studies were conducted in indoor environments designed to replicate typical indoor exposure conditions.<sup>30</sup> These effects are also considered to be partially reversible.<sup>31</sup>

Of course, potentially harmful chronic exposure consists of a multitude of acute exposures.<sup>32</sup> These can range from the sort of

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25. See, e.g., DEP’T OF HEALTH & HUMAN SERVS., CHILDREN & SECONDHAND SMOKE EXPOSURE: EXCERPTS FROM THE HEALTH CONSEQUENCES OF INVOLUNTARY EXPOSURE TO TOBACCO SMOKE, A REPORT OF THE SURGEON GENERAL (2007), available at <http://www.surgeongeneral.gov/library/smokeexposure/report/fullreport.pdf> (explaining that exposure to secondhand smoke increases instances of Sudden Infant Death Syndrome (SIDS), lower birth weight, weaker lungs, and increased respiratory infections in infants); DEP’T OF HEALTH & HUMAN SERVS., THE HEALTH CONSEQUENCES OF SMOKING: A REPORT OF THE SURGEON GENERAL (2004), available at [http://www.cdc.gov/tobacco/data\\_statistics/sgr/sgr\\_2004/chapters.htm](http://www.cdc.gov/tobacco/data_statistics/sgr/sgr_2004/chapters.htm) (discussing a multitude of carcinogenic, cardiovascular, respiratory, reproductive, and other effects as a result of smoking).

26. See generally David S. Celermajer et al., *Passive Smoking and Impaired Endothelium-Dependent Arterial Dilatation in Healthy Young Adults*, 334 NEW ENG. J. MED. 150 (1996); Ryo Otsuka et al., *Acute Effects of Passive Smoking on the Coronary Circulation in Healthy Young Adults*, 286 J. AM. MED. ASS’N 436 (2001); Hitoshi Sumida et al., *Does Passive Smoking Impair Endothelium-Dependent Coronary Artery Dilation in Women?*, 31 J. AM. C. CARDIOLOGY 811 (1998).

27. See generally Christodoulos Stefanadis et al., *Unfavorable Effects of Passive Smoking on Aortic Function in Men*, 128 ANNALS INTERNAL MED. 426 (1998), available at <http://www.annals.org/cgi/content/full/128/6/426>.

28. DEP’T OF HEALTH & HUMAN SERVS., THE HEALTH CONSEQUENCES OF INVOLUNTARY EXPOSURE TO TOBACCO SMOKE: A REPORT OF THE SURGEON GENERAL (2006), available at <http://www.surgeongeneral.gov/library/secondhandsmoke/report/fullreport.pdf>.

29. See, e.g., Otsuka, *supra* note 26, at 437 (“[A]ll subjects spent 30 minutes in the smoking room . . .”).

30. See, e.g., *id.*

31. See Olli T. Raitakari et al., *Arterial Endothelial Dysfunction Related to Passive Smoking is Potentially Reversible in Healthy Young Adults*, 130 ANNALS INTERNAL MED. 578 (1999), available at <http://www.annals.org/cgi/reprint/130/7/578.pdf>.

32. Acute, or short-lived and intense, exposures to SHS may occur often. WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY 23 (3d ed. 1993) (acute is defined as something experienced intensely or powerfully; characterized by sharpness or severity; sudden onset, short course). Chronic exposure is “marked by long duration, by frequent recurrence over a long time and often by slowly

“acute” heavy exposure that a bar worker would get throughout an eight-hour shift all the way through to the fleeting exposure lasting a second or so that one might get when walking past a smoker in a park.<sup>33</sup> In an increasing number of nations, public policy has moved to outlaw all indoor occupational exposures, where the implication is that the exposure is both prolonged and involuntary.<sup>34</sup> The question we face today is whether it is reasonable to outlaw involuntary, fleeting, outdoor exposure.

A recent paper by Neil Klepeis and others providing data on outdoor exposures in places like sidewalk café tables, pub patios, and park benches has caused much excitement among supporters of outdoor smoking bans.<sup>35</sup> The study reported what common sense would predict: that SHS in outdoor settings is rapidly attenuated.<sup>36</sup> However, it also concluded that in situations where there are multiple smokers, “between 8 and 20 cigarettes smoked sequentially could cause an incremental 24-hour particle exposure greater than . . . the 24-[hour] EPA health-based standard for fine particles” for those within half a meter of them.<sup>37</sup>

The authors refer to bar patios and outdoor café tables as where the above situation might happen. But they also state that “sitting next to a smoker on a park bench” might occasion such exposure, despite one paragraph earlier stating that “multiple smokers” are required to get particle exposures to levels that challenge the EPA standard.<sup>38</sup> “Multiple smokers” are rarely seated on park benches next to non-smokers for the time it would take to

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progressing seriousness.” *Id.* at 402. Thus, recurrent acute exposures can add up to chronic exposure.

33. See DEP’T OF HEALTH & HUMAN SERVS., *THE HEALTH CONSEQUENCES OF INVOLUNTARY EXPOSURE TO TOBACCO SMOKE: SECONDHAND SMOKE: WHAT IT MEANS TO YOU 3* (2006), available at [http://www.surgeongeneral.gov/library/secondhand smoke/secondhandsmoke.pdf](http://www.surgeongeneral.gov/library/secondhand%20smoke/secondhandsmoke.pdf) (noting that “there is no safe amount of secondhand smoke.”).

34. See, e.g., *Global Momentum for Smoke-Free Indoor Environments at Tipping Point*, SCIENCE DAILY, Apr. 12, 2007, <http://www.sciencedaily.com/releases/2007/04/070411170909.htm> (recent article in the *New England Journal of Medicine* “describe[s] the growing momentum for indoor smoking bans in countries across the globe”).

35. Neil E. Klepeis et al., *Real-Time Management of Outdoor Tobacco Smoke Particles*, 57 J. AIR & WASTE MGMT. ASS’N 522, 533 (2007) (study results indicate that outdoor tobacco smoke (OTS) presents a possible hazard in situations such as outdoor patios or near smokers outside of a building).

36. *Id.* “Unlike indoor SHS levels, which decay slowly over a period of hours, OTS levels drop abruptly when smoking ends.” *Id.*

37. *Id.*

38. *Id.*

smoke eight to twenty cigarettes.<sup>39</sup> The paper says nothing about exposure to people on beaches, golf courses, relaxing on the grass in a park, or smoking in an outdoor car park.<sup>40</sup> I would invite reflection on the number of occasions that anyone in any of these situations is *ever* involuntarily closer than half a meter to a group of smokers consuming eight to twenty cigarettes. Yet we are being asked to embrace policies premised on the idea that smoking in such settings poses a danger to others.

## II. IS TOBACCO SMOKE ANY MORE TOXIC THAN SMOKE FROM OTHER SOURCES OF BURNT BIOMASS?

As I stated earlier, while tobacco smoke has its own range of recognisable smells, there are few differences between the physics and chemistry of tobacco smoke and smoke generated by the incomplete combustion of any biomass, whether it be eucalyptus leaves, campfire logs, gasoline, or meat on a barbeque.<sup>41</sup> Secondhand smoke is not so uniquely noxious that it justifies extraordinary controls of such stringency that zero tolerance outdoors is the only acceptable policy.<sup>42</sup>

Many cities around the world ban coal and wood fuel fires and backyard incinerators in urban areas.<sup>43</sup> These are deemed to be so

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39. Many of the experiments were measured in ten-minute intervals, approximately the length of time to smoke a cigarette. *See, e.g., id.* at 525 (experiments included burning three to five cigarettes successively for thirty to fifty minutes total).

40. *Id.* (on-site locations visited included “restaurant and pub patios, cafés, airport sidewalks, and a public park”).

41. *See generally* Naeher, *supra* note 7, at 67–100 (discussing toxic effects of wood smoke).

42. *See id.* For example, the Clean Air Act monitors, regulates, and seeks to reduce many air pollutants (even hazardous pollutants), but does not speak in terms of elimination, or zero tolerance, of air pollutants. *See* U.S. ENVTL. PROT. AGENCY, THE PLAIN ENGLISH GUIDE TO THE CLEAN AIR ACT 16 (2007), *available at* <http://www.epa.gov/air/caa/peg/toxics.html>.

43. *See, e.g.,* ENV’T PROT. AUTH., GOV’T OF S. AUSTL., THE STATE OF OUR ENVIRONMENT: STATE OF THE ENVIRONMENT REPORT FOR SOUTH AUSTRALIA 2003, at 19 (2003), *available at* <http://www.environment.sa.gov.au/soe2003/report.html> (stating that Adelaide, Australia has banned “burning waste on domestic premises (e.g. in backyard incinerators)”); DEP’T OF ENV’T & CLIMATE CHANGE, NEW S. WALES GOV’T, ENVIRONMENTAL ISSUES: AIR TOXICS: SUMMARY, *available at* <http://www.environment.nsw.gov.au/air/dopahhm/summary.htm> (last visited Apr. 1, 2008) (outlining government control of dioxins in the air by, among other things, banning backyard burning and through a wood and coal smoke reduction program); Theodore Parker Sr., Curriculum Unit 86.06.04: Where, Oh Where is All the Clean Air?, <http://www.yale.edu/ynhti/curriculum/units/1986/6/>

anti-social in their contribution to urban air pollution that they are now often totally outlawed.<sup>44</sup> Similarly, restaurants are required to meet expensive standards for the indoor ventilation of smoke caused by cooking.<sup>45</sup> However, outdoor commercial cooking such as beer garden barbeques and fund-raising hot dog and steak sizzles run in shopping centres on Saturday mornings have not attracted any attention so far. Neither have health authorities sought to close park facilities for barbequing. I suspect the very obvious reason for this is the amounts of smoke involved are trivial.

While control of industrial and vehicle carbon emissions have attracted immense regulatory controls, there is universal willingness to trade off continuing emissions from industry and motor vehicles for the sake of the massive utility that both bring to society.<sup>46</sup> The benzene we all breathe from car exhaust is the same as the benzene in SHS.<sup>47</sup> We hear many calls for car exhaust abatement and reduction, but we hear no serious calls for the banning of cars, which continue to contribute tonnes of benzene to the atmosphere each year.<sup>48</sup> So when it comes to outdoor smoking

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86.06.04.x.html#top (last visited Apr. 1, 2008) (stating that Los Angeles has banned all backyard incinerators).

44. See Gregory J. Hobbs, Jr., *To See the Mountains: Restoring Colorado's Clean and Healthy Air*, 75 U. COLO. L. REV. 433, 444–46 (2004) (noting that Colorado banned “backyard refuse burning” in 1970 to combat severe air pollution in the Denver area, resulting from what one journalist called “that odious neighborhood nuisance, the backyard incinerator.”).

45. In New York City for example, restaurants must provide adequate ventilation and if the exhaust hood is “not sufficient to remove excess fumes in kitchen,” the restaurant can be cited for a violation of the city’s health code. THE CITY OF NEW YORK, DEP’T OF HEALTH AND MENTAL HYGIENE, INSPECTION SCORING SYSTEM FOR FOOD SERVICE ESTABLISHMENTS app. 23B, Violation 10D (2005), available at [http://www.nyc.gov/html/doh/downloads/pdf/inspect/foodservice\\_info.pdf](http://www.nyc.gov/html/doh/downloads/pdf/inspect/foodservice_info.pdf). The city of Minneapolis has similar requirements, mandating that “ventilation hoods or canopies shall be installed over equipment where grease vapors, smoke, steam, odor, and heat are produced in the preparation of food.” MINNEAPOLIS, MINN., CODE § 188.440 (Supp. 1999).

46. Cf. MAINE DEP’T OF ENVTL. PROT., BEAM BENZENE FACT SHEET, [http://maine.gov/dep/air/beam/factsheets/benzene\\_fs.htm](http://maine.gov/dep/air/beam/factsheets/benzene_fs.htm) (detailing the adverse health effects of benzene exposure from burning fossil fuels) (last visited Apr. 2, 2008).

47. *Id.* (“[B]enzene comes from auto exhaust, gasoline stations, and industrial sources . . . . Cigarette smoke is a significant source of benzene for those who smoke or are breathing in second hand smoke, particularly in the home.”).

48. See, e.g., HEALTH ASSESSMENT SECTION, BUREAU OF ENVTL. HEALTH, OHIO DEP’T OF HEALTH, BENZENE: ANSWERS TO FREQUENTLY ASKED HEALTH QUESTIONS 1 (2003), <http://www.odh.ohio.gov/ASSETS/B50DD769DEAF483D84C7A06756121521/benzen.pdf> (stating “[a]uto exhaust and industrial emissions account for

as a public risk to others, a sense of proportionality would seem to have many precedents. Against such considerations, arguments for zero tolerance of *any* tobacco smoke in outdoor public settings require interrogation of the assumptions and values driving such demands. In my experience, these are nakedly paternalistic, with heroic rearguard efforts being made to appropriate science in justification.

### III. WHAT PROBLEMS WOULD ARISE FOR PUBLIC HEALTH POLICY IF AN ABSOLUTE ZERO TOLERANCE POLICY WAS ADOPTED FOR SECONDHAND SMOKE?

Outdoor smoking bans imply zero tolerance for exposure to SHS. In 2005, the World Health Organization (WHO) announced it would no longer employ smokers in any capacity (not just in its tobacco control division).<sup>49</sup> Presumably, it would not matter to the WHO if the world's most renowned health workers in, for example, malaria, HIV/AIDS, or the prevention of injury smoked: they would no longer be welcome inside the world's peak health agency. The WHO policy came under heated debate on an international tobacco control listserver, GLOBALink.<sup>50</sup> Several participants—also advocates for outdoor smoking bans—supported the WHO policy.<sup>51</sup> They advanced a bizarre argument relevant to the debate on zero tolerance for SHS exposure.<sup>52</sup>

They argued correctly that smokers, after smoking outdoors, returned indoors and “off-gassed” SHS smoke particles including volatile organics like benzene and styrene in their exhaled breath<sup>53</sup>

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about 20% of the total nationwide exposure to benzene. About 50% of the entire nationwide exposure to benzene results from smoking tobacco or exposure to tobacco smoke”).

49. World Health Org., WHO Employment, What Are We Looking for?, <http://www.who.int/employment/recruitment/en/> (last visited Apr. 12, 2008) (“Smokers and other tobacco users will not be recruited by WHO as and from 1 December 2005. This policy should be seen in the context of the Organization's credibility in promoting the principle of a tobacco-free environment.”).

50. See GLOBALink, <http://www.globalink.org/> (list server is private and can be accessed by members only; membership is free, but prospective members must be tobacco-control advocates) (last visited Apr. 2, 2008).

51. See *id.*

52. See *id.*

53. Lance Wallace et al., *Exposures to Benzene and Other Volatile Compounds from Active and Passive Smoking*, 42 ARCHIVES ENVTL. HEALTH 272, 273 (1987) (reporting

and from their clothing. This, they argued, was a further consideration for why workplaces might justifiably refuse to employ smokers.<sup>54</sup> However in 2007, a group of researchers showed that the mean time it took for a smoker to stop exhaling residual tobacco smoke particles after finishing a cigarette was 58.6 seconds, corresponding to about nine subsequent breathings.<sup>55</sup> The researchers concluded that asking smokers to wait two minutes before returning indoors after smoking would eliminate measurable particle dispersal from their breath.<sup>56</sup> No one has yet bothered to quantify the amount of smoke particle shedding that smokers emit from their hair and clothing but the levels would be almost infinitesimal.

Those who were animated about the need to stop smokers from “polluting” workplaces like this were in effect so intolerant of smokers that they argued if we can smell smoke on their breath or clothes, they should be denied employment in indoor occupations.<sup>57</sup> The *reductio ad absurdum*<sup>58</sup> of such a position would involve truly frightening policy obligations. Additionally, it would follow that we should not allow smokers to attend cinemas or theatres, travel on public transport, stand in queues, attend sporting matches, or perhaps even walk past us in the street because some non-smokers might find the experience of being near them intolerable.

We might also require employees to declare that they will no longer associate with smokers because they might then come to work with trace levels of smoke in their clothing. Perhaps WHO employees should be asked to divorce their smoking spouses, agree to send their smoking children to approved smoking cessation programs, and agree not to associate with smokers because these people might cause their parents to turn up to work at the WHO smelling of smoke.

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that the breath of smokers contained significantly higher concentrations of benzene, styrene, ethyl-benzene, and xylenes).

54. See GLOBALink, *supra* note 50.

55. Giovanni Invernizzi et al., *Residual Tobacco Smoke Measurement of its Washout Time in the Lung and of its Contribution to Environmental Tobacco Smoke*, 16 TOBACCO CONTROL 29, 31 (2007)

56. *Id.* at 33.

57. See GLOBALink, *supra* note 50.

58. To disprove an argument “by showing it leads to a ridiculous conclusion.” BLACK’S LAW DICTIONARY 1302 (8th ed. 2004).

It is instructive to consider another common behaviour that holds implications for the health of others. Many people are allergic to the fine hair continually shed by pets such as dogs and cats. For example, in the United States, 17% of the population is allergic to cats.<sup>59</sup> A European study concluded that people with cat allergies who do not own cats “may be exposed to high levels of cat allergen . . . if they live in communities with high levels of cat ownership.”<sup>60</sup>

People with cat allergies quickly learn not to own or pat cats and will often avoid going into the houses of people who own cats because of the profusion of dander in such locations. But given that exposure to cats is higher in communities where cats are prevalent and that clothing and hair are key vehicles for exposing the allergens to those allergic to cats,<sup>61</sup> by the same logic that seeks to protect non-smokers from SHS, why should we also not forbid cat ownership or force cat owners to shower and have a complete change of clothing before entering any public space?

Supporters of the WHO policy also argue correctly that smoke-free workplaces can act as incentives to cessation.<sup>62</sup> This paternalism exhibited by supporters of the WHO policy in wanting to stop smokers from harming themselves is presumably motivated by benevolence: it is for smokers’ own good. Therefore, let us assume that such benevolence extends to all avoidable causes of death, not just those caused by smoking (because if this is not the case, the WHO policy advocates would be nothing but single issue moralists who cared about a cancer death from smoking but not a cancer death from, say, sun exposure).

On the basis of this assumption, should we encourage the WHO to refuse to hire tanned Caucasians (for sending the wrong

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59. See Samuel J. Arbes, Jr. et al., *Prevalences of Positive Skin Test Responses to 10 Common Allergens in the U.S. Population: Results from the Third National Health and Nutrition Examination Survey*, 116 J. ALLERGY CLINICAL IMMUNOLOGY 377, 378 (2005).

60. Joachim Heinrich, et al., *Cat Allergen Level: Its Determinants and Relationship to Specific IgE to Cat Across European Centers*, 118 J. ALLERGY CLINICAL IMMUNOLOGY 674, 674 (2006). Non-cat owners may be exposed to the cat allergen through “passive transport” in areas “where cat ownership is common.” *Id.* at 680.

61. Anne-Sophie Karlsson & A. Renstrom, *Human Hair Is a Potential Source of Cat Allergen Contamination of Ambient Air*, 60 ALLERGY 961, 961–64 (2005). “[H]uman hair contains substantial amounts of cat allergen and may be an important source for transfer and deposition of cat allergen in public places, school and even homes.” *Id.* at 963.

62. Caroline M. Fichtenberg & Stanton A. Glantz, *Effect of Smoke-Free Workplaces on Smoking Behaviour: Systematic Review*, 325 BRIT. MED. J. 188, 188 (2002).

message about skin cancer risk), people who ride motorcycles (a hugely risky activity as evidenced by insurance premiums), anyone who chooses to participate in extreme sports (for example, mountaineering, lone ocean sailing, or base jumping, where the risks are immense), anyone who is obese, anyone who makes a virtue out of not exercising, and anyone who drinks excessively after hours? The list could go on.

#### IV. PSYCHOGENIC EXPLANATIONS OF CLAIMED HARMS FROM LOW-LEVEL SHS EXPOSURES

Advocates for smoke-free outdoor areas include those who passionately attest to being severely affected by even the smallest exposure to SHS. A compassionate attitude toward such claims would be to accept them uncritically at face value and not to subject them to any scientific scrutiny. But if public health policy is to be evidence-based, such claims need to be subjected to scientific assessment. Here, such individuals may have much in common with those who suffer from what was formerly known as multiple chemical sensitivity (MCS), now known as Idiopathic Environmental Intolerance (IEI).<sup>63</sup> Systematic review of research into chemical provocation studies conducted with people suffering from MCS concluded that the “mechanism of action is not specific to the chemical itself and might be related to expectations and prior beliefs.”<sup>64</sup> Three studies, for example, used olfactory masking agents to conceal stimuli, and none of these found associations between provocations and response.<sup>65</sup>

Two recent reviews examined the evidence for both the toxicogenic hypothesis<sup>66</sup> (that susceptibility or intolerance of low levels of any environmental agent such as SHS explains multi-system symptoms either through toxicodynamic pathways or by sensitising neural pathways) and the psychogenic hypothesis (that IEI is a culturally learned phenomenon characterised by an overvalued idea of toxic harm explained by psychological,

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63. Robert Keene McLellan et al., *Multiple Chemical Sensitivities: Idiopathic Environmental Intolerance [Acoem Position Statement]*, 41 J. OCCUPATIONAL & ENVTL. MED. 940, 940–42 (1999).

64. Jayati Das-Munshi et al., *Multiple Chemical Sensitivities: A Systematic Review of Provocation Studies*, 118 J. ALLERGY CLINICAL IMMUNOLOGY 1257, 1257 (2006).

65. *Id.*

66. Staudenmayer et al., *Idiopathic Environmental Intolerance: Part 1: A Causation Analysis Applying Bradford Hill's Criteria to the Toxicogenic Theory*, 22 TOXICOLOGICAL REV. 4, 235–46 (2003).

psychosocial, and psychophysiological processes).<sup>67</sup> The reviews concluded that none of the Bradford Hill criteria for causation were satisfied by the toxigenic theory, but that all of the criteria were met for the psychogenic theory.<sup>68</sup>

There are many dimensions of antipathy to public smoking. Some people are affronted by the mere sight of smoking (although John Stuart Mill was emphatic that “mere offence” did not count as harm).<sup>69</sup> Others have an evangelical mission to use “tough love” to help others reduce and quit.<sup>70</sup> Communities often introduce standards on the conduct of citizens which relate to reducing nuisance and improving amenity, regardless of whether these issues impact health; neighbourhood building (aesthetic) approvals, dress codes, and noise rules are three broad examples.<sup>71</sup> These standards reflect values that differ between communities, but do not seek refuge in claims about health. Public health research is debased when it lends bogus credibility to what are essentially matters of community preference. If local governments wish to stop people from smoking on beaches because of the intractable butt-littering that occurs, they should frame their actions in terms of litter reduction, not public health. If landlords want to prevent smokers from renting apartments because of the likelihood of complaints about smoke drift from other residents, they should be

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67. Staudenmayer et al., *Idiopathic Environmental Intolerance: Part 2: A Causation Analysis Applying Bradford Hill's Criteria to the Psychogenic Theory*, 22 TOXICOLOGICAL REV. 4, 247–61 (2003).

68. Compare Staudenmayer et al., *supra* note 66, at 244, with Staudenmayer et al., *supra* note 67, at 257. In a 1965 article, Bradford Hill detailed nine criteria to determine when the environment causes medical conditions, instead of merely being associated with them. Austin Bradford Hill, *The Environment and Disease: Association or Causation*, 58 PROC. ROYAL SOC'Y MED. 295 (1965). They are: strength of association; consistency of the association; specificity of the association; the temporal relationship of the association; presence of a biological gradient; biological plausibility of the association; coherence of a causation theory; experimental analyses; and analogy to more famous diseases. *Id.* See also Staudenmayer et al., *supra* note 66, at 236 (table summary of nine Bradford Hill criteria.).

69. See MILL, *supra* note 22, at 135 (“The acts of an individual may be hurtful to others or wanting in due consideration for their welfare, without going to the length of violating any of their constituted rights.”).

70. See, e.g., Jeffrey Mapes, *Study Promotes “Tough Love” of Measure 50*, OREGONIAN, Nov. 2, 2007; see also Andre Picard, *“Tough Love—Smokers Denied Surgery*, ASH, Mar. 2005, available at <http://no-smoking.org/march01/03-05-01-3.html>.

71. See generally John Copeland Nagle, *Moral Nuisances*, 50 EMORY L.J. 265, 276–77 (2001).

at liberty to do so, but need not invoke public health justifications in the process.

My final concern about the current excesses in secondhand smoke policy is that we risk undermining the much needed case for smoke-free indoor policies in most parts of the world where smoking remains a normal, unremarkable, and unregulated activity.<sup>72</sup> Health workers in those nations are today desperate to convince governments of how reasonable it should be to remove involuntary exposure from SHS in occupational and indoor public settings.<sup>73</sup> They marshal evidence about disease caused by long-term exposure and staunchly defend the credibility of that evidence from the predations of the tobacco and hospitality industries<sup>74</sup> which are intent on exposing those risks as trivial.

Opponents of clean indoor air will be able to point to dubious “endgame” advocacy in nations<sup>75</sup> which have successfully introduced indoor smoking bans, and invoke slippery slope precedents that advocates actually want to ban smoking

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72. Paula C. Johnson, *Regulation, Remedy, and Exported Tobacco Products: The Need for a Response from the United States Government*, 25 SUFFOLK U. L. REV. 1, 36–37 (1991) (explaining that there are many countries that have not yet enacted any legislation to control smoking and that those countries have no restrictions on advertising or public smoking). See also WORLD HEALTH ORG., WHO REPORT ON THE GLOBAL TOBACCO EPIDEMIC, 2008—THE MPOWER PACKAGE (2008), available at <http://www.who.int/tobacco/mpower/en/index.html>. According to the WHO, seventy-four countries still allow smoking in health-care institutions and about the same number allow smoking in schools. *Id.* at 44. For example, China, Japan, and Russia do not ban smoking in health-care facilities, and Japan and Russia do not ban smoking in school. *Id.* at 85, 117, 145.

73. See, e.g., F. Howell, *Editorial, Smoke-Free Bars in Ireland: A Runaway Success*, 14 TOBACCO CONTROL, 73, 73 (2005) (noting that the ban on smoking in Irish bars is popular with the public and that negative economic effects have been minimal); see also Charles W. Schmidt, *A Change in the Air: Smoking Bans Gain Momentum Worldwide*, ENVIRONNEWS, Aug. 11, 2007, available at <http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=1940108>.

74. See David Champion & Simon Chapman, *Framing Pub Smoking Bans: An Analysis of Australian Print News Media Coverage March 1996–March 2003*, 59 J. EPIDEMIOLOGY & COMMUNITY HEALTH 8, 679–84 (2005) (discussing tactics of the Australian Hotels Association and tobacco control groups in the fight over legislation to make bars smoke free).

75. E.g., Jordan Raphael, Note, *The Calabasas Smoking Ban: A Local Ordinance Points the Way for the Future of Environmental Tobacco Smoke Regulation*, 80 S. CAL. L. REV. 393, 416 (2007) (discussing the efforts of anti-smoking advocates in the United States to ban smoking in multiunit residences); Lila E. Slovak, *Smoke Screens: Why State Laws Making It a Crime to Smoke in Cars Containing Children Are a Bad Idea*, 41 FAM. L.Q. 601, 602 (2007) (noting that Bangor, Maine has banned smoking in cars with minors under age eighteen and that legislators in fifteen states have introduced similar legislation).

everywhere. This may unfairly brand tobacco control advocates as clandestine extremists with agendas which abandon all proportionality in the formulation of policy. Such views are likely to undermine the credibility of advocacy for evidence-based policies<sup>76</sup> to the great detriment of perhaps hundreds of millions of citizens.

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76. See Katherine Bryan-Jones & Simon Chapman, *Political Dynamics Promoting the Incremental Regulation of Second Hand Smoke: A Case Study of New South Wales, Australia*, 6 BMC PUB. HEALTH 1, 192 (2006) (discussing how “economic, ideological, and anecdotal arguments” can overpower scientific evidence supporting bans on smoking in bars and clubs).