

Jumping Off the Wireless Bandwagon

It's convenient, it's easy, it makes information and social contacts accessible, and the products are fun, but is Health Canada really protecting us from microwave radiation? As the technology spreads and grows, are we really built for a microwave life at such extreme levels? Who's calling the shots?

by Joyce Nelson

During three days of hearings on health impacts of Wi-Fi and wireless technologies, which wrapped up on Oct. 28th, 2010, Canada's Parliamentary Standing Committee on Health heard from some of the top international experts in the field, many of whom roundly criticized Health Canada's protection of Canadians from the dangers of non-ionizing microwave radiation.

Dr. Olle Johansson, testifying by teleconference from Sweden, said Canada's *Safety Code 6* is "completely out of date and obsolete" in terms of protecting people from "prolonged low-intensity exposures" to microwave radiation from cell phones, cell towers and masts, and Wi-Fi. The safety level in Canada's *Safety Code 6* is some 6,000 times less stringent than the safety level advocated in the 2007 *BioInitiative Report*, which was released by the University of Albany and includes expert international research (such as that of Dr. Johansson) on electromagnetic radiation (EMR), electromagnetic fields (EMFs) and brain tumours, leukemia and other illnesses [see the Sept.-Oct. 2007 *Watershed Sentinel*].

Dr. Martin Blank, Columbia University researcher in bioelectromagnetics, told the Committee, "The European Union voted to review their own [safety] standards on the basis of *The BioInitiative Report*."

But Brenda Peterson of Health Canada countered: "*The BioInitiative Report* was biased. We do not support the findings," she told the Parliamentary Committee. In spring 2010,

Children in schools with Wi-Fi are exposed to microwave radiation for "six hours a day, five days a week, for fourteen years," a form of "experiment without consent".

Health Canada issued this statement: "Health Canada has no scientific reason to consider the use of wireless communications devices, such as cell phones, BlackBerrys, wireless laptop computers and their supporting infrastructure, dangerous to the health of the Canadian public."

"I have heard over and over again that the levels of [EMR] exposure are

low," Dr. Johansson told the Committee. "In the room you're sitting in right now, just from the third generation [3G] mobile telephony...you are sitting in levels that are approximately one million billion times above natural background [radiation]. There you have your question mark: are we really built for a microwave life at such extreme levels?" 4G mobile telephony is set to be released in Canada within months.

"Microwave Life"

Perhaps the most moving testimony at the hearings came from Rodney Palmer, spokesman for the Simcoe Safe School Committee. In Ontario's Simcoe County, kids in at least 14 schools have become ill since the schools installed Wi-Fi, beginning in 2006. Palmer described their symptoms – speeding heart rate, fatigue, headaches – and said that two kids have "had cardiac arrests" and are on heart medication. "Now every school in Simcoe County has its own defibrillator, as though teenage heart attacks are normal."

The co-editor of *The BioInitiative Report* recently told *Harper's Magazine* (May 2010), "If EMFs function both as a carcinogen and a neurotoxin, then it's not just brain tumours and brain cancers" that could result, "it's also testicular cancer, breast cancer, leukemia, lymphoma, Alzheimer's, Parkinson's and a range of cognitive and behavioural problems."

The UK's Dr. Andrew Goldsworthy told the Parliamentary Committee that microwave radiation disrupts bird migration and "probably causes colony collapse disorder in bees." Recent research from Europe has shown that bees exposed to EMR from cellular towers made 21% less honeycomb and more than one-third, taken a half-mile from the hive, couldn't navigate back home.

The electromagnetic spectrum is actually a part of the Commons – as much a public resource as the air, water, and public forests. While our governments have been privatizing the spectrum by auctioning off chunks of it to the wireless industries, it remains our resource and should be under the public's control. Now, there is a growing public movement worldwide to have a say in the use of that spectrum and the EMR pollution that is resulting in "the microwave life".

Taking Wi-Fi Out of Schools

As a first step, many parents across Canada are questioning the need for Wi-Fi in schools, when the same Internet capabilities are available through hard-wired modem or fibre optics. As Rodney Palmer told the Parliamentary Committee, children in schools with Wi-Fi are exposed to microwave radiation for "six hours a day, five days a week, for fourteen years," a form of "experiment without consent".

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The Interphone Study

Those who used a cell phone one-half hour per day over a ten-year period were 40% more likely to develop glioma

After ten years of research (1995-2005), the World Health Organization's cancer-research agency, the International Agency for Research into Cancer (IARC), finally released, in May 2010, the world's biggest study so far into possible links between mobile phone use and cancer – dubbed the Interphone study. IARC has offered no explanation for the years-long delay in releasing the study, which had 21 scientists from 13 participating countries including Canada (but not the US, which neglected to participate). The study, partially funded by industry (which had no role in its design), was published on May 18 in the *International Journal of Epidemiology*.

The study had key design flaws. Its 5,100 case-control studies included only adults aged 30-59; it omitted corporate users – the group who used mobile phones the most in the mid-1990s; and its definition of average cell phone use was 2 to 2.5 hours per month. (Today's average is 6.7 hours per month in Canada, and 14 hours per month in the US.) The Interphone study defined "heavy use" of a cell phone as one-half hour per day, or 15 hours per month.

Nonetheless, even with these limitations, the Interphone study found that those who used a cell phone one-half hour per day over a ten-year period were 40% more likely to develop glioma (the usually rare and fatal brain cancer that killed Ted Kennedy) than those who had not used cell phones. The researchers also investigated the incidence of meningioma, a slow-growing and often benign brain tumour. Heavy users had a 15% elevated risk of contracting it, compared to non-users. Studies on acoustic neurinoma and salivary gland tumours are to be released later.

Dr. Devra Davis, author of the new book *Disconnect*, told the *Globe and Mail* (Sept. 24, 2010), "For such a risk to show up in cell phone users within 10 years given what we know about brain tumours, which is that they can have a latency of 40 years, is deeply, deeply disturbing."

—J.N.

⇐ *Wi-Fi continued*

The excellent website of EMR Health Alliance of BC (www.emrabc.ca) has posted a letter that Kristin Cassie, Principal of Roots and Wings Montessori Place in Surrey BC, wrote to the Parliamentary Committee. In it, Cassie explained why she “removed all wireless technology from our school and banned the use of cell phones within our building,” adding that it was “not a major change” to hard-wire all computers. “We have advanced technology without any of the dangers of wireless radiowaves.”

In autumn 2010, a public elementary school in Meaford, Ontario became the first public school in Canada to shut down wireless internet. Parents at Lucerne School in New Denver, BC, have also chosen to keep hardwired computer systems, rather than join the Wi-Fi bandwagon. The New Denver Parent Children’s Association has issued a statement saying, “We encourage other parents to look into the increasingly evident side effects of wireless routers and [wireless] computers, particularly to children whose bodies and brains are still developing.”

School District 61 in Victoria, BC has voted to form a committee to investigate the potential health threats posed by Wi-Fi and to report to the Board by spring 2011.

Lakehead University in Peterborough, Ont. has banned Wi-Fi on its campus and uses fibre optic cable for Internet access.

Canadian schools take health issues seriously, having taken steps for asbestos removal and making schools smoke-free and nut-free. Trent University professor Dr. Magda Havas, an environmental biologist and expert in microwave radiation issues, argues that schools should also be “radiation-free” because “as many as 260,000 students (5%) across Canada may be adversely affected by this radiation – without even knowing it” (at least

at first). Short term effects of EMR pollution include headaches, fatigue, dizziness, insomnia, irritability, depression, and suppressed immune function.

The European Difference

In an article for *GQ Gentlemen’s Quarterly* (Feb. 2010), Christopher Ketcham writes, “The concern about Wi-Fi is being taken seriously in Europe. In April 2008, the national

New research has revealed that the use of cell phones within a metal enclosure (car, train, subway, streetcar, bus) increases radiation exponentially, not only because of metal’s properties, but because the phone sporadically powers-up in a moving vehicle to reach each new transmitter en route.

library of France, citing possible ‘genotoxic effects,’ announced it would shut down its Wi-Fi system, and the staff of the storied Library of Sainte-Genevieve in Paris followed up with a petition demanding the disconnection of Wi-Fi antennas and their replacement by wired connections. Several European governments are already moving to prohibit Wi-Fi in government buildings and on campuses, and the Austrian Medical Association is lobbying for a ban of all Wi-Fi systems in schools, citing the danger to children’s thinner skulls and developing nervous systems.” The Austrian city of Salzburg removed Wi-Fi from its schools in 2007.

Ketcham reports that in Spain, Ireland and Israel, sabotage and attacks on cell phone transmission towers have become “a regular occurrence.”

In June 2009, the Parliament of

Liechtenstein ordered cell phone companies to limit EMR power density levels to those recommended by the *BioInitiative Report*. According to the Victoria-based Citizens Against Unsafe Emissions website (www.causetm.ca), when the cell phone companies threatened to leave the country, “Parliament countered by saying that if they did, the government would take over their operations and lease them to complying companies.”

In a recent paper entitled “A Tale of Two Countries,” Dr. Magda Havas notes that Switzerland is now providing free fibre optic connections to schools through the Swiss government’s telecommunication provider, Swisscom. The Swiss guidelines for microwave radiation exposure to the public are 100 times more stringent than Canada’s. China’s are thousands of times more stringent.

GQ’s Christopher Ketcham memorably states: “The only honest way to think of our cell phones is that they are tiny, low-power microwave ovens, without walls, that we hold against the sides of our heads.” More than 22 million Canadians have cell phones, in what is now a \$17 billion industry in Canada.

Warnings for children

According to Dr. Havas’ research, health officials in various countries have issued warnings for children to limit their use of cell phones: United Kingdom (2000), Germany (2007), France (2008), Russia (2008), India (2008), Toronto Public Health (2008), Pittsburgh Cancer Institute (2008), Belgium (2008), Israel (2008), Japan (2008), Finland (2008), South Korea (2009), and the US Federal Communication Commission (2009).

Following the release of the Interphone Study (see page 9), the European Union is funding a new study to investigate the risk of brain tumours

among children and teens using cell phones.

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Disconnect

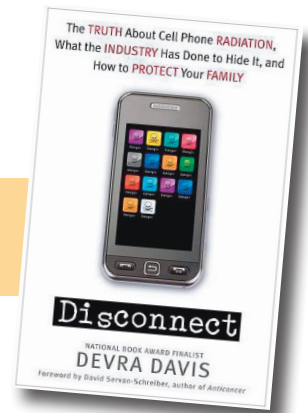
On Nov. 22, a packed hall at the University of Toronto heard Dr. Havas and Dr. Devra Davis address wireless issues. Canada's guidelines on microwave radiation "are among the worst in the world," Havas told the crowd, and she predicted that by 2017, some "50 percent" of the population of Canada will have developed electrical sensitivity, "which is escalating."

Dr. Devra Davis is the author of the newly released book *Disconnect: The Truth About Cell Phone Radiation, What the Industry Has Done To Hide It, and How To Protect Your Family* (Dutton, 2010). Davis reminded the audience that "We are up against a multi-billion-dollar industry," which has "fostered confusion" about the issues. "Science is used as a form of public-relations," she said,

It's not the power that's the issue, it's the pulsed signal

resulting in "doubt creation." Her book explores a number of instances in which important microwave/health research has been stopped, distorted, or suppressed. She includes chilling scientific reports about EMR causing broken strands of DNA and breaching of the blood-brain barrier, which would allow the body's stored toxins to enter the brain. "It's not the power that's the issue, it's the pulsed signal," she said.

Davis informed the crowd that scientists in 1996, in coming up with ways to estimate exposures from cell phones, invented SAM, or "Standard Anthropomorphic Man" – weighing in at 200 pounds, standing 6 feet two inches tall, with an 11-pound head, and making only six-minute phone calls. SAM is the measure by which cell phone safety is still determined, said Davis. Meanwhile, "We are in the midst of an unprecedented biological experiment." Holding up her entwined fingers, Dr. Davis said, "Industry Canada, Health Canada, and [the wireless] industry are like this."



On Dec. 6, Vancouver's Wavefront technology hothouse – a joint venture by government and industry housed at UBC – received \$11.6 million in federal money from Industry Minister Tony Clement to make BC "the centre of excellence" for Canadian wireless research and development. The goal of the funding is to spawn 150 new wireless companies and "take wireless innovation and commercialization to the next level."



Joyce Nelson is a freelance writer/researcher and is the author of five books. Nelson wishes to acknowledge the research contribution made to this article by the EMR Health Alliance of BC website: www.emrabc.ca

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