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In the next issue

‘Communication is peace: Building viable communities’ is the theme of WACC’s Congress 2008, which takes place in Cape Town, South Africa, 6-10 October. The 4/2008 issue of Media Development will carry the keynote presentations and other materials from this extraordinary international event.
Introducing his book *A Short History of Nearly Everything*, Bill Bryson describes seeing in a school textbook a diagram of the Earth’s interior, as if the planet had been cut with a large knife and a wedge representing about a quarter of its bulk removed. ’I remember thinking with real wonder: “How do they know that?”... To me that was just a miracle. That has been my position with science ever since.’¹

Much later, as a successful journalist and travel writer, Bryson devoted three years to reading books and journals in order to ‘see if it isn’t possible to understand and appreciate – marvel at, enjoy even – the wonder and accomplishments of science at a level that isn’t too technical or demanding, but isn’t entirely superficial either.’¹

*A Short History of Nearly Everything* became the most popular science book of 2005, selling over 300,000 copies. That same year Bryson was chosen as one of the recipients of the European Union’s prestigious Descartes prize for science communication. Press coverage of the book was overwhelmingly positive and, despite a few factual errors, it was generally accepted by the scientific community.

Bryson’s book only attracted a tiny percentage of the viewers of Al Gore’s celebrated documentary on global warming. Shown at film festivals, in cinemas, and on cable television, *An Inconvenient Truth* received numerous awards and, at the time of writing, had grossed nearly US$50 million worldwide. Millions of people have seen it. In July 2006, a companion book authored by Gore reached #1 on the *New York Times* bestseller list.

Given these achievements, is it fair to ask how successfully science is presented to the public at large? Science magazines and Internet sites abound. Many offer expert alternative information or points of view. But how is the average reader to sift that information and discern what may be biased or unbiased? What contribution can the mass media make? Is anything at all amiss with how science is reported?

A number of studies are critical of science reporting. The rapid development and convergence of several branches of science, the technical demands of digital media, and the pressure of today’s 24/7 newsrooms mean that reporters are stretched in covering increasingly complex stories. Their task is made harder by a dearth of impartial sources and the need to unravel hidden links to global industrial and corporate interests.

Some studies show press coverage to be ‘unbalanced’. While not wildly exaggerating or containing blatant inaccuracies, pro- and anti- stances are evident, suggesting personal bias or corporate control. Lack of balance includes a tendency to quote exclusively from scientists rather than other sources and a failure to consider ethical questions or the potential risks inherent in a new technology.

Delegates at the 5th World Conference of Science Journalists (Australia, 16-20 April 2007) called for a code of ethics to help them communicate increasingly complicated science accurately. Science communicators say this should be combined with better practice, including rules to help journalists distinguish science news from public relations material.

All agreed that at its best science journalism helps the public understand complex concepts, encourages investigation and debate on scientific issues, and challenges communities to consider new ideas.

But that is not the whole story. In a democratic society, scientific developments must be made public if they are to be adequately debated. Scientific discoveries are part of the creative commons of all humanity, (see www.sciencecommons.org) and an appropriate system of licensing should apply to their use that benefits all people everywhere. When information about scientific developments is controlled by vested interests – government, military or industry – ordinary people lose out.

Media coverage of scientific research and discovery, including questions of ownership and control, can promote democratic accountability. Five simple questions can be addressed: Who needs it? Who will benefit from it? Who will pay its costs? What happens when it goes wrong? Who will regulate it, how, and on whose behalf?²

These questions do not have simple answers. Raising them opens up public dialogue in which all sides can argue their case and hear alternative perspectives. In this regard, science reporting, like good journalism, needs to be objective, balanced, fair, and democratic.

Notes

Editor’s note: Some references have been updated.
Catastrophe theory

Robyn Williams

Science coverage is on the wane when public scrutiny of science is more important than ever. (Editorial in Nature, 27 March 2008.)

Pulitzer Prize winning writer Laurie Garrett, at the time she was President of the American Science Writers, said ‘There aren’t any science reporters, only stenographers!’ She was referring to the syndrome most of us eventually succumb to as we have to choose between becoming part of the scientific culture, co-opted, if you will, rather than staying sternly apart from it.

Political reporters face the same quandary. Do you accept the after-hours drinks from friendly senators and cabinet ministers? Or do you refuse all enticements to join the club? Most become embedded.

I did. I have been reporting science for forty years. Long ago I became President of the Australian Museum Trust (it’s the oldest museum in Australia) and a Fellow of the Australian Academy of Science. You qualify to become a fellow, they told me, when your prostate is larger than your brain. This says a lot, as you can no doubt infer, about both the scientific establishment and its gender preferences. I have been a willing member of countless other committees and elevated bodies to save science, if not the planet, and in that respect, am past redemption. I’m committed.

But does that make me a lesser science reporter? A stenographer?

The trouble with science issues is that they are replete with portmanteaus. People are against GMOs (genetically modified organisms); against nano; against radiation, against ‘elites’. This is as mindless as being against germs or ‘chemicals’ – as quite a few activists were a decade ago, even wanting to ban chlorine. GM and nano are as massive fields of R&D as is chemistry itself. Sensible folk prefer to enquire: which chemical? Which nano?

What kind of radiation. They do not say ‘I am against GM, nano or ‘chemicals’ as if they are a job lot. They take matters case by case.

‘Scientists’ are also, sometimes, perceived, publicly, as a herd, driven by the same appetite for advancement and funds, compelled by the same orthodoxies. For much of the public, all scientists and most of what they do are in the same black box. I, instead, perhaps like you, see them as individuals, infinitely varied, as are their experiments and studies.

So, I am not a cheerleader for science, come what may. I recognise the power of establishments, money and profit. But I do think that science, by and large, is a good thing. Worth defending. Speaking up for.

The real catastrophe in science reporting is elsewhere. It is insidious, ignored and likely to succeed. We are being threatened with extinction.

Why is communicating science important?

Before I explain why I think this is so I better propose why science communication is important in every country on Earth. There are five reasons, with a sixth looming. 1. Wealth creation. 2. Democracy 3. Fun. 4. Quarantine 5. Who we are.

To elucidate. Wealth creation is obvious. Surveys in America and other countries have shown that 72% or more of patents are based on lab research. No country can be well off, in all senses of the term, without science and its popularisation.

Democracy is also straightforward. How can you vote effectively in this century knowing nothing about DNA, evolution, biodiversity, climate, energy, health or education?

Fun is what science is all about. Ask young people whether they enjoy nature, fitness, electronics, food, cleanliness, sex – and they say ‘yes.’ Ask them whether they like ‘science’ and they seize up – thinking of classrooms and infallibility. They are the same thing. Fun!

Quarantine is trickier. It is a way to accept or refuse any technology or system likely to affect your community. GMOs, nanos, RU486, anti-depressants, internet porn, botox, Viagra
(now ten years old!)… the list goes on. And on. But do you have folk with the expertise to explain to you what these invaders are like and what they mean. Without science communication you may never know.

Finally, you need science to tell you who you are. Or, really, to tell you who you are not. Women inferior? Blacks more stupid? Races distinct? Science can act as a Bullshit Filter. It won’t tell you how to live, but it might explain where the crap lies and how to avoid it. A good Australian example is the human occupation of the continent. When I arrived in Sydney in 1964, the official view was that people had been on the land, living there for, at the most, 5000 years.

By 1984 that view had been transformed by means of archaeological and anthropological evidence. Indigenous humans were shown to have occupied Australia for at least 50,000 years and so represent the longest continuing culture in history. Legislation affecting land rights and other far ranging issues were enacted forthwith.

So, five compelling reasons for all citizens everywhere to be informed about scientific ideas – not mountains of fact – but an understanding with which they can lead fulfilled, safe and rewarding lives.

And the sixth reason to know your science? Frankly, to save the world. There are, according to Professor Paul Ehrlich of Stanford University, at least half a dozen ways in which the Earth and our place on it are threatened environmentally. Climate is just one of those. If we are to get intact through what Professor Martin Rees (President of the Royal Society) wonders will be Our Last Century, then it will be through science.

Given these reasons it is galling to find our profession being diminished. In March 2008, the Pew Research Center’s State of The Media 2008 was released. It showed that in five hours of US cable news you would see an hour on politics, 26 minutes on crime, one minute on science and three on health. The journal Nature commented in an editorial: ‘Perhaps the most worrisome finding in the Pew report is that this type of resource-intensive science is precisely the most threatened: as the newspaper industry responds to falling circulation with sweeping cuts, science stories are among the first to suffer.’

Why so few science reporters when the need is manifest and the public interest is enormous? The answer is both simple and exasperating: cost.

Cutbacks and lack of commitment
Science reporting, like research itself, requires long term commitment by an employer and, to succeed, needs critical mass. In broadcasting there is no surprise in finding most colleagues around the world precariously perched in public institutions like the CBC, BBC, my own ABC, NPR + PBS as well as the semi-public outfits such as National Geographic, Discovery Channel and Deutsche Welle.

Precariously? Well, the Canadian (CBC) show Quirks & Quarks was buffeted by the upheavals in 2006 which saw many programs shut down. Quirks survives – but its companion health program went long ago. In 2007 the BBC Natural History Unit in Bristol, famed for its superb documentary series, was cut by one third in staff and money. Sir David Attenborough was among those voicing outrage.

In 2007 our own Natural History Unit at the ABC was closed. Those of us who had taken part in renowned series such as Nature Of Australia could hardly believe what had happened. At the same time a supremely talented colleague at the ABC, Richard Smith, who had recently made a documentary called Crude, ninety minutes long about the history of carbon and the end of oil, has spent the last few months picking up international awards for this magnificent film. Back home he has no more programs to make (everything is outsourced) but has been invited to produce staff training videos instead.

But isn’t this view of a decline in the traditional outlets something you would expect in an age of new media? Do you not find just as many science reports in the virtual zone, blogging away? And do we not need to redefine our concept of ‘reporter’ as nowadays amateurs can nominate themselves instantly by leaping onto the net? If they can write and get their facts
Not science reporting, but the winner of the WACC Photo Competition 2008, by Leslie Knott, a photojournalist based in Kabul, Afghanistan. Conducting an interview for her programme on an independent radio station, this image challenges Western preconceptions about the power and position of women in the country.

correct, more or less, does this not represent a vast burgeoning in the ranks of science reporting?

Well, ‘Up to a point, Lord Copper.’ The Wiki World is welcome, and there is certainly a revolution all around us with huge numbers of people everywhere (or nearly everywhere – over a billion have never made a phone call let alone used a computer) communicating in a fury. But that is not the same as science reporting.

Our job is to synthesise, not fragment; to clarify, not confuse; to investigate; not just promote; to tell the truth as we find it, not conspire with lobbies. Whatever your outlet or electronic transport system or ‘Platform’ there is something quite distinct about the journalist – as there is, or should be, about many professions bound by a code of ethics. And this is where the strain is greatest right now.

Most of us are so strained for resources we find it hard to leave the building, let alone to travel to places where science is being done. At the same time we are being urged to satisfy the plethora of outlets: the websites, the chatrooms, the niche lists at universities, the virtual newspapers, podcasts. Increasingly we are skimming the topics, ‘covering’ them instead of giving them a thorough going over.

I am reminded of the legendary BBC correspondent Kate Adie in China during an upheaval fifteen years ago. Her news editor in London was demanding yet another ‘update’ for the voracious news bulletins renewed every quarter hour and getting her to commit to a voice piece on the phone. Firmly, she declined, saying that she had already done three that morning and had not yet left her hotel bedroom to go outside to see anything to report.

And while we sit, harried in our offices, all kinds of helpful PIOs and book promoters and drug dollies are in constant contact wanting to smooth our passage to nowhere by bringing
stars ready packaged and willing to our studios. Get the name right... and they'll do the rest. The public will never know the difference. You hope.

My own position seems privileged. I have three radio programs per week, 52 weeks a year. I have been presenting The Science Show since 1975, the others for a decade or two. I have opted for a continuing presence on the airwaves rather than risk losing outlets. Other programs have indeed, disappeared (notably our environment show!) and not been replaced. The price of this continuity is depth. With two hours to fill I have little hope of cracking Pulitzer Prizes with investigative coups. Budgets are minuscule and free-lance reporters cannot be maintained – beyond the occasional crumb.

And there are no signs of my successors, young, fresh, desperate reporters-in-the-making, raring to go. We stopped hiring a generation ago.

Is this merely the jaded view of a grumpy veteran? Are we not well-served by the vast range of quality publications such as New Scientist, Scientific American, Seed, Cosmos, Discover, Science & Spirit, Green Futures, National Geographic as well as their various on-line services and shows?

Yes, we are. But these are high-end vehicles mainly for aficionados. It takes a well-prepared mind and some hours to tackle either New Scientist or Scientific American. Science struggles to get in to most newspapers and magazines and, on air, there is the ‘And, finally...’ syndrome. After the usual parade of pollies, crims, jocks and dollars in every news and current affairs coverage... comes the science story, like some last laugh in the freak show.

Though we can all very quickly, through the net or the average news stand, obtain almost anything we want in the form of information or scientific analysis, first we have to know what is there. Getting to that stage is what science communication is about.

Ways forward
How can one break out of this syndrome? I suggest there are three ways: 1. To convince young people that every job in the twenty first century requires some substantial background in science and technology. 2. To convince all organisation with experience of science communication, newspapers, broadcasters, publishers, to start hiring young people once more and to offer them career paths. 3. To re-establish science teaching as a very well paid and well-regarded profession and to use locums from outside, even from among the retired scientists and engineers, to fill the generation gap with which we are now saddled in a number of countries. (In 2007 the Minister for Education and Science, Julie Bishop, in John Howard’s conservative government, revealed that Australia is short of at least 200,000 scientists and engineers).

All three measures are in the spirit of loosening orthodoxies and allowing ideas to flourish. Infusing youngsters into an organisation brings fresh thinking and, inevitably, new ways of integrating the technologies of communication. Showing that all of us need science to do our work will stop the debate being purely about the recruitment of guys holding flex or girls crunching numbers. It’s more than a debate about shortages of engineers and medics.

Restoring the teachers at the front line, as some countries in Asia and Scandinavia are already doing, will stop science education being more than the stultifying parade of just-so stories it has so often become.

Without such drastic changes most of us in science communication will remain compromised, whatever our ethical or professional ambitions. I am reminded of Alan Bennett’s wry comment in answer to enquiries about his sexuality – straight or gay? He responded that it was rather like being lost crawling across the Sahara Desert and being asked whether you preferred Evian water or Perrier. The refinements of our profession are clear and urgent. But we must be in a position to put them into practice instead of being set up to fail.

At the moment things look goodish. Science is everywhere for those equipped to find it. There are even science communication courses at universities (I teach the subject at two of them) and there is sometimes more than a handful of willing students.

But do remember Catastrophe Theory. The
wave is tallest just before it crashes. If we are not careful we may soon be asking ‘Where have all the science reporters gone?’ At that stage niceties about professional conduct will be beside the point.

Robyn Williams started The Science Show on location in Vancouver, Canada, in August 1975. The one hour program has been on air every week ever since with the same producer/presenter, broadcast from the ABC Science Unit in Sydney. RW joined the Australian Broadcasting Commission (as it then was) in 1972 having completed an honours degree in biology at the University of London. His first broadcasts were live coverage of the last missions to the moon, Apollos 16 and 17. He is a professor (visiting) at the University of NSW and (adjunct) University of Queensland and was both a visiting fellow at Balliol College, Oxford and a Reuter fellow at Green college, Oxford. His latest books are 2007, A True Story Waiting to Happen (2000), Unintelligent Design (2006), and Future Perfect (2007). He chaired the organising committee for the World Conference of Science Journalists in Melbourne (2007) and has been a President of the Australian Science Communicators.

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Technological fundamentalism in media and culture

Robert Jensen

While media watchdogs and bloggers probe contemporary news media for signs of bias – from every angle, on virtually every issue – perhaps the most important of journalists’ biases is ignored: their routine acceptance of society’s technological fundamentalism. This devotion to the industrial world’s core delusion shows up not just in stories about science and technology but in the assumptions about science and technology that underlie virtually all reporting in the corporate commercial news media in the United States.

Let’s start with definitions: While fundamentalism has a specific meaning in Protestant history (an early 20th century movement to promote ‘The Fundamentals’), more generally the term can be used to describe any intellectual/political/theological position that asserts certainty in the unquestioned truth and/or righteousness of a belief system. Fundamentalism shows up in history often enough, in enough places, that it seems to be a feature not of a particular culture but of human psychology – we humans are prone, though one hopes not doomed, to fundamentalist thinking.

The attraction of fundamentalism is not hard to understand; in a maddeningly complex world, such a way of thinking can offer comfort, even if illusory. But fundamentalism is better described as a system of non-thought, for as ecologist Wes Jackson puts it, ‘fundamentalism takes over where thought leaves off.’

Journalists are conscious of religious fundamentalism and treat it as a phenomenon to be covered, even if they don’t always explore it in much depth. But other fundamentalisms – which likely are even more dangerous than the religious varieties – are the water in which journalists swim, rarely reported upon and usually taken as an unquestioned state of nature. This includes national fundamentalism (the belief that we owe loyalty to nation-states and that patriotism is a good thing) and market fundamentalism (the belief that market-based corporate capitalism is the only rational way to organize an economy in the contemporary world).

But it may well turn out that the gravest threat to a just and sustainable human presence on the planet is technological fundamentalism – the notion that the increasing use of increasingly more sophisticated high-energy advanced technology is always a good thing and that any problems caused by the unintended consequences of such technology eventually can be remedied by more technology. According to David Orr, an environmental studies professor at Oberlin College in Ohio, technological fundamentalists are those ‘unwilling, perhaps unable, to question our basic assumptions about how our tools relate to our larger purposes and prospects.’

Our experience with unintended consequences is fairly clear. For example, there’s the case of automobiles and the burning of petroleum in internal-combustion engines, which give us the ability to travel considerable distances with a fair amount of individual autonomy. This technology also has given us traffic jams and road rage, strip malls and the interstate highway system, smog in some places while everywhere contributing to rapid climate change that threatens sustainable life on the planet. We haven’t quite figured out how to cope with these problems, and in retrospect it would have been wise to have gone slower in the development of a transportation system based on the car and to have paid more attention to potential negative consequences. The point is not to look back and condemn John D. Rockefeller, Henry Ford, and Dwight Eisenhower, but to ask a simple question: Can
we learn from these mistakes?

Those who raise questions about this fundamentalism are often said to be ‘anti-technology’, which is a meaningless insult. All human beings use technology of some kind, whether stone tools or computers. An anti-fundamentalist position is not that all technology is bad, but that the introduction of new technology should be evaluated carefully on the basis of its effects – predictable and unpredictable – on human communities and the non-human world, with an understanding of the limits of our knowledge.

One expression of this view is the ‘precautionary principle’, which argues that instead of asking sceptics to prove that a new product or process might be harmful, advocates of the proposed new action should have to prove it is safe. A 1998 conference of scientists, philosophers, lawyers and environmental activists produced this widely used definition of the principle:

> ‘When an activity raises threats of harm to human health or the environment, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically.

In this context the proponent of an activity, rather than the public, should bear the burden of proof.

The process of applying the Precautionary Principle must be open, informed and democratic and must include potentially affected parties. It must also involve an examination of the full range of alternatives, including no action.’

This idea is not new. An early challenge to greed-fuelled technological fundamentalism came from the Luddites, artisans who resisted the factory system in early 19th century Britain not because they were afraid of machines but because they anticipated the negative effects of a dangerous and dehumanizing system on their communities. The contemporary use of ‘Luddite’ as a synonym for ‘someone with an irrational fear of anything new’ indicates how a fearful culture regards this kind of thoughtful critique. The lesson we should learn from the early Industrial Revolution is that the Luddites were correct – by overvaluing machines we can easily undervalue people and the non-human living world.

Today, some critics of the culture’s technological fundamentalism describe themselves as neo-Luddites, an attempt to connect to the wisdom of that earlier movement. Neo-Luddites recognize that technological scepticism and the adoption of the precautionary principle would slow the introduction of new inventions – unless a compelling need to take a risk could be justified in an open and democratic process – and that would be a good thing. Slowing down a runaway train doesn’t magically take care of all problems, but it usually beneficial both for those in the path of the train and those riding it.

**Technological fundamentalism in journalism**

Let’s leave the train metaphor and go back to the issue of the cars on the road. The most common response to the social and ecological pathology of the car culture has not been to rethink the reasons and ways we transport ourselves, but rather to figure out how to replace petroleum so we can continue to drive, leading to the manic quest for ‘alternative fuels’. This has led to the promotion of corn-based ethanol, which is now widely understood to be a disaster on all fronts: it takes almost as much energy to produce as is recovered, intensifies unsustainable farming practices, and increases costs of food.4

Technological fundamentalism – exacerbated by the greed of private agribusiness corporations that are publicly subsidized – created the climate in which corn-based ethanol emerged, and for years journalists yawned at the larger issues. Now we can see the depth of the technological fundamentalism in the way in which journalists start to critique corn-based ethanol; routinely such discussions come with an implicit or explicit endorsement of other biofuels, such as sugar cane or switch grass.

Recognizing that ‘[t]he economics of corn ethanol have never made much sense’, the New York Times editorialized in 2007 that:

> ‘There is nothing wrong with developing
alternative fuels, and there is high hope among environmentalists and even venture capitalists that more advanced biofuels – like cellulosic ethanol – can eventually play a constructive role in reducing oil dependency and greenhouse gases. What’s wrong is letting politics – the kind that leads to unnecessary subsidies, the invasion of natural landscapes best left alone and soaring food prices that hurt the poor – rather than sound science and sound economics drive America’s energy policy."

To the Times, the belief in technological solutions is unquestioned; the only problem is the interference of politics. But what if ‘sound science and sound economics’ argue for first recognizing the need to radically reshape our landscapes and lives to reduce dramatically our need for large quantities of portable liquid fuels for individualized transportation? What if biofuels are a key component of the fantasy scenario that allows so many to believe we can continue business as usual? When those crucial questions are left out of stories, journalists reinforce technological fundamentalism.

A year later, the Times was still avoiding the limits of biofuels, encouraging Congress to continue subsidies ‘as an important part of the effort to reduce the country’s dependency on imported oil and reduce greenhouse gas emissions.’ Identifying the problem as dependency on imported oil leads away from a focus on the core problem of – to borrow a phrase from the social/ecological analyst James Howard Kunstler – a ‘living arrangement with no future’ on which the United States is structured. The Times is hindering, not helping to advance, the conversation needed.

Another example of the technological fundamentalism of journalism is the steady flow of stories about new products that are little more than free advertising for the gadgets that are central to our dead-end living arrangement. The reviews of this endless flood of products celebrating the culture’s child-like obsession with shiny things – everything from hulking SUVs to tiny electronic devices – are much the same; even when a specific product is criticized for its shortcomings, the assumption is that such products are part of a sensible life and consistent with a sustainable future. The idea that journalists might inquire into ‘our larger purposes and prospects’ – who really needs these things, and what are the costs to the planet of the manufacture and disposal of them – would be seen by most journalists as inappropriate editorializing, while avoiding those questions is a sign of objectivity.

Journalists’ instinct to fall in line with the dominant assumptions of the culture is hardly surprising. In the contemporary United States, the good life is synonymous with consumption and the ability to acquire increasingly sophisticated technology. Those who challenge this dogma are routinely ignored or dismissed as naïve, such as in this story in Wired magazine:

‘Green-minded activists failed to move the broader public not because they were wrong about the problems, but because the solutions they offered were unappealing to most people. They called for tightening belts and curbing appetites, turning down the thermostat and living lower on the food chain. They rejected technology, business, and prosperity in favor of returning to a simpler way of life. No wonder the movement got so little traction. Asking people in the world’s wealthiest, most advanced societies to turn their backs on the very forces that drove such abundance is naïve at best.’

Naïve, perhaps, but not as naïve as the belief that unsustainable systems can be sustained indefinitely, which is at the heart of the technological fundamentalists’ delusional belief system. With that writer’s limited vision – which is what passes for vision all around this culture – it’s not surprising that he advocates economic and technological fundamentalist solutions:

‘With climate change hard upon us, a new green movement is taking shape, one that embraces environmentalism’s concerns but rejects its worn-out answers. Technology can be a font of endlessly creative solutions. Business can be a vehicle for change. Prosperity can help us build the kind of world we want. Scientific exploration, inno-
ative design, and cultural evolution are the most powerful tools we have. Entrepreneurial zeal and market forces, guided by sustainable policies, can propel the world into a bright green future.'

In other words: The ‘sophisticated’ thinkers ask us to ignore our experience and throw the dice, to take naiveté to new heights, to forget all we should have learned. This is what Kunstler calls the ‘Jiminy Cricket syndrome’, after the character in ‘Pinocchio’ who believes that when you wish upon a star, your dreams come true. ‘It’s a nice sentiment for children, perhaps, but not really suited to adults who have to live in a reality-based community, especially in difficult times,’ says Kunstler.9

**Raising difficult questions**

An alternative would be to question the technological fundamentalism and think about how we might reorder our world. If one central role of journalism is to raise the difficult questions that citizens should confront in a democratic society, journalists are not doing their jobs.

An honest assessment of the culture’s technological fundamentalism makes it clear why Wes Jackson’s call for an ‘ignorance-based worldview’ is so important. Jackson, a plant geneticist who left conventional academic life to co-found The Land Institute to pursue projects about sustainable agriculture and sustainable culture, suggests that we would be wise to recognize what we don’t know. His point is that whatever the advanced state of our technical and scientific prowess, we are – and always will be – far more ignorant than knowledgeable, and therefore it would be sensible for us to adopt an ignorance-based worldview that could help us work effectively within our limits.

Acknowledging our basic ignorance does not mean we should revel in the ways humans can act stupidly, but rather should spur us to recognize that we have an obligation to act intelligently on the basis not only of what we know, but what we don’t know.

If we were to step back and confront honestly the technologies we have unleashed – out of that hubris, believing our knowledge is adequate to control the consequences of our science and technology – I doubt any of us would ever get a good night’s sleep. We humans have been overdriving our intellectual headlights for thousands of years, most dramatically in the 20th century when we ventured with reckless abandon into two places where we had no business going – the atom and the cell.

On the former: The deeper we break into the energy package, the greater the risks we take. Building fires with sticks gathered from around the camp is relatively easy to manage, but breaking into increasingly earlier material of the universe – such as fossil fuels and heavy metal uranium – is quite a different project, more complex and far beyond our capacity to control. Likewise, manipulating plants through traditional selective breeding is local and manageable, whereas breaking into the workings of the gene – the foundational material of life – takes us to places we have no way to understand.

These technological endeavours suggest that the Genesis story was prescient; our taste of the fruit of the tree of knowledge of good and evil appears to have been ill-advised, given where it has led us. We live now in the uncomfortable position of realizing we have moved too far and too fast, outstripping our capacity to manage safely the world we have created. The answer is not some naïve return to a romanticized past, but a recognition of what we have created and a systematic evaluation of how to step back from our most dangerous missteps.

As key storytellers in the culture, journalists can either help or hinder the process of coming to terms with living arrangements that are not only profoundly unjust but also unsustainable. Journalists think of themselves as progressive (in a non-partisan sense), helping steer the culture toward a progressive future that improves the lives of ordinary people.

For a lot of people, unfortunately including most journalists, notions about progress have become rooted in this technological fundamentalism. Yet if humans enjoy too much more of this kind of progress in the world, and it’s not clear there will be a world left for humans much longer. Journalists need to start telling the stories that can help us avoid that fate.
Challenges in communicating science to Canadians

Stephen J. A. Ward and Eric Jandciu

Knowledge of science, the scientific process and the issues surrounding scientific achievements is essential because it allows for informed public participation in a democratic society. A science communication shortage in society leads to low public understanding of science. However, media coverage of science remains sparse. Newspapers rarely hire staff science reporters and, apart from specialty programming, science news on television is scarce.

While science reporting is often criticized as inaccurate or ‘hyped’, it is important to recognize the concrete limitations that must be overcome. Science journalism faces serious challenges that, according to our research, lead to situations where science reporters become ‘slaves to journals’, work with quality-limiting resources and have insufficient professional training.

Our on-going research into the state of science journalism tackles the questions:
1. What is the communication process that produces science journalism?
2. What roles do the news media play in communicating science?

To begin to answer these questions, we needed to start with a baseline of data on how science journalists at newspapers do their jobs. To gain insight into how newsrooms obtain and report science news, we conducted interviews with a total of 25 English-language staff reporters, editors, and freelance journalists in Canada.
Our sample included two categories of journalists: Journalists known and recognized as scientific journalists and claiming to be so, and journalists working frequently on scientific stories (based on observation of media content). All interviews were conducted by telephone (except one, which was done by e-mail) and followed a prepared script.

The interview script covered such areas as the journalists’ education, reporting experience, motivations for doing science journalism, the types of stories they write, their sources, their role as a science journalist and their relationship with editors.

This article focuses only on the challenges that science journalists face while performing their daily work and concludes with suggestions for improvement. Currently, the same interviews are being done by research collaborators in Quebec, France, and Belgium, which will allow comparisons among journalists in English and French-speaking Canada and in other countries.

We categorized the challenges science journalists face into two major groups: individual and systematic. By ‘individual challenges’ we mean the personal abilities, skills and qualifications of the individual journalists interviewed, such as their level of scientific knowledge. By systematic challenges we mean the challenges created by the science journalism ‘system’ such as how newsrooms gather and edit science stories. Often, journalists have limited or no control over systematic factors yet these factors still significantly affect how they do their job. Although individual and systematic challenges are related, for purposes of analysis we place them in separate categories.

Individual challenges

One of individual challenges was finding the right person to explain the issues and topics. This means not only finding a scientist who is an expert in the field being reported, but also someone who can talk on deadline and in a manner that journalists and readers will understand. Journalists are looking for ‘characters’ that can provide good quotes.

Also, journalists struggle to find a ‘real person’ angle to stories. For instance, if a journalist is working on a story about a disease, she may find it difficult to find a patient to interview. There are privacy issues and not all hospitals or doctors are comfortable having their patients talk to the news media. Agencies may help reporters locate patients, but interviewees may be found too late for deadlines.

Another challenge is finding stories that are both important and of interest to readers. The main elements of any news story must still be present, that is, the story should be relevant, timely, novel, local, and have impact. According to the journalists we talked to, finding these elements in a science story is not easy.

Some science journalists said their lack of science education was frustrating. Reading scientific papers without having a science background was challenging. Many reporters without science degrees said that they wished they had more science training (a broader knowledge base).

Even those who do not have science degrees, but have been reporting on science for a long time, agreed that it wouldn’t hurt to have more science reporters with science degrees. Of the 25 journalists interviewed, only five had a science degree. This is consistent with existing data (Saari, Gibson and Osler, 1998).

Our survey also found varied opinions about whether a science degree is beneficial or detrimental to good science. ‘Someone once asked me whether I thought a science journalist needed to have a science degree,’ remarked one reporter. ‘I said, I don’t think they need to have one, but I think they need to be capable of getting one. You have to have that kind of brain… I think you need to have a bit of a math brain.’

However, some reporters felt not having a science degree gave them an advantage:

‘…in some ways, not having a health or science background is sometimes a benefit to me, because the people I’m writing for, for the most part, they don’t have health or science backgrounds either. [...] When I know that I understand the science and the medicine, then I know my readers will understand the science and the medicine because they’re in the same situation as me.’

This is an ongoing and well-documented debate.
(Weigold, 2001), the full scope of which can not be discussed here and was not a major focus of our research.

**Systematic challenges**

One systematic challenge is that the typical amount of time provided to prepare and the space allotted in newspapers for science stories is not adequate for good science journalism. Given these restrictions, reporters said they often find it difficult to contextualize science stories by (i) showing how a piece of research can have an affect on the reader’s life and (ii) providing adequate background information.

Science and health editors said they had to compete with other editors for space in their newspapers. In addition, time and financial restrictions prohibit reporters from meeting scientists face to face for interviews. With personal interviews, the character behind the scientist becomes more apparent, and could be worked into the story. Personal interviews would allow for lab visits, which would give journalists (and hence readers) a better sense of the research.

A number of reporters mentioned that they have encountered scientists who do not adequately understand how the news media work. For example, some scientists are not familiar with the embargo system whereby science journals provide reporters with research papers a few days before they are to be published in the journal. Journalists agree not to report on the studies until they appear in the journal. The delay in publication gives journalists time to interview the study authors, gather reaction from experts, and write their stories.

But still some scientists will apparently not talk to journalists before the actual publication date, or the journalists have to explain the embargo system before scientists will talk about unpublished research.

Many reporters stated that there are not enough markets in Canada for science news and that the media lack focus on science and science-related issues. The situation in Canada is quite different than in the US – there are very few magazines for science and not as many newspapers. There are fewer reporters in newsrooms and this trend makes it unlikely for newsrooms to have a full-time science reporter.

Finally, in the category of systematic challenges, we asked interviewees the question: ‘Do you feel pressured to create pop science?’ The majority of interviewees did not agree that this was a problem, but it was nonetheless a concern among many. ‘The hardest thing about my job is convincing the editors that these stories are interesting,’ said one journalist. ‘In order to do that I often feel that if I could, I have to jazz it up.’

Another reporter noted: ‘There could be a really interesting development in science that is not a cure for cancer, for example. And they want you to massage it into something where they can say “cure for cancer on horizon”.’

The fact that a story is popular with readers can cut both ways. Some editors may feel that enough has been written on the topic. Otherwise, popularity helps. ‘Something on genomics or climate change sells well these days,’ said a reporter.

One growing issue is a suspicion among some editors that scientists at universities are starting to hype their own research or promote themselves. ‘He’s [the editor] sometimes suspicious that they’re just being self-promotional, not newsworthy,’ said a reporter. ‘I think lots of papers struggle with that.’ At the same time, it is important to remember that this hype, if it is there, does not necessarily originate in the newsroom and may originate in the peer-reviewed research article itself (Bubela and Caulfield, 2004; Caulfield, 2004).

In busy under-resourced newsrooms, journalists may become ‘slaves to the journals’ as a convenient ‘pipeline’ of science news. Instead of spending time outside the newsroom reporting on other science stories, or reporting on local research, journalists write stories from largely non-local sources – news wires and journals located in other cities and other countries. As one reporter described it: ‘They are like a conveyor belt of ideas and it is hard to break away from that.’

Another challenge is the danger of passivity. Reporters become passive by being fed information rather than going out into the community to find local stories. This problem is tightly linked with the other systematic challenges discussed above, such as the reliance on the
embargo system. It may be that science reporters must rely passively on external sources for story ideas because they are not given the time or resources to pursue other sources. But several responses did indicate that there is passive behaviour among some of the journalists interviewed.

For example, many reporters mentioned that there is a lack of good public relations at Canadian universities. They said the American counterparts are much better at releasing information about the research going on at the institutions. Some also mentioned that it is hard to keep in touch with researchers at universities.

**Recommendations**

Given these many challenges, how do we improve science journalism? The reporters interviewed had a number of suggestions and recommendations.

As discussed above, many journalists thought that Canadian newsrooms need more reporters with training in both science and journalism. In addition to formal university training, nearly all journalists recommended more professional development and on-the-job training through workshops, seminars or fellowships. ‘There is relatively little spent on continuing education on their reporters and editors, said one reporter. ‘I think if there was more of that… it would be a good thing.’

Only one person of the 25 interviewed had attended a workshop within their newsroom. More encouragingly, six people had participated in an external workshop or fellowship. Only four said they regularly are able to attend conferences. Yet there are some exciting opportunities out there, such as the recent international competition for 15 journalist positions aboard the Canadian Coast Guard Ship Amundsen (World Federation of Science Journalists, 2008), but this needs to be a more regular occurrence.

In order for editors to better understand that science stories need more time to put together, require more space to report effectively and may require a larger budget, some journalists suggested that editors need training as well. ‘I’ve had editors tell me that I have to define words like cell,’ remarked a reporter.

Another respondent, who is now an editor, thought back to her days as a reporter when discussing the need for editor training:

‘I think we’re working in an era where a lot of editors are in a generation that’s not very scientifically literate, and they’re less scientifically literate than most of our readers are, especially younger readers,’ she says. ‘They may try to send you off in an angle that’s kind of ridiculous.’

Interviewees felt that adequate science training does not guarantee more or better science journalism because their stories must still work through a hierarchy of journalists and editors in newsrooms before they actually appear in press. Having an editor who does not know a lot about science is a ‘twin-edged sword’. One reporter commented: ‘The reader I’m writing for doesn’t know anything about science so if my editor can’t understand it that’s a good sign I haven’t explained it very well. The disadvantage is that they [editors] won’t catch mistakes.’

An example of this was one reporter who was writing about the legacy of Einstein. She says her editor’s response to the article was: ‘Writing-wise, it’s fine, but I cannot judge the validity of what you’re saying here because it’s just beyond me.’ The reporter added: ‘There certainly is a lack of editing skills in terms of asking critical questions about the science we’re writing about, and I don’t think that’s anyone’s fault… we’ve just pared down newsrooms.’

Our interviewees felt strongly that there is room for the media education of scientists. But, as one reporter noted, there is a risk of over-educating: ‘I also feel that some institutions have over-educated their scientists, taught them to speak on-message and to not veer away from it and it makes for very boring quotes,’ said the reporter.

At the same time, there were many journalists who said the Canadian scientific community, including universities, agencies and government labs, need to improve their public relations. As one reporter said: ‘If you want to find out what’s happening at the Canadian Space Agency, phone NASA.’
## Conclusion

This article provides an important snapshot of the basic working conditions of English-language print journalists in Canada. It provides evidence of serious practical issues that are limiting the development of quality science journalism in newsrooms – issues that are a combination of individual and systematic factors. The interviews show that, while some people believe that science journalism is distorted by unethical reporters prone to hype stories, there are, in fact, many other problems such as resources, freedom to pursue one’s own story ideas, scientific training and the relationship of reporters and editors.

Clearly, if we wish to improve science journalism, initiatives will have to address these concrete problems. Our research indicates where efforts at improvement might begin.

## References


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tal como lo vivió en redacciones de su patria y lo que significó el paso de ese oficio a la legitimación en la academia.

‘La creación posterior de las escuelas de periodismo fue una reacción escolástica contra el hecho cumplido de que el oficio carecía de respaldo académico. Ahora ya no son sólo para la prensa escrita sino para todos los medios inventados y por inventar.

Pero en su expansión se llevaron de calle hasta el nombre humilde que tuvo el oficio desde sus orígenes en el siglo XV, y ahora no se llama periodismo sino Ciencias de la Comunicación o Comunicación Social. El resultado, en general, no es alentador. Los muchachos que salen ilusionados de las academias, con la vida por delante, parecen desvinculados de la realidad y de sus problemas vitales, y prima un afán de protagonismo sobre la vocación y las aptitudes congénitas. Y en especial sobre las dos condiciones más importantes: la creatividad y la práctica.’

Las carreras de comunicación en nuestros países tienen dos raíces que no han alcanzado a conciliarse. De un lado la riquísima tradición del periodismo que reivindica García Márquez y de otro el viejo discurso universitario. Me tocó vivir de cerca lo sucedido en la década del 60. Una práctica en las redacciones, caracterizada por ‘cátedras ambulatorias y apasionadas de veinticuatro horas diarias’, en las cuales también yo tuve la dicha de formarme como comunicador, pasó a legitimarse en un espacio educativo penetrado por el extensionismo hacia afuera y hacia adentro; una preciosa rutina cotidiana de interacción, diálogo, tertulia, fue sometida a la estructura de cátedras y de clases expositivas (la escuela de transmisión, emisor activo receptor pasivo…) y al enclaustramiento, cuando lo más hermoso del oficio era su vocación por la gente, por los espacios abiertos, por la maravillosa aventura de involucrarse en la sociedad a la búsqueda de información. El viejo discurso universitario acabó por colonizar la enseñanza del oficio.

En un ámbito de estudios así colonizado, grandes temas sociales corren siempre el riesgo de quedar al margen de la mirada de la academia dedicada a formar estudiantes para nuestra práctica de comunicadores. Un análisis de las ofertas de cursos de periodismo científico en la Argentina ofrecidos de 1986 a 1999 mostró lo que puede suceder con esa colonización: la mayor parte de la oferta organizada por profesionales de carreras centreadas en cuestiones científicas, una mínima inscripción de comunicadores; argumentos para explicar el escaso interés:

‘Se desalientan por el rigor que impone la especialidad. En general, abandonan los cursos cuando se enfrentan con los ‘papers’ y otras publicaciones científicas, y con la necesidad de comprender en profundidad un tema de investigación.

Reconocen carecer de un marco de conocimientos científicos y tecnológicos de base para comprender cualquier problemática científica.

Reconocen su imposibilidad de acceder a las fuentes científicas primarias por falta de conocimientos de idiomas, principalmente el inglés.

Manifiestan un fuerte rechazo ideológico hacia la ciencia y la tecnología, que solo se conciben desde su rasgo de dominación…’

El problema de la comunicación de la ciencia no fue nunca comunicacional.

Pero la academia no está sola en este pobre impulso a salir del extensionismo hacia adentro y hacia afuera. Colaboran también los medios de comunicación social. García Márquez se refirió a ellos en su trabajo citado:

‘…las empresas se han empeñado a fondo en la competencia feroz de la modernización material y han dejado para después la formación de su infantería y los mecanismos de participación que fortalecían el espíritu profesional en el pasado. Las salas de redacción son laboratorios asépticos para navegantes solitarios, donde parece más fácil comunicarse con los fenómenos siderales que con el corazón de los lectores. La deshumanización es galopante.’
Esa asepsia de navegantes solitarios toca de lleno algo fundamental para la tarea de informar a la sociedad: la especialización. Las empresas, embarcadas en una incontenible ola de concentración monopólica, de gigantescos multimedia donde no se pone el sol, no invierten en sus profesionales (las excepciones cuentan como tales), no proponen programas para especializarse en temas como comunicación y educación, comunicación y medio ambiente, comunicación y ciencia...

El problema de la comunicación de la ciencia no fue nunca comunicacional. El problema es, por sobre todo, estructural.

De estructuras académicas, en primer lugar. En las universidades de la región donde se forman nuestros comunicadores, campea todavía con mucha fuerza el viejo discurso, basado en el extensionismo hacia adentro y hacia afuera. El extensionismo en las viejas cátedras donde priman las sesiones expositivas, en la comunicación interna, donde suele hablarse de interdisciplina desde una isla de conocimientos a otra, en lo poco que se comunica hacia la sociedad, porque nuestras instituciones producen mucho más de lo que comunican. El extensionismo que va en contra de todo lo que significa un aprendizaje de la comunicación rico en interacciones, en lenguaje, en contacto con la gente de dentro y de fuera de la institución.

De estructuras mediáticas. Con la creciente concentración, podemos hablar de países enteros en los cuales se van vaciando las instancias de comunicación local y regional, porque buena parte de lo publicado o difundido es producido en grandes centros urbanos. Y la comunicación científica, o pasa por lo local, por lo más cercano a la vida de la gente, o carece de sentido. A ello se suma la constante desprofesionalización de los comunicadores, debido a condiciones de trabajo en las cuales la calidad, la formación, la capacidad de investigar, no son siempre tenidas en cuenta. El personal especializado no suele formar parte de las prioridades de muchos medios.

Y también el problema es de concepción de la comunicación. Para nosotros, luego de una experiencia de más de 40 años en este campo, la comunicación científica se enmarca en un proyecto educativo. Y ello supone una concepción diferente a la que impulsan carreras orientadas hacia el éxito en la pantalla o hacia seducciones mercadológicas. Si son escasos los establecimientos que todavía continúan hablando de comunicación para el desarrollo, menos lo son aquellos que proponen alguna línea de comunicación educativa.

Iniciativas nuevas
¿Hay alternativas para salir de esas estructuras y de esas formas de concebir nuestra práctica? Sin duda. Las iniciativas desde instituciones universitarias, sobre todo desde carreras relacionadas con la salud, con la agricultura, con el trabajo social, entre otras, mantienen propuestas sostenidas de comunicación de la ciencia, de las cuales no están del todo ausente estudiantes y egresados de comunicación social. Y se abre de manera creciente un espacio que no podemos ignorar, relacionado con el entretenimiento, en el cual la televisión ocupa un lugar importante, a través de empresas como Discovery Channel, a lo que se añade la ya infinita oferta digital de la red de redes.

Con un grupo de queridos amigos optamos, hace ya largo tiempo, por sostener una iniciativa de comunicación educativa por fuera de la academia y de las empresas de comunicación, sin romper con ellas y en muchos casos colaborando con ellas. Me refiero al proyecto Radio Nederland Training Centre para América Latina, de 30 años de trabajo continuo en comunicación educativa en el contexto de la región.

Quienes compartimos hoy ese proyecto caracterizamos desde un comienzo nuestra tarea como comunicación y: comunicación y salud, comunicación y medio ambiente, comunicación rural, comunicación y niñez... ¿Qué hemos hecho? ¿Qué hacemos? Nos movemos en esos y otros frentes sobre la base de la capacitación, la investigación, la producción multimedia y la elaboración de materiales teóricos, metodológicos y prácticos para colaborar desde la comunicación en todas esas líneas de necesidades y demandas sociales. Con un sistema educativo con fuerte estructura de funcionamiento y de itinerarios para el aprendizaje, hemos trabajado fundamentalmente en el ámbito de la educación.
no formal, sin dejar de apoyar a instancias formales de todos los niveles del sistema.

En una oportunidad le preguntaron a García Márquez: ¿cuál es el primer deber de un escritor revolucionario? Y él contestó sin pesar: escribir bien.

La esencia de la tarea que desarrollamos en RNCT se expresa así: sabemos comunicar para educar en la tarea de producir, en la tarea de investigar y de desarrollar propuestas conceptuales, metodológicas y prácticas. Todo ello sin contenidos sería un contrasentido. Cada uno de los temas mencionados nos lleva tiempo de aprendizaje, que se logra mediante la incorporación a los proyectos de especialistas, en un juego permanente de interdisciplina.

Nuestra práctica se enmarca de lleno en la comunicación de la ciencia: a colegas que trabajan en el estado y en ONG, a gente de medios, a estudiantes y grupos de niños y jóvenes, a sectores desocupados que buscan alternativas para su vida cotidiana (en colaboración con UNESCO, por ejemplo, la colección ‘Aprender sin fronteras’ con materiales de estudio para construir casas y muebles de bambú, tejas de microconcreto, vajillas de barro...). Estamos convencidos de eso: comunicamos ciencia y tecnología a escala de las necesidades de diferentes sectores sociales.

Una labor ininterrumpida de tres décadas nos permitió consolidar una propuesta educativa con base teórica, metodológica y práctica, que hemos caracterizado con el concepto de mediación pedagógica⁴:

\[
\text{el tratamiento de contenidos, de las prácticas de aprendizaje y de las formas de comunicación, a fin de hacer posible el acto educativo, dentro del horizonte de una educación concebida como participación, creatividad, expresividad y relationalidad.}
\]

Nuestra tarea de comunicar ciencia ha ido siempre más allá del intento de divulgar ciencia. Jugamos con contenidos, con prácticas de aprendizaje y con la forma de los materiales propuestos (todo lo cual se articula ya sea en la producción de textos impresos, recursos multimedia, cursos on line y presenciales); no nos interesa sólo que determinados grupos conozcan conceptos válidos para su vida cotidiana, sino que hagan algo con ellos. Y eso significa un hacer con los demás.

La comunicación educativa o es cuestión de relación entre seres humanos, o no es nada. La comunicación de la ciencia cae en esa afirmación, en tanto que para nosotros su tarea fundamental es educar.

Propongo un ejemplo, a mi entender paradigmático en el tema que nos ocupa. Sobre la base de esa propuesta de mediación pedagógica, RNCT, en colaboración con UNICEF Centroamérica, produjo, valido y puso en circulación la Enciclopedia Familiar de la Salud, ‘Para la vida’, dirigida a gente de medios de comunicación, a personal encargado de promover la salud y a organizaciones no gubernamentales dispuestas a utilizar los materiales en trabajo grupal. Cada módulo fue organizado en tres discos compactos, el primero con una campaña de spots para radioemisoras, el segundo con charlas para transmisión radial de apoyo a grupos y el tercero una serie de radiodramas para uso en las radios y en las comunidades.

Los temas trabajados a lo largo de cinco años, por equipos interdisciplinarios de especialistas en salud y en comunicación, fueron:

- La adolescencia.
- Infecciones y cáncer en la mujer.
- La menopausia.
- Salud en la mujer embarazada.
- Lactancia materna.
- Mujer, salud y medio ambiente.
- El cólera.
- Agua y saneamiento.
- SIDA y enfermedades de transmisión sexual.
- El dengue.
- Diarreas infantiles.
- Niñez con discapacidades.
- Las vacunas.
- Enfermedades respiratorias.

Las preguntas básicas que se hacen quienes trabajan en comunicación educativa son: ¿Para quiénes hablamos? ¿Con quién hablamos?

Punto de partida: los otros, los interlocutores de cualquier intento de comunicar. Por ese motivo la Enciclopedia Familiar de la Salud se
basó en una rigurosa experiencia de validación en todos los países centroamericanos con personal especializado en cada uno de ellos y con grupos compuestos por representantes de diversas comunidades, con el propósito de escuchar y conocer sus puntos de vista y sus reflexiones sobre la forma de los materiales los contenidos y las prácticas de aprendizaje sugeridas.

Insistimos: estuvimos en esa experiencia, estamos, en el terreno de la comunicación educativa, no de la divulgación científica. Quienes integramos esta iniciativa, no somos ni extensionistas, ni divulgadores, somos comunicadores comprometidos con la educación. Desde allí mediamos ciencia a escala de las necesidades de los grupos a los cuales hemos hecho referencia.

¿Qué hacemos en la actualidad frente a la expansión de la cultura mediática y al crecimiento sin márgenes del universo digital? Lo mismo de hace treinta años, incorporando lo que nos hace falta de las innovaciones tecnológicas. Hemos entrado al terreno de e-Learning, con todo el bagaje teórico, metodológico y práctico atesorado por décadas. Nos encanta una expresión como la siguiente: ‘Dime qué hiciste con las anteriores tecnologías y te diré qué harás con las nuevas.’

No llegamos a este mundo nuevo con las manos vacías. Las traemos llenas de experiencias, de vidas y sueños compartidos, de aprendizajes, de intercambio de saberes, de reflexiones sobre textos y contextos, de culturas diversas, de conocimientos científicos adaptados, mediados, para la existencia cotidiana de la gente.

Lo fundamental para nosotros sigue siendo el desde dónde se intenta comunicar ciencia. Nuestra opción fue: desde la comunicación educativa. Por lo tanto, en nuestra mirada y nuestra experiencia, el sentido de aquella tarea es pedagógico en lo profundo.

Comunicamos ciencia para promover y acompañar aprendizajes dentro del horizonte de una educación concebida como participación, creatividad, expresividad y relationalidad. Y estos cuatro últimos términos significan para nosotros que la comunicación de la ciencia, o es cuestión de relación entre seres humanos para aprender unos de otros y para a

la comprensión y el enriquecimiento de sus existencias, o carece de sentido.

Notas

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Periodismo de ciencia

Miguel Ángel de Alba

De vida o muerte. El periodismo científico en América Latina se debate entre la vida y la muerte, sin siquiera haberse desarrollado. La de ciencia es la sección perdida, la hoja del periódico o el suplemento dedicado a los datos curiosos.

El periodismo de ciencia supone la publicación de noticias con una cierta periodicidad, que permitan al ciudadano entender información del entorno y tomar decisiones: cancelar un viaje a Indonesia por la gripe aviar, consumir alimentos transgénicos o usar la píldora del día siguiente. El fin del periodismo es dar un sentido a la información para actuar en consecuencia. Las actuales coberturas de ciencia son una recolección de datos con una serie de términos más o menos incomprensibles.

El periodismo de ciencia ha sido subvaluado por los medios y desdeñado por las escuelas de periodismo y de comunicación, que no ofrecen cursos especializados. Los jefes de redacción y de información, los editores, no consideran que sea importante y lo relegan. Hoy se vive una época de rápidos cambios y transformaciones de los conocimientos y de las innovaciones científico-técnicas pero, salvo contadas excepciones, esos avances no se reflejan en las noticias cotidianas.

Para que las informaciones sobre ciencia y tecnología formen parte de las noticias cotidianas, para que existan espacios de reflexión y análisis de políticas públicas sobre estos temas, hace falta más que buena voluntad. Es necesario que científicos, periodistas y entidades científicas trabajen unidos, superando recelos y desconfianzas mutuas.

El consumidor de los medios de comunicación permanece al margen de los adelantos y, más aún, de las políticas sobre ciencia y tecnología, absorbidas la mayoría de las veces por temas intrascendententes, por debates que no conducen a ninguna parte y por una manipulación de sus prioridades.

En un contexto global donde se acepta sin discusión que ‘el conocimiento es poder’, resulta lamentable escuchar los argumentos de que ‘la ciencia no es noticia’, ‘es aburrida’, ‘la ciencia no vende’ o ‘no le gusta a la gente’. La inconsistencia de tales argumentos ha quedado demostrada en innumerables ocasiones, por lo que los avances e investigaciones científicas y tecnológicas deberían ser parte de las noticias; los medios deberían informar ciencia en forma regular, esforzándose por hacerla accesible al entendimiento del público.

Divulgador o periodista, el dilema

La diferencia entre periodismo científico, periodismo de ciencia y divulgación de la ciencia supone un grande y grave dilema. No es lo mismo un divulgador que un periodista. De entrada, el periodismo se rige por las reglas del periodismo y trata de ciencia. La divulgación se rige por otras reglas, otros estilos y manejo de fuentes.

Un divulgador es un mediador entre el científico y los lectores. Si bien un periodista hace lo mismo, los temas que abordan y la profundidad con que lo hacen marcan la diferencia. La inmediatez no es básica para el divulgador - aunque en la ciencia lo más novedoso siempre es interesante- y sí para el periodista. Lo urgente mata a lo importante, por eso el periodismo de ciencia es poco y se hace más divulgación que periodismo.

A eso sume que el lector de periódicos no es experto en ciencia. El lector de textos de divulgación puede no ser experto pero tiene bagaje e interés. Hay curiosidad por leer de ciencia, por eso hay espacios y hasta los tienen en ‘hard news’. Los lectores mandan correos y las estadísticas de las páginas web dedicadas a ciencia muestran que la gente sí está interesada.

Un periodismo inexistente

¿Dónde quedó el periodismo de ciencia? En Latinoamérica no está presente, ni en la formación de los periodistas ni en los medios. Debe reconocerse que hay algunos espacios para
hacer el periodismo de ciencia pero los periodistas no están formados para aprovecharlos y los medios aprovechan esos espacios con temas más atractivos o que generan publicidad.

La ciencia atrae, siempre y cuando se sepa escribir de ella. Las noticias presentadas de forma parca, poco atractiva, lejana al público, no contribuyen a posicionar al periodismo de ciencia. La sección de ciencia en los medios se limita a reproducir las notas de las agencias, sin confrontar las fuentes ni contextualizarlas localmente. Los medios compran el paquete completo: notas, infografías, gráficos.

Este mal viene desde la formación del periodista. Las carreras de comunicación no incluyen la materia de periodismo de ciencia, aunque comienza a haber algunas materias optativas y diplomados. Hoy por hoy, quienes son capaces de hacer un buen periodismo de ciencia es porque lo han buscado por propio interés y con sus recursos.

Se requiere, entonces, una estrategia de dos vías. Una, en las universidades y centros de investigación, donde exista un comunicador especializado, que sepa ‘traducir’ o acercar la información científica al gran público, que asesore a los científicos que generan el conocimiento para que lo sepan transmitir apropiadamente y facilite las relaciones de éstos con la prensa para que el mensaje sea transmitido con claridad y el receptor lo capte en su esencia.

Por la otra vía, es necesario que haya periodistas realmente interesados en cubrir este tipo de noticias... Y no sólo reporteros, sino editores, el punto neurálgico de todo medio.

Surge aquí una primera consideración: la necesidad de tener comunicadores con una sólida formación profesional que les permita ‘traducir’ los ‘papers’ de una investigación o análisis científico a un lenguaje común y fácilmente entendible por públicos con escasa instrucción.

Del lado de la comunidad científica, se requiere una mejor comprensión del trabajo del comunicador, diferenciando sus facetas como reportero, editor, comunicador, asesor; conocer su metodología de trabajo, opuesta a la del científico.

Para el periodista la rapidez es la prioridad; la primicia su arma y la sencillez su norma. Y debe entender que el periodista es un profesional tratando de hacer su trabajo lo mejor posible y no un enemigo encubierto a la caza de un desliz para ponerlo en evidencia ante toda la comunidad científica. No es un científico, sino un profesional de la comunicación. Como tal, no está obligado a conocer todos los temas, aunque sí a documentarse previamente y a tener una cultura general consistente.

Pero hay un punto que muchas veces se soslaya, sobre todo desde el lado de la ciencia: el papel que juegan o pueden cumplir las entidades científicas para coadyuvar a la difusión de investigaciones, proyectos, políticas; en la comunicación pública de la ciencia.

Es indudable que muchas entidades, principalmente del sector público, no tienen una estrategia para vincularse eficazmente con los medios de comunicación; y más aún, en muchas pareciera existir una estrategia de cerrazón y mantenimiento de la prensa lo más lejos posible de las investigaciones que realizan.

El periodista de ciencia

El periodista de ciencia es un factor primordial para la comunicación eficiente del conocimiento científico. Se requieren profesionales capacitados y familiarizados con el lenguaje, capaces de acercar el conocimiento a diversos públicos, conservando la rigurosidad y veracidad del trabajo científico e incorporando la sencillez y amabilidad características del periodismo a diversos formatos, en un reto de creatividad, sensibilidad y profesionalismo por parte de los periodistas.

Al igual que en otros temas, el periodismo científico no debe limitarse a ser una caja de resonancia de los adelantos o descubrimientos científicos; debe fomentar espacios de reflexión, corrientes de opinión y debate en torno a los temas de ciencia y tecnología, sus aplicaciones y vinculaciones con la realidad.

El periodista debe reconocer sus limitaciones; si no entiende la explicación científica, debe pedir que se la expliquen nuevamente de forma más sencilla y las veces que sean necesarias hasta asegurarse que comprendió los conceptos.

A pesar de que en la actualidad se acepta y critica la invisibilidad del periodismo en cien-
cia, algunos acontecimientos han empujado al periodista a verlo y reportarlo... E incluso los científicos han salido a gritar su verdad, como en el caso del calentamiento global y el cambio climático.

El del Panel Intergubernamental para el Cambio Climático, creado por la Organización de las Naciones Unidas, es un caso excepcional, que trastocó la agenda de los medios y llevó a la ciencia a los titulares, aunque muchos siguen sin entender qué está pasando, porque la información se les ha dado cruda, sin traducir.

Además, ha habido algunos – políticos, organizaciones no gubernamentales, empresas y activistas – que han aprovechado esta ‘burbuja’ informativa para hacer propaganda.

Los periodistas han estado ahí pero, por su escasa preparación, se limitan a ser cajas de resonancia. Paulatinamente se han dado cuenta que deben estar mejor formados y los medios tendrán que abrir espacios. Para que el periodismo de ciencia deje de ser un copiado de noticias de agencia, se necesita más preparación, más tiempo y capacitaciones constantes. Los medios deben comprometerse a profesionalizar a sus periodistas, a darles tiempo, herramientas de preparación.

Y este aspecto deben visualizarlo también los investigadores. Deben salir y hablar con el periodista, invitándole a conocer, a prepararse, a investigar. Pero periodista e investigador deben estar conscientes de que de estos encuentros no saldrá la nota principal del medio. El camino es largo.

La responsabilidad del periodismo
La publicación en una revista especializada es parte fundamental de los criterios de calidad para juzgar un desarrollo científico. Sin embargo, esa fuente de información ha sido cuestionada porque no está libre de los conflictos de intereses.

En el área biomédica existe bastante preocupación por estas cuestiones, ya que además de recibir dinero por publicidad, se benefician por publicar grandes ensayos clínicos: estos trabajos contribuyen a aumentar la cantidad de lectores, a la promoción de los contenidos de la publicación, y a que los laboratorios compren un gran número de reimpresiones.

El periodismo científico parece todavía poco consciente del nuevo escenario. Los conflictos de intereses, las controversias científicas, las investigaciones parciales o no concluyentes y, también, la investigación reñida con la ética, tienen una presencia mucho menor en el perfil de la agenda periodística. Lo fundamental es comprender que, además de ser fuente de información directa del público, el periodismo especializado es también fuente de los médicos, de las autoridades regulatorias y hasta de los propios expertos.

A la escasa conciencia del problema de los conflictos de interés en las investigaciones biomédicas, se agrega que los propios periodistas son utilizados por las empresas farmacéuticas en sus tácticas promocionales. En la IV Conferencia Mundial de Periodistas Científicos (4th WCSJ), en octubre de 2004 en Montreal, se pidió el establecimiento de un código de conducta sobre estos conflictos de interés del periodismo especializado.

Son muchas las actividades de mercadotecnia, prensa y relaciones públicas con las que las empresas farmacéuticas buscan influir sobre los periodistas. Entre estas actividades se cuentan: *Gacetillas* (publicidad con aspecto de nota periodística y suplementos especiales): las agencias de publicidad pueden contratar espacios comerciales en medios y publicar piezas publicitarias con formato de nota. También conocidos como publinotas o publirreportajes, suelen ser diferenciadas de las páginas de contenido editorial con una breve leyenda, del tipo ‘Espacio Comercial’, ‘Inserción Pagada’, ‘IP’, enmarcándolo o presentándolo como un cintillo muy discreto en el margen superior de la página. También es posible contratar un suplemento especial completo, que se distingue de la misma forma. Cada medio tiene su propia política para contratar estos espacios, determinar qué actor provee los contenidos, y diferenciar a través de la diagramación estas secciones que son, simplemente, comerciales. *Campañas de prensa*, que consisten en ofrecer información en la forma de carpetas muy completas (dossier) en relación con la próxima o reciente aprobación de un medicamento o de un procedimiento terapéutico. Estas carpetas suelen incluir un boletín de prensa con la infor-
mación necesaria para escribir las notas y hasta un esquema predeterminado -es decir, la mejor manera de presentar la información-, más el o los “papers” involucrados, declaraciones de expertos y materiales que facilitan el trabajo del periodista. ¡Ah! Por supuesto que se pueden concertar entrevistas con los expertos.

Viajes. Como parte de las campañas de prensa, pueden incluirse viajes a los congresos donde se hacen las presentaciones; a simposios o jornadas donde se habla específicamente del medicamento o tratamiento en cuestión.

Concursos periodísticos: Con esta actividad se busca impactar en varios niveles de las redacciones periodísticas, conformando una estrategia que apela a la vanidad de los que concurren, los jurados y los medios en que trabajan jurados y concursantes.

El pequeño tamaño y el bajo presupuesto de las secciones de ciencia en las redacciones –en los medios que tienen secciones, que no son todos–, aumenta el espacio de influencia de las agencias y oficinas de prensa y relaciones públicas. Ante este tipo de ofertas, editores y periodistas elaboraron normas formales e informales para mantener algún tipo de ecuanimidad y balance, que pueden estar contenidas en sus manuales de estilo o, simplemente, sustentadas en prácticas de rutina.

Un criterio utilizado habitualmente con respecto a los viajes, por ejemplo, es que no se acepten invitaciones para cubrir temas que no se consideren rigurosos y relevantes. Sin embargo, que se cumpla con este estándar no alcanza para superar el malentendido en el que pueden caer los lectores. Se trata de una situación compleja, que no admite soluciones apresuradas. Ante esto, hay que recordar que en Latinoamérica el periodismo es, en muchos casos, el último recurso para poner en evidencia los intereses políticos y económicos que buscan influir sobre la opinión pública.

Las asociaciones
El futuro hace necesario fortalecer las asociaciones de periodistas de ciencia a nivel latinoamericano, las cuales deben tener objetivos que apunten a generar espacios para la divulgación de la ciencia, por ejemplo, gestionando o facilitando la búsqueda de recursos para el financiamiento de proyectos tanto a nivel nacional como internacional, en circunstancias en que claramente no hay apoyo directo para el surgimiento de medios que tengan una finalidad social y cultural, en lugar de meramente comercial.

Un punto importante que deben abordar las asociaciones de periodistas científicos es la capacitación para los profesionales que deseen dedicarse a estos temas. Las asociaciones no pueden ser elementos meramente decorativos o instancias utilizadas por determinados personajes para su figuración personal.

En su esencia debe ponderar que la unión de los diferentes actores que participan en la divulgación científica estén comunicados generando instancias de reunión entre periodistas y científicos. Éste vínculo esencial permitirá que las instituciones científicas, los laboratorios y los estudios en general estén a disposición de los periodistas y, al mismo tiempo, al alcance de la población que los lee.

En la medida en que comiencen a surgir más periodistas especializados en ciencia, los medios tendrán a la mano más profesionales capacitados, que escribirán mejor y harán un trabajo riguroso. Esto permitirá que los científicos tengan más confianza en los medios y en los periodistas que se dedican a la divulgación de la ciencia y, sin duda, se crearía un círculo vicioso positivo en torno a nuestro quehacer periodístico.

Las Asociaciones de periodistas y las instituciones científicas deben hacer acuerdos de cooperación mutua de capacitación. Por un lado, los profesionales de la comunicación necesitan capacitación en temas de ciencia y, por otro, los científicos necesitan herramientas para comunicarse mejor y divulgar su conocimiento. ■

Miguel Ángel de Alba, Mexicano, es periodista de investigación desde 1972, fuertemente vinculado con los temas de ciencia, como salud, medioambiente y desarrollo. Fundador y presidente de la Red Mexicana de Periodistas Ambientales, A. C.
Information technologies and the life-sciences

Pradip N. Thomas

The Life Science industry has adopted a metaphor and model of ‘information’ as if it were entirely natural. In the parlance of popular science, living beings are nothing but sophisticated computers and, if we are to believe the pundits, humans will soon have to compete with cyborgs and, as part of the great leap forward, reckon with the novelty of carry-around, detachable electronic brains.

Robert B. Shapiro, the ex-CEO of Monsanto is quoted as saying, ‘Biotech is a subset of information technology… It is a way of encoding information in nucleic acid as opposed to encoding it in charged silicon’ (Bowring, 2003). This example of information determinism may be problematic from philosophical, ethical, and theological perspectives, although it does signify the real role played by cybernetics and information flow, and information processing models derived from cybernetics.

When James Watson and Bernard Crick announced the discovery of the DNA double helix in 1960, they used the language of cybernetics to describe their find – the gene, for instance, was described as a code that was programmed and could be deciphered. The gene, in other words, was described in terms of an ‘information system’ that functioned in relation to all the other genes that made up the human genome.

This way of conceptualising biology on the basis of principles drawn from cybernetics was first mooted by Norbert Weiner, who had, as early as 1948, drawn parallels between machines and organisms ‘both… used on-off switches in their information processing (neural in one case, electromechanical on the other) and both used “feedback loops” – circular processes beginning in the nervous system, emerging as output through muscular activity, and cycling back into the nervous system through sensory input – to interact with their environments’(1996: 309).

The physicist Erwin Schrödinger was the first to suggest that the gene was an information carrier and that the physical structure of the gene corresponded to a hereditary code script (Reimer & Fuellen: 1). This determinist, mechanistic view of an information-centred understanding of life and of humans as information processing systems is all too common place and is illustrated in the following quotation from the contemporary science writer Tom Siegfried:

‘In a way thanks to DNA and the genetic code, the life sciences adopted the super paradigm of information even before the computer introduced it to the physical sciences. Information and life were a natural fit. After all, science’s understanding of life is based on Darwinian evolution by natural selection, and selection is, in essence, information processing. It’s all about input and output. In evolution, the environment processes the information presented to it in the form of organisms and produces output – some dead organisms, some live organisms. The information in the live ones survives to make more organisms. DNA, therefore, does not just store information about an individual. DNA is really a record of the selection that has gone on in evolution... DNA is the Herodotus of molecules. For chronicling the history of life, it beats stylus and papyrus, quill and parchment, typewriters and paper, or keyboards and floppy disks’ (Siegfried, 2000:100).

Metaphors borrowed from computing were used to understand life forms as biochemical
machines whose efficiency coefficients could be raised via precise genetic reprogramming. Sheldon Krimsky (1991: 5-6) has made note of the centrality of cybernetic language to the understanding of modern biology:

‘The modern conception of the cell is based on a cybernetic materialism involving information transfer, energy, feedback signals, primary and secondary matter... replication, and reproduction... In the language of the new cybernetic materialism of molecular genetics, genes or DNA are referred to as “bits of information” or the carriers of the “code” for the production of proteins... DNA is said to be unzipped... Genomes are spoken of as being mapped, DNA as being read or sequenced. The term “gene machine” has been introduced to describe devices that synthesize specified stretches of DNA automatically. The frequently used expression “reprogramming micro-organisms” exploits the language of computers to characterise human-induced changes in the DNA “code”.

The brain too is today likened to a bio computer that can be reprogrammed with the right commands leading to all sorts of behavioural changes. Jeremy Rifkin describes the increasing interfaces between computing and biotechnology that are a result of ‘real’ correspondences:

‘It is not only the computer’s rules of engagement that make it a suitable communication tool to manage dynamic living systems. The very “operational language” of the computer is now being grafted onto biological systems. It is this common language that is creating a seamless web between the information and life sciences and making possible the joining together of computers and genes into a single, powerful, technology revolution’ (Rifkin, 1998: 181).

The computer, however, is not only used for the storage, analysis and retrieval of data, for purely functional purposes. It has also become the means for modelling, design and simulation, imaging products and processes, and reprogramming life itself. The databases related to the Human Genome Project consist of informational translations of physical data that have been identified through powerful computers based on parallel processing. As Fukuyama (2002:74) has observed:

‘The Human Genome Project would not have been possible without parallel advances in the information technology required to record, catalogue, search and analyse the billions of bases making up human DNA. The merger of biology and information technology has led to the emergence of a new field, known as bioinformatics. What will be possible in the future will depend heavily on the ability of computers to interpret the mind-boggling amounts of data generated by genomics and proteomics and to build reliable models of phenomena such as protein folding’ (see Thomas, 2003).

‘Bioinformatics’ as Goodman (2002:68) describes it ‘includes genomics... genomic sequencing and mapping, genome annotation, and comparisons of multiple genomes. Bioinformatics is also essential in transcriptomics – the study of transcribed sequences... It is also crucial in proteomics for the analysis of protein sequences... For the study of protein abundance, the determination of protein structure, ...the analysis of protein-protein interactions and molecular pathways, ...in gene regulation. It also plays a vital role in genetics.... and is also essential in the studies of evolution and phylogeny.’

The **common language** of the digital and **increasing convergences**

One can argue that it is the language of the digital that has facilitated the convergence of technologies and that has brought together once separate, stand alone media technologies and also enabled emerging synergies between nanotechnology, biotechnology, information technology and the cognitive sciences. Sandra Braman has argued that biotechnology and information technology are examples of meta-technologies that differ from earlier technologies in terms of their complexity, speed, scala-
‘Meta-technologies involve many processing steps and there is greater flexibility in the number of steps and the sequence in which they are undertaken. They can process an ever expanding range of types of inputs and can produce an essentially infinite range of outputs... Meta-technologies are always informational, and the internet is a premier example of a meta-technology used for communication purposes. With recombinant DNA, biotechnology entered the meta-technology realm. The change in human capacity enabled by meta-technologies is both qualitative and quantitative’ (Braman, 2004: 5).

Irrespective of whether we agree with Braman’s interpretation or not, there is no denying the fact that there has been an accentuation of commodification in the wake of what Robert Boyle has called the ‘increasing homologisation of forms of information’, in other words the analogous nature of these forms and the fact that it does not make sense anymore to distinguish between electronic information and genetic information, the fact that one can store the human genome on a computer disk and that in the ‘informational economy’, the notion of the ‘medium as the message’ has ‘become irrelevant’.

Dan Schiller, who foresaw in the mid-1980s, the need for critical political economists of communications to theorise information in terms of the big picture and not as discrete technologies, alerts us to impending extensive and intensive commodifications of information:

‘The transition to information capitalism does not depend on or equate with a narrow section of the media-based products. It is co-extensive with a socio-economic metamorphosis of information across a great (and still undetermined) range. As commodity relations are imposed on previously overlooked spheres of production, new forms of genetic and biochemical information acquire an unanticipated equivalence with other, more familiar, genres. Agribusiness, pharmaceutical giants, energy and chemical corporations, and medical companies – all essentially concerned with diverse genetic and bio-chemical information streams – are in the midst of a continuing technological transformation of the means of information production that is every bit as relevant to our understanding of the parallel trend “convergence” between television, computing and telecommunications’ (Schiller, 2007: 25).

It is worth reiterating that IT plays a significant role today in the new sciences, particularly in an area such as bioinformatics that is based on the integration between biology, computer science and IT and that has taken off in the context of the many genome projects, data banks and the need for computational assistance that is required to make sense of nucleic acids and protein sequences.

At the same time software that was originally designed, for example, to analyse microbial evolution is being used to examine variations in versions of Chaucer’s Canterbury tales. Crossovers and correspondences reinforce the point that information synergies are a natural aspect of what can be called the ‘informational mode of production’.

The informationalisation of life processes
One of the major issues that needs to be addressed in this brave new world in the making is the ownership of biological information, and, in particular, human biological information. There are many examples from around the world of rampant bio-piracy the double standards adopted – global harmonisation of measures to curb the piracy of cultural goods as opposed to the rather lax approach to dealing with global bio-piracy – are profoundly disturbing. There is, however, a key issue here. When an intangible – ‘information’ as means and ends – becomes the de facto ’real’ version of a tangible product – animal tissue, genes, cell lines – what is really happening and how should we deal with it?

We need to remember that information and digital information are inherently non-rivalrous resources. As economists would put it, con-
sumption/reading of this article does not curb, limit or take away from another person’s consumption of the very same product. In this sense it can potentially be read, circulated and accessed by all within the entire online world irrespective of boundaries, status and ability to pay. An informational product is unlike biscuits and toothpaste that are products of industrial manufacture based on tangible raw materials that need either to be grown in the field or manufactured in a lab or factory. Non-informational goods generally tend to be finite.

In a digital world however, the copy is an intrinsic feature of the digital. This is the reason why, despite the best efforts of the Business Software Alliance and the Motion Pictures Association of America to popularise new encryption technologies, copying remains supreme. In other words, the information revolution really has opened up a Pandora’s Box full of issues related to information as a product, information and the copy, the very nature of information itself.

At the University of Queensland, Australia, we have begun to move away from teaching Journalism to teaching Citizens’ Journalism precisely because text messaging in the Philippines and online news services like OhMyNews in South Korea, along with the plethora of social networking sites online, have begun to show the world that access to and use of information in the manufacture of public opinion, a process hitherto controlled by dominant media, can now be also done by ordinary people.

Kaushik Sundar Rajan (2002: 278), in an excellent article ‘Banking on Biologicals: Commodifyng Global Circulations of Human Genetic Material’ that is available on the Sarai website (http://www.sarai.net/), has emphasised three points. That it is necessary for us firstly to distinguish between the social lives of human biologicals and human biological information despite correspondences; secondly to understand the commodification processes that involve wet-lab experiments and data-bases owned by MNCs that turn information into knowledge:

‘The abstraction of information away from the material biological has a very specific function in making therapeutically relevant knowledge. This is also why it is so easy to intuitively conceptualise the generation of information as “inventive”, and therefore ownable.’

Thirdly, we have to understand that information determinism – for example the notion that the gene is a code – suits the MNCs as it facilitates the ownership of and enclosures around information as knowledge. In other words, the need for us to understand ‘Information’ on its own right and the ‘Information-Knowledge-Thing’ continuum and its links to industry and commodification processes.

In this respect, perhaps the ecumenical movement, if it has not already began the process, ought to consider the making of a global movement related to open-access data-bases related to human biological information. After all genetic information is also potentially a non-rivalrous resource.

Knowledge enclosures and the new political economy of information

Most of my own work has been in the area of mapping the changing nature of the political economy of communications – the players, issues related to media governance, trade in audio-visual products, intellectual property, commodification of cultural products including religious cultural products. I have argued elsewhere (Thomas, 2003) that for those of us whose parameters for the study of a critical political economy of communications were mainly based on an interrogation of the politics, structures, processes, systems and rules pertaining to the extension, maintenance and dominance of the cultural industries – there is an absolute need to address not only the traditional structures of cultural and economic dominance in our globalised world but also the new sources of global cultural, economic and political power and the instruments being used to reinforce this power.

In other words, the lessons of the AOL-Time Warner merger and the decline of that partnership may, in the long run, be of less sig-
nificance than IBM’s and more recently Microsoft’s massive investments in the life sciences.

It can be argued that the more far-reaching developments relate to the new synergies being formed between the IT and biotech sectors. The bioinformatics market that is devoted to making sense of the sequence, structure, and function of genes and proteins is an industry worth a projected US$ 6.9 billion in 2007. The IT market in the life sciences was estimated to be in the region of $30 billion in 2004. A fact a report in the Financial Times (2001: II) states that the 140 collaborations between the IT and Life Sciences industries that year covered: ‘…bioinformatics, DNA microarrays (gene chips), data analysis and visualisation, chemical and biological library integration, detection of human genetic variation (SNPs), microfluidics and in silico research (modelling drug effects in computers)’.

There are a range of bioinformatics companies catering to a variety of interests – custom-built software and consulting services and web businesses and tools and services aimed at pharmaceutical and biotechnology companies. Proteomics – the study of the interaction between genes, proteins and disease – is highly computer dependent given the vast quantities of data that need to be generated ‘computing power measured in teraflops, or trillions of operations per second’ (2001:1).

Proteomic alliances include Myriad Genetics Inc. with Hitachi Ltd. and Oracle Corp., IBM and MDS Proteomics and Oxford Glycosciences Plcs venture with the telecoms equipment group Marconi Plc. Key players of IT fame involved in the life sciences include Compaq, Hewlett Packard, Motorola, Sun, Fujitsu, Hitachi and the leader IBM. IBM, for instance, has begun to invest heavily in the life sciences through making direct equity investments in companies such as MDS Proteomics (Canada), Devgen (Belgium) and Structural Bioinformatics (USA) (2001: II).

Owning more than half of the world’s top 500 super computers, IBM has a head start on companies involved in a race to build a special super computer ‘Big Blue’ to analyse the protein structure. IBM’s Deep Computing Institute has a Bioinformatics and Pattern Discovery Group which uses supercomputing to solve problems in molecular biology. Among IBM’s many patented algorithms are Teiresias and MUSCA that are used for gene-pattern discovery and alignment and SPLASH that is used for pattern discovery. IBM is also involved in biotechnology, genomics, e-health, and is in partnership with leading pharma and agri-science companies and is involved in the Interoperable Infrastructure Consortium.

Microsoft’s co-founder Paul Allen has invested $100 million in a project ‘that will unravel the genetics of the mammalian brain’ (Dalton: 2003, 226). Microsoft’s Bill Gates and Paul Allen have invested in a leading biotechnology company aptly named Darwin Molecular that is involved in gene sequencing (1994). Similarly, Sun Microsystems has launched a number of Life Sciences oriented projects.

As convergence results in applications based on interlocking correspondences between areas that previously used to be autonomous – chemistry, modelling, biotechnology, telecommunications, bio-medical technologies, computing, among other areas, IP issues have become a lot more complex. A single application can be governed by a range of patents which is why it makes sense for the major players in this area to build up a formidable, inter-sectoral IP presence. In fact the patenting of research tools including screening systems, expressed sequence tags (ESTs), techniques related to DNA sequencing among other tools further strengthens control over the downstream research of companies involved in bioinformatics.

IBM’s leading edge in computer hardware design and innovation is built on an aggressive patents regime. IBM’s extensive IT-based investments in the life sciences inclusive of research centres, discovery and development, pharmacogenomics, solutions, manufacturing, sales and marketing services worth billions of dollars is founded on their position as the leading MNC involved in building enclosures around knowledge in the USA.

‘In 2005, IBM received 2,974 U.S. patents from the USPTO. This is the thirteenth consecutive year that IBM has received more US
patents than any other company in the world. In addition to delivering these innovations through its products and services, IBM maintains an active patent and technology licensing program' (http://www.ibm.com/ibm/licensing/).

In other words, it is imperative that we interrogate the source of property power in the knowledge economy – the structures, systems and instruments of intellectual property that have become the means of maintaining corporate dominance in the new economy.

IT, on the one hand and at a very mundane level, functions as a transport mechanism for carrying information like roads carry vehicles and pipes carry water. But the analogy ends there because unlike roads and pipes, IT is not just about flows, it is also the basis by which ideas and content are turned into products – intellectual property – and therefore into commercially valuable products. The universality of code enables networking, convergence, translations, blurrings – and it is this quality and interfunctionality of code that is at the very core of the vast changes taking place in the networked societies in which we live.

Questions related to ethics
How do we begin to grapple with the many ethical implications arising from the gene (nature) and practice (culture) becoming implicated within a single ‘information continuum’, as societies and the many distinct institutions and processes that define society become plugged into a global information grid and in turn is shaped by the logic of information?

We are dealing with hegemonic technologies (see Thomas, 2006). These technologies are hegemonic because of their intimacy. Every aspect of our lives – reproduction, consumption, the zones and environments that we inhabit, work in, culture and nature, health and food security, governance and security – will, sooner rather than later, be based on and tied to this informational mode of production.

There have been innumerable discussions related to bioethics and the need to protect some core areas related to life from being turned into commodities. Michael Walzer (1984) has used the concept of ‘blocked exchanges’ to refer to those items that should not be invested with economic value, that ought not be monetised within a capitalist society. These refer to ‘…categories of items about which society has determined that distribution should be on a non-economic basis.’.

The ‘list of fourteen such “blocked exchanges”’ or things which cannot be bought and sold includes human beings; political power and influence; criminal justice; freedom of speech, press, religion, …’ How can one translate/operationalise Walzer’s concepts into prescriptions for life? How does one place brakes on the ceaseless commodifications of life? How do we advocate life-affirming technologies? How can the great diversity and wealth of meta technologies be used to make a difference to the lives of ordinary people? And how do we design a future in which these technologies are subordinated to the needs and priorities of life, humanity and freedom?

Last but not least, what is needed to extend the world’s global commons, including knowledge in the public domain? A core issue that is enmeshed with empowerment is that of the Commons – peoples’ access to and use of the memories and skills, the cosmologies and technologies, the spaces and places that help keep alive other traditions of science and technology, other ways of life. The Commons also includes the space for publicly accessible gene banks. ■

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The tyranny of science

Frank Furedi

Scientists at one of Rome’s most prestigious universities, La Sapienza, protested against a planned visit by Pope Benedict XVI on 17 January 2008. The Pope was officially due to open the university’s academic year, but some of the professors of science at the university were not happy.

In a letter to the university’s rector, 67 lecturers and professors said it would be ‘incongruous’ for the Pope to visit given his earlier comments on Galileo. While he was still Cardinal Joseph Ratzinger, the Pope said that the Catholic Church’s trial of the great Italian astronomer was ‘reasonable and just’ (Parma, 15 March 1990). So, university staff wanted to block a visit by a religious leader in the name of defending scientific truth and integrity.1

This is a striking story. Today, it frequently seems as if scientific authority is replacing religious and moral authority, and in the process being transformed into a dogma. At first sight, it appears that science has the last word on all the important questions of our time. Science is no longer confined to the laboratory. Parents are advised to adopt this or that child-rearing technique on the grounds that ‘the research’ has shown what is best for kids. Scientific studies are frequently used to instruct people on how to conduct their relationships and family life, and on what food they should eat, how much alcohol they should drink, how frequently they can expose their skin to the sun, and even how they should have sex. Virtually every aspect of human life is discussed in scientific terms, and justified with reference to a piece of research or by appealing to the judgment of experts.

Of course, as in the past, science still invites criticism and scepticism. Indeed, its authority is

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continually scrutinised and subjected to a deeply moralistic anti-scientific critique. Scientific experimentation and innovation – for example, in the areas of stem cell research, cloning and genetic modification – are stigmatised as ‘immoral’ and ‘dangerous’.

Moreover, many wonder if there are hidden agendas or interests behind scientific studies, especially those that are used to justify moral or political campaigns. Many people understand that last year’s scientific advice is often contradicted by new findings further down the line. Others are anxious about the rapid pace of scientific advance: they worry about the potential for destruction that might be unleashed by developments in genetic manipulation or nanotechnology.

Many greens blame science and technology for contributing to environmental degradation and to global warming. Indeed, one of the puzzling features of our time is this: the relentless expansion of the authority of science is paralleled by a sense of distrust about science.

The attitude of Western society towards science is intensely contradictory. In the absence of political vision and direction, society continually hides behind scientific authority – but at the same time it does not quite believe that science has the answers, and it worries about the potential rotten fruits of scientific discovery.

Yet whatever misgivings people have about science, its authority is unrivalled in the current period. The formidable influence of scientific authority can be seen in the way that environmentalists now rely on science to back up their arguments. Not long ago, in the 1970s and 80s, leading environmentalists insisted that science was undemocratic, that it was responsible for many of the problems facing the planet. Now, in public at least, their hostility towards science has given way to their embrace and endorsement of science.

Today, the environmental lobby depends on the legitimation provided by scientific evidence and expertise. In their public performances, environmentalists frequently use the science in a dogmatic fashion. ‘The scientists have spoken’, says one British-based campaign group, in an updated version of the religious phrase: ‘This is the Word of the Lord.’ ‘This is what the science says we must do’, many greens claim, before adding that the debate about global warming is ‘finished’.

Also in January 2008, David King, the former chief scientific adviser to the UK government, caused a stink by criticising extreme green ‘Luddites’ who are ‘hurting’ the environmentalist cause. Yet when science is politicised, as it has been under the likes of King, who once claimed that ‘the science shows’ that global warming is a bigger threat than terrorism, then it can quite quickly and inexorably be converted into dogma, superstition and prejudice. It is the broader politicisation of science that nurtures today’s dogmatic green outlook.

Today, religion and political ideologies no longer inspire significant sections of the public. Politicians find it difficult to justify their work and outlook in the vocabulary of morality. In the Anglo-American world, officials now promote policies on the grounds that they are ‘evidence based’ rather than because they are ‘right’ or ‘good’. In policymaking circles, the language of ‘right’ and ‘wrong’ has been displaced by the phrase: ‘The research shows…’

Moral judgments are often edged out even from the most sensitive areas of life. For example, experts use the language of medicine rather than morality to tell young teenagers that having sex is not so much ‘bad’ as bad for their emotional health. So pervasive is the crisis of belief and morality that even religious institutions are affected by it. Fundamentalists no longer simply rely on Biblical texts to affirm their belief in the Creation; today, the invention of ‘creation science’ by Christian fundamentalists in the US is symptomatic of the trend to supplement traditional belief with scientific authority.

Likewise, the anti-abortion movement no longer restricts itself to morally denouncing a medical procedure which they consider to be evil. Now they increasingly rely on scientific and technical expertise to advance their cause. They argue that having an abortion is bad for a woman’s health and is likely to cause post-abortion trauma. The question ‘when does life begin?’ was once a moral issue, bound up in competing views of morality, rights and human consciousness. Today anti-abortion activists
appeal to medical research and use a narrowly scientific definition of ‘when life begins’: they argue that because ‘the evidence’ shows that fetuses can survive at 24 weeks, then this demonstrates the unquestionable beginning to life.3

Despite its formidable intellectual powers, science can only provide a provisional solution to the contemporary crisis of belief. Historically, science emerged through a struggle with religious dogma. A belief in the power of science to discover how the world works should not be taken to mean that science itself is a belief. On the contrary, science depends on an open-ended orientation towards experimentation and the testing of ideas.

Indeed, science is an inherently sceptical enterprise, since it respects no authority other than evidence. That is why Britain’s oldest and most respectable scientific institution, the Royal Society, was founded on the motto: ‘On the word of no one.’ The message conveyed in this motto is clear: knowledge about the material world should be based on evidence rather than authority.

The critical spirit embodied in that motto is frequently violated today by the growing tendency to treat science as a belief that provides an unquestionable account of the Truth. Indeed, it is striking that the Royal Society recently dropped the phrase ‘On the word of no one’ from its website, while its former president, Lord May, prefers to use the motto ‘Respect the facts’ these days.4 Many religious leaders, politicians and environmentalists have little interest in engaging in the voyage of discovery through scientific experimentation. Instead they often appear to be in the business of politicising science, or more accurately, moralising it. For example, Al Gore has claimed that scientific evidence offers (inconvenient) Truths.

Such science has more in common with the art of divination than the process of experimentation. That is why science is said to have a fixed and unyielding, and thus unquestionable, quality. Frequently, Gore and others will prefix the term science with the definite article, ‘the’. So Sir David Read, vice-president of the Royal Society, recently said: ‘The science very clearly points towards the need for us all – nations, businesses and individuals – to do as much as possible, as soon as possible, to avoid the worst consequences of climate change.’ Unlike ‘science’, this new term – ‘The Science’ – is a deeply moralised and politicised category.

The slippage between a scientific fact and moral exhortation is accomplished with remarkable ease in a world where people lack the confidence to speak in the language of right and wrong. But turning science into an arbiter of policy and behaviour only serves to confuse matters. Science can provide facts about the way the world works, but it cannot say very much about what it all means and what we should do about it. Yes, the search for truth requires scientific experimentation and the discovery of new facts; but it also demands answers about the meaning of those facts, and those answers can only be clarified through moral, philosophical investigation and debate.

If science is turned into a moralising project, its ability to develop human knowledge will be compromised. It will also distract people from developing a properly moral understanding of the problems that face humanity in the twenty-first century. Those who insist on treating science as a new form of revealed truth should remember Pascal’s words: ‘We know the truth, not only by reason, but also by the heart.’ ■

Notes
1. The Pontiff cancelled his visit in view of the protests and his speech was read out by a faculty member. The Rector of La Sapienza, Renato Guarini, said that a new invitation would be issued.

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From a ‘mean world’ to a world with meaning

Rose A. Dyson

The impact of converging technologies on science has led to calls for better reporting practices among journalists. But harmful fall-out from convergence with content within profit-driven communication industries tends to be overlooked. Popular culture that fuels violence and consumer driven lifestyles detracts from progress toward a sustainable future. The ultimate ethical dilemma is whether we can survive as a species without change that begins within the media.

Reports on climate change and the coming energy crisis proliferate. But for most media moguls, calls for new economic models that value natural capital, full cost accounting and carbon taxes apply to other industries. New modes of production and consumption that would restrict advertisements to information and rationing of products are still largely ignored.

Yet harmful media content fuels climate change in numerous ways. According to the World Bank 51 of the 100 largest global economies are corporations. The top 200 have twice the economic clout of the poorest four-fifths of humanity. Popular culture commodities, mostly violent, are top U.S. exports. Video games have overtaken film and television production and distribution in recent years. In 2005, the two biggest gaming companies, Nintendo and Sony, earned US$14 billion (Cameron, 2006). Two weeks after Grand Theft Auto Part IV was released in 2008 it was considered one of the most lucrative entertainment launches in history (Chakravorty, May 20, 2008). Old forms of media may be giving way to new ones on the internet as My space, YouTube, and endless blogs swallow up available advertising revenue, but familiar problems of harmful effects are accelerating and intensifying.

Despite the popularity of Al Gore’s celebrated documentary, An Inconvenient Truth, vast amounts of fossil fuel continue to light up billboards, and power vehicles for a single film, television or commercial shoot. When she addressed the Senate Committee on Banking, Trade and Commerce in April, 2008, in defense of Bill C-10,1 Canadian Heritage Minister, Josee Verner said that, in the past 12 years, taxpayers have contributed over $22 billion to the audio-visual industry. Support for the bill from those of us who appeared before this Committee was quickly overwhelmed by a tsunami of opposition from the entertainment industry over a clause that would eliminate tax credits for extremely violent and pornographic productions deemed to be contrary to the public interest. Decrying the heavy hand of censorship, lobbyists rejected the argument that such discretionary funding is expected of any democratically elected government entrusted to set policy on how public money is spent.

On December 28, 2007, Canada’s national newspaper, The Globe and Mail, ran an article on a television recycling plant near Toronto’s Pearson International Airport where overworked technicians scramble to keep up with the demand for removal of lead and other harmful metals from old-fashioned tube-style sets as viewers switch to flat screens. But for every old set shredded, 600 new ones are manufactured for distribution in China. Similar stories abound about the life cycles of computers and other forms of communication technologies.

Pornography, now estimated to involve 40% of all internet use, fuels violence against women and children and props up the worldwide sex slave trade, identified by the UN as the largest illegitimate form of business in the world today. Meanwhile, alternative sources of livelihood in
poverty stricken developing countries continue
to shrink in the aftermath of globalization and
climate change. In his opening address to the
52nd Commission on the Status of Women in
New York City on February 25, 2008, UN
Secretary General Ban Ki-Moon pointed out
that 1 in 3 women will be assaulted in her life-
time.

At the annual video game trade show in Los
Angeles in 2006, Sony released a jealously
guarded trade secret involving plans for the
entire family to communicate with each other
by accessing content over broadband internet
to play exciting new games with titles like
Stranglehold and Final Fantasy Part IV
(Colbourne, 2006). According to Doug
Lowenstein, President of the Entertainment
Software Association, 83% of parents are now
involved in buying software and games such as
Play stations and Xboxes, at around $3-400
each (C-SPAN, Feb.2007). The industry coun-
ters alarm from educators and health profes-
sionals, arguing that only 15% percent are
rated ‘mature’. With extremely violent video
games such as Killzone liberation and World
WARCRAFT, already rated suitable for teens,
not much is left over for the ‘mature’ category.

Last fall, Rockstar Productions released the
extraordinarily violent video game, ‘Manhunt
2’ in Toronto. Banned in the United Kingdom,
it encountered no objections locally (Saltzman,
2007). Canadian critics are more inclined to
give out awards for audacity for such produc-
tions as they did at the 2006 Toronto
International Film Festival for the controversial
documentary, Death of a President, about the
assassination of George W. Bush.

The dots between violence in society and
violence in entertainment remain stubbornly
unconnected. In both the 1000 page Falconer
Report on Violence in Toronto Schools released
in January, 2008, and the yards of ink which
followed, the focus was on the code of silence
and fear among teachers and superintendents,
not on the culpability of the media industries.
What we are witnessing is a gradual erosion of
our right to feel safe and our responsibility to
make others feel safe as the boundary between
entertainment and victimization fades.

What about the research?
Over the past 50 years, we’ve had warnings
from thousands of studies on media violence
and pornography. But when findings are
released into the public domain, they are usually
quickly neutralized to ensure that the debate
never gets beyond proof of harmful effects and
onto policy. In 2001, a leading Japanese brain
specialist found that playing Nintendo video
games renders parts of the brain inert. The cor-
porate giant approached him and quickly
became his number one research donor. Now,
Dr. Rutya Kawashima reciprocates by calling
for more research. For the gaming industry, its
back to business as usual (Cameron, 2006).
Findings involving the use of MRI (magnetic
resonance imaging) techniques, demonstrate
that brain cells which normally counsel empa-
thy are shut down in teens who play violent
video games (Linn, 2004).

Aggressive marketing yields US$1 billion in
annual sales for Brainy Baby and Baby Einstein
videos despite protests from the Campaign for
a Commercial Free Childhood, at the Harvard
University Medical School. The American
Pediatrics Academy recommends no screen time
at all for children under the age of two, yet
only 6% of parents are aware of this. New evi-
dence demonstrates that children who watch
television or video games before the age of two
actually show slower vocabulary development
than those who experience no screen time at all
(CCFC, 2007).

What about censorship?
In the U.S., court challenges have been filed
against the video game industry, usually as
class action lawsuits from relatives of murdered
victims, similar to what we have seen in the
past involving the sales and use of tobacco.
Although nine circuit courts have struck down
state attempts to regulate video games on the
basis of First Amendment considerations in
recent years, child advocates persevere (C-
SPAN3, Feb. 2007). In fact, there are growing
demands for the Amendment to be updated as
scholars, from various disciplines, call for a
reinterpretation of both the Amendment and
the definition of healthy economic activity in
response to looming environmental disasters.
In Canada, accusations of government censorship such as those which have erupted over Bill C-10 are more typical.

**Ideological child abuse**

Corporate encroachment into the lives of children has been relentless for decades. By December, 2003, over 30% of Ontario schools were selling advertising space to corporations – in hallways, cafeterias and on sports uniforms (CTF, 2003). New toys, as spin-offs from Marvel Entertainment’s estimated US$ 500 million profits from its latest film release, *Iron Man*, are predicted at $10 million for this year (Schuker, 2008). In Canada, new evidence indicates that children are engaged in three times the medically recommended amount of screen time. Meanwhile, the Japanese government is starting a program to limit Internet and cell phone use among addicted youngsters (Ogilvie, 2008).

As a society, we have turned over our children’s value systems to media giants whose primary motives are profit. Consumerism, materialistic world outlooks, a tendency to resort to violence as a conflict resolution strategy, and a sense of entitlement to instant gratification are personality traits that are much more likely to emerge in such a learning environment than reverence for a Green Earth. According to David Suzuki, over US$500 billion is spent annually by the advertising industry to get any of us on the planet to buy things (The11thHour.com).

Global warming and the coming energy crisis are not our main problems. They are symptoms of deeper, entrenched cultural and societal problems. Massive changes to our conceptions of truth, freedom, individual and human rights, and how we see ourselves in relation to the Earth as a whole must change dramatically in the next few years if we are to survive as a species.

Indeed, the threat to our survival goes well beyond the issue of climate change. Violent video and computer games are also helping to fuel terrorism. It is estimated there are now around 5,000 websites associated with extremist groups, many used for recruiting young converts (Dyson, 2007). Almost all terrorist activities in recent years have been executed by members of diaspora communities, whether in Spain, England, Holland or Canada. Often they are well educated and technologically-savvy.

Some see involvement in terrorism as a graduation from gangsta rap for young testosterone propelled male teens as a kind of status symbol. Many bring with them skills and lifestyles associated with urban youth gangs where guns, violence and extremism are the norm. Another factor is the growing legions of unemployed young males as structural change, downsizing and economic transition reduce opportunities for meaningful employment.

Mushrooming websites, rife with beheadings and insurgents attacking either U.S. or Arab targets (depending on the player’s preferences), army trucks and cars blowing up and snipers shooting soldiers, police officers or other law enforcement personnel proliferate. Indeed, one of the central themes in popular culture for young people for decades has been a tendency to undermine all authority figures, parents and teachers included. The subsequent rise in government promises for tougher law and order measures and the increasing focus on national security issues was predictable. It resonates with the late George Gerbner’s definition of ‘the mean world syndrome’ as one of the harmful effects from entertainment violence to society at large (Morgan, 2002).

**What’s to be done?**

First, we must break the international code of silence and fear on the subject. At the 2007 UNESCO annual meeting in Ottawa, Ahmed Djoghlaf, Executive Secretary of the Convention on Biodiversity and Culture, emphasized the importance of transformative change in large urban centres where reverence for biodiversity must be cultivated. But he avoided entirely the issue of consumer driven lifestyles fueled by billions of advertising dollars.

The current scenario was inevitable. We have an increasingly polluted cultural environment protected under the guise of liberalism, diversity and free speech. It is accepted as a normal part of our cultural and social fabric and nurtures mainstream media with advertising revenue. Politicians squander millions of tax dollars...
with grants, incentives, credits and shelters, on violent and pornographic productions. Few stand up to the industry as the Canadian Government has attempted with Bill C-10. As I pointed out to the Ontario Government panel on ‘Roots to Youth Violence’ in April, 2008, the provincial government must stop adding to the problem by encouraging the production of harmful content with government hand-outs.

In February 2008, it was announced that they were investing C$1 million in the development of two video game prototypes in collaboration with Canadian game developers, Digital Extremes and Silicon Knights. One is a third-person action game with an old school horror theme. The other is a third-person action/psychological thriller. Both will employ Ontario community college and university educated designers (OMDC, 2007). The project is enthusiastically embraced by Brock University, the City of St. Catherines and Niagara College. Why is creativity with such ominous overtones being encouraged at all in our institutions of higher learning?

The new Toronto District School Board plan for safe schools admittedly hinges on funding, but surely it is a no brainer that this involves more than the millions earmarked by the province to hire more social workers, policemen and psychologists to deal with sexual harassment, cyberbullying and expelled students. One wonders if officials from the Ministry of Culture ever talk to those in the Ministry of Education. All applications for government funding – anywhere – should be carefully monitored for their impact, on both the cultural and natural environment. A lesson can be learned from Leonardo Di Caprio who concludes his film, The 11th Hour, with the statement that it was produced with the smallest possible impact on the environment.

Popular culture, marketed as entertainment for profit driven purposes, with themes of sex and violence because they sell well on a global market and translate easily into any language, will have to change, if we are to shift to a paradigm of sustainability. Parents are now up against enormous odds in rearing their children. Ways in which the advertising industry knowingly undermines family cohesion through the use of marketing tactics such as ‘the nag factor’ and ‘pester power’ need to be better understood and resisted. Media literacy courses for both adults and children should emphasize ways in which media detract from eco literacy.

On a global basis, policy making must measure up to standards in the province of Quebec and other parts of the world where all advertising to children is banned. The Scandinavian countries, Malta, Greece, Turkey and New Zealand adopted such standards years ago, with the U.K., Switzerland and Italy joining the list last year. The bill introduced in the Ontario Legislature in April, 2008, to ban advertising of food and drinks to children in response to the growing obesity problem is a start but it should be expanded to include violent entertainment as well.

Regulatory bodies such as the Canadian Radio, Television and Telecommunications Commission must be discouraged from corporate friendly plans toward further deregulation. The Commission is now toying with the idea of deregulating all advertising on television by September, 2009, despite the growing obesity problem and evidence released in 2004 by researchers at Laval University that, in 10 years, acts of violence on Canadian TV rose 286% with 81% of it before 9:00 p.m., the watershed hour established for the protection of children (Hansard, Jan. 2007).

Clearly, industry self-regulation does not work without a little help from government and the rule of law. Cultural policy must become more topical during all election campaigns and better connected with global warming and other looming disasters. Only then will we begin to move toward real change.

Note
1. Bill C-10 is an amendment to the Canadian federal Income Tax Act, now in its third reading before the Senate. Among other things, the bill would give the federal Heritage Department the power to deny funding for films and TV shows it considers offensive or not in the public interest. The amendments have already been passed in the House of Commons.

References
Soul-searching at the crossroads of journalism education

Kaarle Nordenstreng

The terrain of journalism education in the light of basic developments around media and journalism today is reviewed in the following article. It also offers a perspective on contemporary higher education reform in Europe. Its conclusions include both general points and one concrete proposal.

With regard to the general development of the media I wish to highlight three prospects. Firstly, I subscribe to the growing importance of media in all areas of life, not only in industrialized but increasingly also in developing countries. Media seem to be capturing more and more power; media-related matters including media education are becoming more and more decisive.

This does not necessarily mean that there is more money for communication education as we know all too well. Nevertheless, media seem to be an aspect of history whose importance is growing. Where this power lies and whom it benefits are another matter. Suffice to state that media constitute a kind of sunrise industry in world history.

Secondly, due to technological developments, the boundaries are dissolving between different media and between media and the rest of culture, economy and other aspects of society. The structures of media are changing, too, and this is happening not only within the media and editorial offices, but also throughout the whole...
media ownership system with its vertical and horizontal structures. The term typically used for this development is convergence.

Let me make here a footnote which I find indicative of the potential for change in media structures, based on what I heard from an American media consultant. She had visited the Globo Corporation right after the Sydney Olympics and was presented with a corporate dilemma. Altogether 50 newspapers and radio-tv stations owned by the company throughout Latin America had sent their reporters to cover the games, each operating separately and suffering from lack of resources, while this could have been done jointly by perhaps only 20 reporters with technical support and a highly qualified processing team at Latin American headquarters, feeding the individual outlets.

This had led the corporate strategists to a thought experiment by turning around the present system of independently operating units under local barons called editors and publishers, replacing it with a centralized structure under one big unit commanded by a single media ‘tsar’. The suggestion was that this would have been better both in terms of economic cost and performance quality.

The thought experiment has not yet been implemented, but it shows us what potentially can be done by these huge conglomerates to change the media structures – and not necessarily to the detriment of quality. Better quality and greater diversity could be achieved through a centralized structure and management, while the existence of numerous independent units in a formally free marketplace does not necessarily guarantee diversity. This reasoning has always been part and parcel of public service broadcasting philosophy.

Thirdly, the information and communication technology – or ‘Nokia syndrome’ as I might say coming from the birthplace of that company – becomes so central an element of life that it no longer appears as a big issue. According to futurologists, for example, in Japan, ICT will be less sexy in 20 years just as electricity has become over the last 100 years. It becomes so important, so salient that it ceases to be special. We will no longer have distinct ICT companies as we do today, because ICT will permeate (post-)industrial life. The digital revolution in media is a passing stage in world history: this page will soon be turned. Of course technology is crucial and has its impact, but it will not retain its present-day distinction and appeal.

**Journalism as a profession**

Firstly, professionalism has been increasing over the past 50 years. More skills and greater competence are both needed and guaranteed in journalistic production. A new mindset seems to be entering into the journalistic professional world with an increasingly multimedia approach. So far we have been monomedia oriented with newspapers, radio, television, etc. each in its own pigeonhole, but this way of thinking will become increasingly outdated and replaced by the multimedia mindset. This does not only mean mastering the skills of various media but is a fundamentally different paradigm of working and thinking.

Secondly, professionalism not only brings about good for journalism as it is typically understood but also gives rise to serious problems for democracy. The more competent and powerful you are as a professional, the more you become a prisoner of your own professional thinking at risk of alienation from so-called ordinary people. It is the dilemma of elitism and alienation from social realities, which is not good for democracy – something I call the ‘fortress journalism syndrome’.

Part of this process is the development whereby journalism becomes less overtly political. I happen to believe that journalism remains equally political if not more political, but the nature of the politics is different; it is more invisible and insidious. In any case nowadays most of the message content of mainstream media is non-news by nature. Much of this non-news represents tabloid journalism and the kind of dumbing-down material, which is clearly in contradiction with the historical view of journalism as part of democracy and enlightenment.

On the other hand, much of this non-news material is made up of serious background stories and feature articles which do continue to serve the democratic cause. Moreover, industri-
ally produced news is not necessarily conducive to democracy. It is often beset by the same dilemma as smooth professionalism: it alienates the audience and creates an illusion of factual coverage of the world, while in reality you are surrounded by another form of ideology.

So non-news is not simply bad for democracy and news is not necessarily good for democracy. The relations are more complicated, but the point is that changing journalism and media are delicately related to problems of democracy – and those problems are serious indeed.

Thirdly, there is the question about the end of journalism in this time of digital abundance and overkill: Doesn’t live coverage and online news render the gatekeepers and storytellers called journalists obsolete? My answer is: No. Processing raw materials and packaging them into user-friendly forms demands more, rather than less, journalistic input and therefore journalism is needed more than ever. This is not just the wishful thinking of educators and experts; it has also been shown by empirical studies demonstrating public demand for predigested material in this ever more complicated world.

Despite the popularity of tabloid materials and various kinds of reality television, there is a thirst for information, including objective information not only in matters of conflict and terrorism but also in matters of economy, ecology and so on. And this thirst is not only satisfied by the digitally facilitated supply of information with countless new sources, online and other. What people need for their worldview is not just encyclopaedic material but also overviews and comment – both objective from trusted sources and opinionated from stimulating sources. This is journalism in its purest form and there is no reason to believe that it has had its day.

Diversification of skills
Summarising the developments of both media and the journalistic profession, we can say that while there is no end in sight for journalism, future journalists will work typically in a multimedia environment – including conglomerates governed by a ‘tsar’ instead of conventional editors and publishers. Converging digital media structures lead to diversification of journalistic skills propelling the profession into different directions.

One of these directions is online information seekers and processors in a corporate centre serving several media simultaneously, while another trend is to have specialists at each media end to edit the products for local users. This development will not do away with the need for profound knowledge of various areas of life and society; on the contrary, there is a growing need for substantial competence boosting serious and ‘elite’ journalism.

Then there is the well-known trend towards tabloidization, whereby serious news and information are accompanied by human interest and entertainment material, leading to ‘infotainment’. Also, fact and fiction are mixed against the conventional wisdom of journalism, leading to ‘faction’. These are challenges to be taken seriously, but I think it is very short-sighted to use them as arguments to declare a doomsday for journalism.

Consequently, my overall thesis is that the so-called Information Society will not render journalism obsolete, but it poses challenges and creates uncertainties. Some call them ‘cyber revolutions’ while others take them as normal evolution, and in both camps there are those who approach them with enthusiasm and optimism as well as those whose approach is pessimism or cynicism. The real roots of the challenge go deeper than the mere technical surface of digitalization. Unfortunately the academic and political field is short of analytical understanding about what is really going on.

After these prospects it is logical to reflect on journalism ethics, media performance and the tasks which media are supposed to fulfil in society – in short, the normative roles of media. This area of professional debate and scholarship has not been buried under new technologies and globalisation. Quite the reverse, it has been revived with projects which are effectively rewriting the outdated ‘four theories of the press’.

One such project divides the paradigmatic thinking into four leading ideas which dominated certain stages of history: corporatist (the search for public wisdom, 500 BC – 1500 AD),
The project also introduces four ways of defining the role of the media in relation to socio-political power: cooperation, surveillance, facilitation and radical challenge. My point here is, firstly, to note the irony of these kinds of philosophical reflections gaining popularity in the digital era. In other words, the Nokia syndrome, instead of killing is stimulating the cause of back to basics. Secondly, it is this level of basic theorising, instead of ICT fever, that will help to dispel the confusions referred to above.

Perspectives on higher education in Europe
All university people in Europe today speak about ‘Bologna’. This site of Europe’s oldest university has become a buzzword for the latest reform of higher education in this part of the world due to a document signed in June 1999 by 29 Ministers of Education from various European countries: the Bologna Declaration. It confirmed an initiative taken one year earlier in the Sorbonne by the Ministers of Education of France, Germany, Italy and the UK.

Bologna was followed by another meeting of Ministers of Education in Prague in 2001, now attended by 32 ministers who adopted a joint communiqué. A further ministerial conference on higher education in Europe was held in Berlin in 2003, attended by 33 European ministers, including Russia, leading to another communiqué. Next were follow-up meetings in Bergen (2005) and London (2007), with the next scheduled in Leuven (2009). (See http://www.ond.vlaanderen.be/hogeronderwijs/bologna/)

This reform seeks to replace the different systems of higher education in European countries by a common ‘European Higher Education Area’ (EHEA) and to create both a competitive and attractive market for academic studies in Europe compared to the USA. What is called for is both a rejuvenation of the often outdated academic systems – as happened in France in 1968 – and also a push for the typically independent academia to serve more directly the needs of the European labour market. The reform is already underway and is to be completed before 2010.

A central idea is to establish a Europe-wide system of comparable degrees, with the first degree (Bachelor) no less than 3 years and the second degree (Master’s) ideally a further 2 years, followed eventually by a doctoral degree in 4 more years. Thus the basic model: 3 + 2 + 4 years. The Master’s degree is expected to be reached after 5 but at least 4 years of studies. Measured with a common European Credit Transfer System (ECTS points), the first degree is 180 points and the second degree 120 points, altogether 300 points.

The first degree cycle (BA) is supposed to equip the student with basic competence for the labour market, but more specialised academic skills will be given by the second cycle (MA). The policy target for example in my own country, Finland, is for 75% of the BAs to continue to MA. This is quite different from the US system where only a minority of some 15% continue their studies to Master’s level. It remains to be seen whether European economies are able to achieve that ambitious target.

Regarding studies in communication, media and journalism, the reform proceeds in both BA and MA levels. In many countries (such as mine) this does not mean revolutionary changes, because a two-level degree system has already been in place. But in other countries (such as Spain) it will fundamentally shake up the old system. In any case the reform gives a welcome boost for journalism education to review its curricula.

Conclusions for journalism education
How to characterise and label these developments? Two keywords are obvious: opportunities and threats – the last two elements familiar to SWOT analysis. And there is a clear contradiction between these perspectives.
Media and journalism is indeed a field of contradictions and paradoxes – the other two keywords. Developments especially relating to media technologies are full of contradictions, but so also are the general socio-political and cultural developments in the world. Accordingly, there are no longer clear black and white answers, but more and more questions, challenges, and reasoning ‘on the one hand, on the other hand’. Saying this doesn’t mean that I have turned liberal from being an old radical. On the contrary, I think that a true radical today is a kind of dialectic; we have reverted to the old dialectics.

What actions should we take? Firstly, an obvious conclusion is that we need to promote networking between journalism educators. There are thousands of colleagues and institutions that should be supported by the synergy of contacts and cooperation, both in analysis and action. This work has been started by the Global Network for Professional Education in Journalism and Media (http://www.journet.org/) and continued by the World Journalism Education Congress (http://www.amic-wjec.org/).

Secondly, I have a specific proposal: to begin preparing a Unesco Recommendation for journalism education. Such universal instruments have been made for a number of areas, but not for the field of media and journalism. Initiated by JourNet and drafted together with all professional and academic circles, a Unesco Recommendation could become an important instrument in promoting and implementing the objectives of JourNet.


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CBC’s Little Mosque on the Prairie: Just a ‘Little Masquerade’?

Aliaa Dakrouy

A Muslim-Canadian, who advocates for, and believes strongly in, the human right to communicate and the capabilities of the media to enforce a democratic and free public sphere, argues that in Little Mosque on the Prairie the CBC has created a bridge between differences among Canadians. It has naturalized the ‘other’ by showing that these individuals of another culture are still human despite their difference. Most importantly, it shows that a public broadcaster can, and should, risk acting as the democratic means of social communication and discussion.

‘What’s the charge… flying while Muslim?’

‘Our present age is slowly learning to respect others and is gradually realizing that, for mankind as a whole, our wealth derives from our diversity and not from any artificially imposed unity’.

With the exotic drumming of oriental music behind her, a female voice opened CBC’s Little Mosque on the Prairie sitcom, with ‘ah ya Layli’ – ‘What a night!’ and ‘ya habibi’ – ‘Oh my love!’, Arabic expressions heard by many Canadians when entering a Shawarma restaurant or riding in a
taxi to the airport.

There was widespread reaction to this novel, and some might say daring, new show. Comedy is tricky, and in this world, too often ‘you can’t make comedy without conflict.’ Thus, some Muslims criticized it as a ‘masquerade,’ an attempt to ‘misrepresent’ Islam. Others, however, felt it was a large step in the right direction towards representing multiculturalism and the right for ‘other’ cultures to see themselves accurately portrayed in prime time.

In essence, to some the programme portrayed the true sense of being Canadian. However, given past performance, whether or not the media can portray visible minorities in Canada accurately and responsibly is debatable. Further, in a time when the concept of ‘visible minorities’ itself is coming under attack as ‘discriminatory’ and ‘racist’, is Little Mosque doing more harm than good?

Little Mosque is the first Canadian comedy portraying and discussing Islam, its followers, practices, behaviours, and everyday life since 2001. The buzz surrounding its launch was heard internationally by various media. Based on the thought that ‘our understanding of and attitudes toward people, events, and problems are greatly influenced by the information and views communicated through [the] media,’ there can be no argument that since 9/11, Muslims around the world have struggled with misrepresentation not only in their day-to-day life, but also with the media’s portrayal of them as extremists, fundamentalists, and sometimes, if not always, terrorists.

Drawing from my passionate belief in the right to communicate, I consider airing such a controversial and sensitive topic over a public broadcaster is certainly a serious attempt to bridge mainstream public knowledge with an awareness of ‘other’ cultural frameworks in Canada. Further, this attempt refutes the United Nations watchdog’s claim of minority groups’ discrimination in Canada, noted above, and reinforces the media’s role not only in representing minorities, but helping them promote and enrich their languages, cultures, rituals, etc which is affirmed in Article (3-b) of the Canadian Multiculturalism Act of 1985.

It is evident that Little Mosque is a conscious effort by the media to show non-Muslim Canadians that Muslims are an integral part of the multicultural mosaic that characterizes Canada. Laughter is a human, not a cultural phenomenon, although in recent years, as the scriptwriter Nawaz says, ‘Some non-Muslims wonder, “Are we [Muslims] allowed to laugh?”’ I have argued elsewhere that the idea of multiculturalism as endorsed and practiced in Canada is a core aspect of the human right to communicate in different arenas, especially among the Canadian media.

Thus, the right to communicate in Canada is also the right to seek, send and receive, and impart ideas surrounding the concept of different cultures, as well as to be able to express them freely using the media. Jean d’Arcy, who is generally regarded as the intellectual progenitor of the idea of the right to communicate, suggested that ‘the right of man to communicate ... is the angle from which the future development of communication will have to be considered if it is to be fully understood.’

When one considers various controversial cases in broadcasting, the media are sometimes shown to be a democratic means for minority groups’ self expression in Canada. This is evident, for instance, in the 2004 case of the CRTC approval of the broadcast of Al-Jazeera’s Arabic channel despite concerns in some quarters of it being a source of terrorist propaganda and hate speech.

Similarly, in the debate surrounding Little Mosque, the CBC has provided an excellent example of the practice of the right to communicate in Canada by advocating the ‘communicative mode’, i.e. the mode of creating a public space where issues of public matters are displayed and debated. This program has shown that a public broadcast can be a means of ‘inclusion’ by disseminating and facilitating the enhancement of public/community communicational discussion.

Further, the social dialogue pioneered by this new CBC sitcom can be seen as boosting social networks, creating a community that is not merely bound by space or geographical location, but rather is connected through an aware public broadcaster. This contradicts van Dijk’s paradigm of representation, which
argues that media outlets have a significant role in ‘self-serving positive- self-presentation and negative other-presentation.’

By analyzing the first eight episodes of *Little Mosque*, we can see that the characters are an extreme representation of different social, cultural, and intellectual elements in Canadian society which range through positive, to neutral, to negative behaviours of Muslim-Canadians. On the other hand, it also accurately represents the different intellectual and religious Muslim positions. I have identified five different positions in this show: Reformist, traditional, moderate, conservative, and non-practitioners, a dissection that refutes the claims that CBC has drawn a ‘false picture’ of the Muslim community.

For instance, the reformist in the mosque is the young ‘Imam’, who is born, raised and educated in Canada. He builds a friendly relationship with the Anglican priest in whose church the mosque is located. We can identify a traditional position in the character of Fatimah, the restaurant owner who is a widow from Africa. She believes that Islam must follow ‘tradition’ and regards it as an ‘imported’ religion from Saudi-Arabia where the Muslim Holy places exist. Rayanne, on the other hand, is a clear moderate practitioner and feminist Muslim; she represents the second generation Muslim-Canadian who is following the spirit of Islam while enjoying multicultural Canadian society.

Of course, Baber, the ‘extremist’ is also the funniest character in the show; he is somewhat of a parody, zealously adhering to the tenets of Islam in his clothes, ideas, and behaviour. Finally, a representation of ‘non-practising’ Muslims can be seen in Yasser and his wife Sarah who very occasionally practice Muslim rituals, yet are still strongly affiliated with the Muslim community.

**Small-town Canada**

This show accurately portrays small-town Canada: a coffee shop where members of the community have their coffee and bagels while reading the morning newspapers, and listen to the morning talk show on the radio; a working scene in the mayor’s office or the town’s medical clinic; a community meeting in someone’s house; day-to-day scenes where families discuss and argue their lives; and finally, scenes of worship in the mosque or the church.

In the show, Muslims are seen as the doctor, the waitress, the lawyer, the town public relations officer, the local contractor, and even the university professor (Baber’s character is constantly criticizing the hegemony of the West through a critique of *Desperate Housewives* and *Canadian Idol* and a call to smash all idols). These characters are not portrayed in a less flattering light than the non-Muslim characters, i.e. the radio journalist, the mayor, the priest, etc.

The show has also focused on the Muslim community’s inherent mosaic characteristic, through representing different, races, ethnic background, and language. Thus, Fatimah comes from Nigeria, Baber from Pakistan, Yasser from Lebanon, and Rayanne, Laila, and Ammar are the second generation born in Canada and raised as Muslim-Canadians.

Further, for a programme produced in the West, it has clearly shown the misconceptions that currently surround Islam and Muslims in a very natural and funny way. For example, putting the words ‘Allah’s plan’, ‘suicide,’ and ‘bomb’ in the mouth of the young Imam in the airport resulted in him being arrested in the first episode. In reality, this might well happen anywhere in the world, not just Canada.

Nevertheless, Islam and the Orient, despite the positive experience shown by the CBC, remains an exotic mystery to many in Canada. In episode 1, the mayor when attending the **Iftar** was surprised to find cucumber sandwiches; she instantly reacts by saying ‘I thought that Ramadan meals are more...exotic.’ Edward Said and his *Orientalism* showed that ‘Islam has been fundamentally misrepresented in the west – the real issue is whether indeed there can be a true representation of anything, or whether any and all representations, because they are representations, are embedded first in the language and then in the culture, institutions, and political ambience of the representer.’

CBC’s **little Mosque** has shown that Muslims might be the ‘other’ in many ways to non-Muslim Canadians. They wear head-
scarves, they are not allowed to date, they fast a whole day for a full month. Yet, the program has genuinely interpreted the voices of many Muslim-Canadians who want to maintain their religion and its rituals but at the same time also want to live in an integrated fashion within their larger Canadian communities by showing a ‘Canadian’ solution in each instance.

Wearing the head-scarf (hijab) didn’t interfere with Rayane’s choosing to become a doctor, nor is fasting a big deal since by the end of the day the whole community, Muslims and non-Muslims alike, are eating together. ‘Halal-ween’ was the Little Mosque’s interpretation of the kids’ favourite festival, even if they were dressed up as ‘terrorists!’ It is just the Canadian multi-cultural lifestyle.18

Validation of two-way communication

It is correct to argue that the right to communicate as laid down in the Universal Declaration of Human Rights in the 1940s interpreted the dominant view of media at that time as ‘one-way’ media without ‘interference’ or ‘frontiers.’ Yet, today, as the multicultural Canadian experience shows, that right consists of more than the media simply sending information. Without two-way communication, this becomes an exclusionary right that merges differences and creates disrespect of the ‘other,’ whoever that might happen to be.

Thus, two important conclusions can be drawn from the CBC’s airing of Little Mosque. Firstly, that the concept of the right to communicate born 59 years ago has its reflection in the current practices of media, especially the right of visible minorities to voice their language, culture, rituals, and opinions in the publicly owned media, as is the case in Canada. A recent poll conducted in 23 western countries showed that Canadians are the most accepting nations of the ‘other,’ especially Muslims. According to this poll, only 6.5% said they would not like to live beside a Muslim neighbour, a result confirming what this CBC sitcom tried to do, i.e. foster tolerance and promote different communicative patterns in society.19

Secondly, the CBC airing of Little Mosque in prime time has significantly represented minorities’ cultural and social communicative patterns by breaking new ground in the North American mainstream media. Thus, as Jean d’Arcy, father of the concept of the right to communicate, said, ‘After millennia marked by cultural expansionism, ... our present age is slowly learning to respect others and is gradually realizing that, for mankind as a whole, our wealth derives from our diversity and not from any artificially imposed unity.’20

Notes

6. The New York Times for instance, commented that this sitcom ‘ventures into new and perhaps treacherous terrain: trying to explore the funny side of being a Muslim and adapting to life in post 9/11 North America. Its creators admit to uneasiness as to whether Canadians and Americans can laugh about the daily travails of those who many consider a looming menace.’ See MacFarquhar, New York Times (7 December, 2006).
8. See Estrin, Maclean’s Magazine (December 11, 2006).
10. The idea of the right to communicate is emphasized clearly in Article (19) of the Universal Declaration of Human Rights ‘Everyone has the right to freedom of opinion and expression; this right includes freedom to hold opinions without interference and to seek, receive and impart information and ideas through any media and regardless of frontiers’. Available at: <http://www.un.org/Overview/rights.html> (25 March 2007).
12. Canadian Radio-television and Telecommunications Commission
Price says, ‘If only the public sphere could be enhanced, if only there were more understanding of the role of public service broadcasting in enriching national identity, if these margins could be improved, societies would cohere and citizen participation be enhanced.’ Available at: <http://www.fas.umontreal.ca/COM/spry/spry-e.html> (25 March 2007).

15. See van Dijk, p. 317.


18. As the program’s creator, Zarqa Nawaz says in an interview in the Maclean’s magazine in December 11, 2006: ‘The Muslim community is dying for a portrayal of Muslims that is more dynamic and more nuanced than the traditional terrorist villain.’


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Documents and Publications

Blogs and female expression in the Middle East

Basilio G. Monteiro and Middle Eastern students

In today’s technologically mediated world, blogs seem to offer a way of subverting censorship and of addressing social and cultural ‘taboos’. However, the recent plight of Egypt’s so-called ‘Facebook Girl’ – arrested (and later released) on charges of inciting a strike and causing disruption and rioting – sums up the contradictions in government-media relations in the Arab world. To what extent are blogs useful in countries where people do not have the right to express themselves freely? Three blogs run by women in Egypt, Jordan, and Saudi Arabia, help to understand how new communication technologies are challenging prevailing socio-religious norms in these societies.

This study is the fruit of critical examination of various blogs in the Middle East maintained by women. The subject of the examination was blogs maintained by three women. The volume of the blogs material varied, reflecting different formats the blogs are written in, and the different contexts of the bloggers’ living circumstances.

The Egyptian blog is an expression of its politically active author; the amount of posts per month is very high, as they reflect on daily issues published by the local newspapers. Thus, our examination includes all the posts from October to the end of December 2006. Some of the posts referred to external links whose content was crucial to understanding the author’s position. In such cases, our examination included those supplemental links.

A similar approach was followed with the Saudi blog, which also reflected the political situation in Saudi Arabia. However, the posts on this blog were referential as opposed to analytical. The blog also served as a small directory to other blogs and websites with focus on human rights and liberalism in Saudi Arabia. The Jordanian blog was a literary expression, where the author posted short stories and prose. Given the creative nature of the content the volume of posts per month was not high.

The blogs were carefully chosen to make sure they could represent the best efforts in utilizing the technology. Like all other information technologies, blogs are not used for intellectual and meaningful expression exclusively. The only bias in choosing these blogs was the language used. We thought that an Arabic expression would offer a closer look at how self-initiated, as opposed to mimicked or imported development, is taking place in these cultures.

Judging from our own experience as bicultural individuals, using a language other than the mother tongue for expression indicates a degree of alienation from the mother culture. With this alienation the individual is bound to experience (if not consciously) a split in their identity. Since our research revolves around cultural change and institutional/political development, we would rather not focus on the psychological outcome of global integration.

It was not difficult to find an Arabic Egyptian blog; it was rather challenging to find a Jordanian one; and almost impossible to find a Saudi blog written in Arabic. After reading the most popular and effective female-authored blog, we realized that the spread of English as the language of expression is closely tied to the direction of social development in Saudi Arabia. In that case it was necessary to break the rule we followed in collecting our data.

The Egyptian Blog ‘Bint-Saad’

An echo of strong collective Egyptian Identity

The author of this blog is 21 year-old Eman
Saad, who lives in Cairo, Egypt. Eman is a recent pharmacology graduate. She currently works as a pharmacologist in a small pharmacy in Cairo. She has recently joined a new Islamic political party called *Al Wasat* (The Middle). Her posts include numerous references to an array of literature, including Egyptian, Arabic, Islamic, Russian (e.g. Fyodor Dostoevsky and Anton Chekhov), and John Stewart Mill. She’s also very careful about keeping herself updated by reading the daily local newspapers, both major and populist. Her blog is linked by numerous Arab blogs, both Egyptian and non-Egyptian, and she in turn links to a lot of other Egyptian blogs, whose styles are sometimes really different to her own.

The content of Eman’s posts is vastly diverse. Reading three months of blog, we found no redundancy in her topics. Her views are consistent; the subjects she discusses are social, political, economic, moral, and sometimes personal. Her identity as an individual is painfully forged and defined by her interest in the collective betterment of her society. The following was posted 12 December 2006 under the title: *Take It, Mister, Without Pay; Only Relieve Me Of This Home*, where she posts two newspaper articles regarding the subjugation of ordinary citizens, entrepreneurs, and activists, without any regard for their civic rights:

‘Before I start writing anything, let me tell you in all honesty that I am the last to be characterized as “pessimistic”. Let’s just say that my lot of optimism is generally great and my capability to maintain a sense of humour in the most critical conditions is vouched for by those who know me. But I am currently lacking both – or let’s say I’ve given them up. I try to enter the shell that is my haven whenever I am overwhelmed, but I fail to do so. Even seclusion has become beyond my reach. I desire to sever all my connections to the external world, but I fail once again, for reasons that are beyond my control.’

The loneliness Eman, even though only 21, experiences as an individual striving to contribute to the development of her society, manifests itself in her poetic approach in reflecting upon the issues she discusses in her posts. Her feelings of loneliness and her sense of dejection is manifested through her blogs, but she expresses herself with clear intellectual objectivity.

Eman, like many other Arabs, feels that she and her fellow citizens are forsaken by the government. As a pharmacist, she gets frequent visits from desperate customers asking about government-subsidized essential products, such as milk. She refers to these products as ‘illusions’. They’re either an illusion of despair or rumours spread by the government. In any case, what is a loss of faith in and respect for the government takes a severe form in Egypt where millions are starving needlessly without any institutional efforts to aid them.

Eman believes that politicians who occupy positions in the government have been swayed by power and are no longer honest and concerned about the citizens. Recently political activism and opposition to the Mubarak regime is expressed quite openly and frequently; she compensates her feelings of being forsaken with the hope that the new thousands of activists will bring about change.

Eman decided to offer a new political perspective by interviewing what she calls ‘an anonymous citizen’. She posted an interview with ‘Mac’s Brain’, a fellow male blogger – a 23 year-old recently married and who lived in the West for a few years before he returned for good to Egypt, only to find that the home he returned to needed ‘a lot of work’.

Mac’s Brain: ‘Regarding the opposition, I think it has moved people. However, it’s still not organized.’

Eman: ‘As an Egyptian citizen, what challenges do you face in attempting to feel secure socially, financially, and politically in this country?’

Mac’s Brain: ‘I need to know what my duties and rights are exactly; to stop being solely preoccupied with how I am going to feed and clothe my family; to know that as long as I have a right, I can claim it quickly and from whomever it is, because slow jus-
justice is not different from injustice. That’s security that’s more important than security from usual crimes such as a burglary and murder.6

One of the issues Eman Saad reflects on is Islamic fundamentalists who have achieved a degree of organization, but whose ideology does not serve the betterment of society. There were three occasions, in the course of two months, where we had a chance to examine her views on this issue.

Another characteristic that contributes to the melancholy of this new generation of activists is that they have been weaned from the old tendency to project failures upon Western civilization; they have turned inwards to understand the prevailing situation, instead of blaming the west. In turning inward, they have to battle feelings of powerlessness and, at the same time, willingness to effect positive change.

We could not find one post where Eman blames any of the difficulties she sees around her on the West. Instead, she implicitly agrees that the West could offer a model for development. Her non-linear analysis always acknowledges that the problems faced by her society are the result of many complex factors: economic, cultural, social, and political.

For the first three days of the last Muslim holiday, Eid Al Fitr, Cairo witnessed an absurdly massive phenomenon of sexual harassment, where males in their twenties exposed themselves to female pedestrians and harassed them physically. The harassed females were both covered (wearing the Hijab) and not covered. Reflecting on this, Eman considered the various social, cultural, economic, and political factors that led to this incident, whose core, she says, is not a new phenomenon.7

Then, in response to an e-mail she received on the subject from an Egyptian residing in Holland, Eman posted a perspective she believed she missed in her analysis:

‘[Men are taught] to reduce “woman” to the body she is, and to forget the fact that she’s a human being before she’s a female, and to degrade her humanity in all ways, as if she was, like you [the one corresponding from Holland] said, only a tool to fulfill sexual urges. Teach your children to think “human being” before “woman”.’8

To clarify any assumption about Eman, that she might be a feminist who ‘hates men’, it’s important to note that the comment she acknowledged were e-mailed to her by a man. Also, most of the comments concerning this issue were posted by male bloggers. It is actually curious that Egyptian men were more expressive about the horrifying subjugation of this issue than women. Eman was one of very few women who posted an extensive and impartial analysis of the female harassment phenomenon.

Reflecting on an incident, where religious ‘militia’ pompously demonstrated their militarily skills inside the Azhar mosque, Eman quotes an Arabic author on conscience and discipline: ‘People are led to noble conduct by decree from the sultan, or an inspiration from the Qur’âns, or by a deterring society. If we’re safe from the rule of a sultan and religion and society, we’re only left with our conscience.’9

The Jordanian blog ‘Grass’
A creative individual expression
The author of ‘Grass’ is one Neda, from Jordan. Her profile doesn’t tell much about her, and her posts consist of short stories. We could only speculate about her age, occupation, and life. A few short stories we read were first-person narratives and revolved around the life of a teacher – a mother of two children who’s alienated from what surrounds her of social customs and rules of conduct. Judging by some historic references she makes while narrating in the first-person voice, we would guess that Neda is in her late twenties or early thirties.

Her stories are written in a language that is hard for modern Arabs to master. Classic Arabic is similar to Shakespearian English. While not as dramatic, it is as distant from the form of Arabic used in everyday life. Neda demonstrates an uncommon ease in her expression; and is almost void of linguistic awkwardness in any expression and any genre articulated in this endangered form of Arabic.
Perhaps that’s evidence of how Neda has absorbed her reading. While most alienated Arabs turn to English and immerse themselves in Western modes of cultural interaction and expression, Neda has evidently turned to a rather timeless and placeless form of Arabic to create a world where her identity could function more comfortably. It is timeless and placeless because, besides the new technological terms that had to be imported, classic Arabic bears no sign of cultural and ecological evolution, like Arabic dialects.

Neda’s blog motto says: ‘the ugly woman…she hears, she sees, she reads, but she’s not in songs, nor in movies, and not even in good books.’ Her stories are about unprivileged women: marginalized by their ‘ugliness’, by feelings that are not benevolent and pure, and unprivileged by the need to compromise their individuality for the sake of their social and domestic obligations. Neda is impressively bold in her exploration of the internal human life, its darkness and loneliness. Since that’s her main focus, her stories also have a timeless and placeless feel to them (even though they do make references to specific places and critical times in Jordan).

In blogging, Neda has an external place where she can communicate her otherwise anonymous identity. In an uncommonly personal post that isn’t a narration, she expresses how blogging can become a haven:

‘A pseudo name is the solution. It hides your identity and in doing so gives you a larger margin of freedom. Blogs don’t only give you the chance to hide, they give you another valuable thing: a space without a title. But what happens after a while of creating the blog [Neda created ‘Grass’ in November 2005] you find yourself in the midst of what you once escaped. The pseudo name is no longer a curtain that hides you, but it becomes the name of the being exposed by the posts, one after the other. You gain an identity among your neighbours in blogging – an identity made more defined and clear by every new post. And the creation of an identity means the creation of expectations. You have to control your nerves so that you don’t allow them to limit your freedom… I want to write poorly and I want to repeat myself. I want to blog for ten years and remain, to the tenth year, thinking about this place as my own place where my rules apply, and that I could, if I desired, post blank posts.’

Every once in a while, Neda’s ‘I’ merges with her protagonists’ ‘I’s.” In a story about a wife and mother of two boys, Neda tells about a woman’s struggle to protect her eight year-old against the incessant inquiries of her nosy neighbour. The protagonist says that even when her neighbour revealed, with her social skill, that the secret behind the bed sheets daily hanging out to dry was that the eight year-old was still wetting his bed – after the neighbour discovered the truth she started using it against the heroin to degrade her, hence elevate herself. The heroin says that she’s forced at this stage in her life to retreat and submit to the petty social abuse:

‘[B]ecause if I clash with her, my kids will clash with hers. And she won’t be alone. She and the other women speak a common language. I am allowed to be kind to them. They are capable of charging and coveting and engaging in massacres, but they’ll always stay one unit, and I’ll always stay the eccentric [weird] neighbour.’

This is where her identity merges with her heroin’s voice: ‘If I happen to always tell stories like these, it is because they’re battles I am forced to engage in everyday. Petty battles at tremendous cost.’

In expressing the rebellious and tormented self, Neda has a big audience of regular readers, some of whom are men. The reason that her work doesn’t repel them even when it’s focused on acknowledging the marginalized woman, as mentioned above, is the timeless and placeless aura she builds by focusing on humanity instead of gender.

It is very important not to deny the gender-based subjugation humanity is exposed to. Neda has eminent skill in expressing and addressing this theme without turning women
into victims, or men into demons. Very subtle between-the-lines statements such as: ‘my mind is not I, but my comrade in my body’, and ‘I was then “I”, now I am your wife and “I”,’ set the tone for the readings being an account of humanity, not a violent outlet for suppressed emotions.

Neda’s style is another manifestation of the new trend of individualism in the Middle East. Like Eman, Neda does not make one gesture of blame towards the West – nor towards anyone. That makes her work more valuable, in our opinion, because in acknowledging the dark side of humanity as a normal outcome of social conflict and inequality of power, she does not assume inferiority of race or culture.

Critical analysis is crucial to advancement, but compassion and humanity have to go hand in hand with critical analysis so that whoever’s attempting progress – a very unpleasant process when all factors are considered – does not despair. Neda blends effortlessly her critical assessment of the society around her with contemplation and meditation on compassion. Without asserting her own humanity, the burden of relieving her people might overwhelm Neda with an exaggerated sense of helplessness.

The Saudi blog
A phase of collective alienation
The Saudi blog we chose to examine closely for this study is Aya’s ‘Alien Memoirs’. Aya is a young woman from the Hijaz part (west coast) of Saudi Arabia. She is currently studying in the U.S. Her blog is an excellent collection of reflections on the human rights issue in Saudi Arabia, where people who share her concern for the lack of those rights can get an update on practices that violate the basic rights of humanity, and are given the opportunity to discuss those practices and share their opposition to the system that allows them. Aya has a large number of links to official and popular websites that concern the issue.

Aya’s blog is extremely popular among Arab bloggers. Names that we ran across while researching the Egyptian community of bloggers are posted on her blog with comments of bloggers intact. She has also been nominated for the Middle East and Africa category of the 2006 Best Blog awards, where bloggers from around the globe choose the candidates and vote for the nominees. In her profile, Aya argues that America’s worst export to the world has been ‘individualism’. Faithful to her argument, Aya uses the blog to express her individual views on the right to express that individuality. Her blog is set to browse on a fixed page where she has posted a story of the absence of that right: the story of ‘Saudi Eve’. We believe that hundreds of Arab bloggers are aware, because of Aya’s efforts, that the Saudi government has exercised its authority and the technology to block Saudi Eve’s blog. People residing in Saudi Arabia, including Saudi Eve, are now unable to browse her blog. Instead, whenever they enter her blog’s URL, their browser opens a page that says the following:

Access to the requested URL is not allowed!
Please, fill out the form below if you believe the requested page should not be blocked:
Form for URL unblocking request
Please, send other sites you feel should be blocked using the following form:
Blocking request form

Dozens of bloggers, Saudi and non-Saudi, have posted their requests to unblock Saudi Eve on Aya’s blog. Some of them volunteered techniques to get around the block. Saudi Eve’s posts can now be received daily by e-mail. For the more technologically savvy, a way to get around the block to view the actual website is explained.

Saudi political news is always offered for discussion. (Perhaps that’s what distinguishes Aya’s blog; it is set to show all comments below the post. In that way, it functions more like a forum, with Aya being able to set topics for discussion). The new year’s budget, for example, and Prince Turky Al Faisal’s resignation from the ambassador to the U.S. office, on which Aya invited bloggers to speculate as to why he resigned, then offered a source of possibly better insight: The New York Times.

Aya posted a blog about an incident that took place in Riyadh, where a group of extremists barged into a play organized by the Yammama university and started shouting
‘Allah akbar’, and harassing the actors. The play, which had a critical view of religious extremism, was eventually cancelled, and the furious actors had to go home.

We believe Aya, like Eman, is wounded by such violations of free expression. Since the acts come from her fellow citizens she feels both shame and anger: shame because she thinks the world tends to view the whole region through those acts; anger because her identity, which is part of the collective identity, is marred by what she has no control over.

‘Although this is a really sad and disturbing incident which resulted in the cancellation of the first showing of this play, I say to these extremists: Bravo! Your performance has succeeded in alienating more people and pushing them away from your radical views. Now, dear Saudi authorities, are you going to make an example of these extremists or, as usual, try to cover it up and let them get away with it yet again?’

Another blog Aya posted was a report of a tragic incident in Saudi Arabia that was indeed a terrifying example of the ineffectiveness of the current judicial system. After she reported the incident to the police, a court sentenced a gang-rape victim to 90 lashes along with the individuals who raped her. Curiously, this post received only eight comments, while *Riot On Stage* received 32! None of the comments on the [Saudi Legal System=Rapists' Best Friend](http://bent-sa3d.blogspot.com) discussed the issue at all. Unlike other comments, which are objective and open, these eight comments are basically provoked by another blogger, al-miller:

‘What is the surprise? This is all according to Islamic jurisprudence. Miss, the problem is Islam and this is going to happen till the end of Islam. Get used to it. You are a chattel in Islamic society and the best you can hope for is to be treated kindly by the men that possess you.’

The community did not take that well at all; they became defensive. A few were even offensive, blurting out Jew-related insults. The issue touched a raw nerve. When it comes to the view that Islam is the source of oppression in the Middle East this new generation is intellectually paralyzed. It’s so hard for them to objectively consider – or even just analyze – the view. Naturally, it’s just as hard to objectively challenge it too.

It may take a while until this new generation is ready for organized political activism. Unlike Egypt, which had a history of political parties, Saudi Arabia had none. Aya and the other bloggers are relying heavily on Human Rights Watch and on raising awareness of the lack of liberal rights and an effective law.

Perhaps for the time being, this is the only step possible. But it might be a greater step to turn the silenced stories, such as the punished victim, into reports *within* the country. Maybe in a few years such awareness would turn into consistent views regarding human rights in Saudi Arabia, and later into activism due to the power of blogs.

This paper was developed with the collaboration of four women students from the three Middle Eastern countries of our study. The women students, who wish not to be identified, contributed to this paper by identifying the blog sites, translating them, and engaging in long conversations with the author.

Notes
1. Bint Saad [http://bent-sa3d.blogspot.com]
2. Eman Saad (profile) [http://www.blogger.com/profile/30592429]
4. Take It, Mister, Without Pay; Only Relieve Me Of This Home [http://bent-sa3d.blogspot.com/2006/12/blog-post_12.html]
5. Mac’s Brain [http://demaghmak.blogspot.com/]
9. Take It, Mister, Without Pay; Only Relieve Me Of This Home [http://bent-sa3d.blogspot.com/2006/12/blog-post_12.html]
10. This Is My Place  
[http://grassgrassgrass.blogspot.com/2006/07/blog-post.html]
11. A Model Of A Battle  
[http://grassgrassgrass.blogspot.com/2006/07/blog-post.html]
12. A Model Of A Battle  
[http://grassgrassgrass.blogspot.com/2006/07/blog-post.html]
13. Alien Memoirs  
16. Why Turky Al-Faisal Resigned  
[http://alienmemoirs.typepad.com/my_weblog/2006/12/index.html]
17. Riot On Stage  
[http://alienmemoirs.typepad.com/my_weblog/2006/11/riot_on_stage.html#more]
18. Riot On Stage  
[http://alienmemoirs.typepad.com/my_weblog/2006/11/riot_on_stage.html#more]
20.  
http://alienmemoirs.typepad.com/my_weblog/2006/11/saudi_legal_sys.html#comments

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**IN THE EVENT...**

**ETHICS AND EVIL IN THE PUBLIC SPHERE**

*Calvin College, 28-30 April 2008*

*Ethics and Evil in the Public Sphere: Media, Universal Values & Global Development* is the title of a book edited by Robert S. Fortner and Mark Fackler, to be published in 2008 or 2009 by Hampton Press. All of the more than 20 contributors to the book have been strongly influenced by the work of Clifford G. Christians, Research Professor of Communications, Professor of Journalism, and Professor of Media Studies, University of Illinois at Urbana-Champaign (USA), to whom the book is dedicated.

As part of the ongoing work of writing and critiquing the chapters, a conference took place at Calvin College, Grand Rapids, 28-30 April 2008. Professor Christians took part. All participants expressed their debt of gratitude for his scholarly excellence, his friendship and nurture, and his willingness to listen and learn as well as to guide and mentor.

The book is intended for those who write about and/or teach communication ethics – that is, scholars, and for students of journalism and mass communications who have to struggle with ethical questions during their careers. As Fortner comments in his introduction:

‘The agenda for communication ethics must be an ambitious one in an age of rapid technological change, continuing conflict, and rising aspirations among the world’s peoples. And it must address such issues as where to place our trust, how to conduct our professions, who to represent and with what type of representation, when to observe and when to advocate.’
At the conference, Professor Lee Wilkins (University of Missouri School of Journalism) introduced her chapter on ‘The Ethics of Professional Corruption’. She identified three levels of corruption: the use of public office for private gain (which is not always financial and may be for personal, altruistic reasons). This is first-level corruption and demands sound individual ethical decision-making. Corruption also arises in social systems where the enforcement of ethical norms is lax. Such systems prey on the weaker party. This is second-level corruption focusing on the way a system or an institution can amplify individually corrupt acts.

Third-level corruption occurs when the system itself is engulfed and even individuals who perform superogatory acts can have only modest impact. Instead, the system itself corrupts those who work within it, perverting virtues and ideals.

Professor Jolyon Mitchell (University of Edinburgh) presented ‘Redescribing News: From Spectacular Depictions of Violence to Unspectacular Portrayals of HIV’. He asked if spectacular depictions of violence distort understandings of reality. How far do such media spectacles dominate news coverage and distract the public from the substance of real public issues? And to what extent do they distort viewer’s perceptions of what is ‘real’?

In his opinion, learning to describe the world with nuance and giving attention to the unspectacular can motivate becoming involved in forms of action which work for peaceful change. In other words, seeing and describing the world differently can lead not only to different kinds of definitions of what is spectacular, but also to acting with greater wisdom and compassion in the face of ‘unspectacular’ suffering.

Professor Mark Fackler (Calvin College) presented a chapter titled ‘“Journalism Makes You Kind of Selfless” – Kenya’s Press Code: Media Ethics in Search of a Paradigm’. The chapter investigates how journalists judge right and wrong in common reporting situations, especially when the precedents are just being shaped in a relatively new democratic atmosphere. It goes on to ask if ‘new democracy’ dilemmas concerning truth and privacy, intrusiveness and grief, and source confidentiality help see older democracy media practice through a new prism. These questions are explored in Kenya, a relatively stable African democracy with an unsettled relationship between press and state. The role of the Kenya Press Code was the focus and the deeper issue how journalists learn to sort morally acceptable media practice from market and competitive pressures which, even in advanced democracies, constantly threaten to undermine public service assumptions about the press’s role in democratic government.

Professor Ian Richards (University of South Australia) wrote about ‘The Strange Case of Trust in Journalism’. Focusing on disaster reporting, he commented that there is a common expectation that the reporting of major crises such as the tsunami disaster will both inform the outside world and encourage prompt humanitarian assistance, not that it will further the suffering of those already adversely affected. Problematic behaviour by some sections of the news media undermines this expectation, as it makes it difficult to accept that journalists are acting out of goodwill and a commitment to minimise harm when their actions actually exacerbate the plight of those worst affected.

Professor Steve Jones (University of Illinois at Chicago) co-authored with Ishani Mukherjee a chapter on ‘iThou: Ethics, Friendship and the Internet’. He pointed out that although it is now practically lost in the mists of time, the most iconic visual image of the Internet in the 1990s was that of the New Yorker magazine cartoon that showed a dog seated before a computer screen and keyboard explaining to another dog, ‘On the Internet, nobody knows you’re a dog’. Copies of it still abound online but few people make reference to it any more.

The issue that is central to understanding the cartoon’s humour, just who is communicating with us online, is still vital. Jones and Mukherjee’s chapter explores ideas of awareness and dialogue online. In short, the question at the heart of Martin Buber’s formulation of I and Thou, ‘How do we know a “thou” exists?’ lies at the heart of the Internet mythos. How we choose to treat relationships on the Internet, and those with whom we communicate online,
gives expression to our relation with the world.

This is not to say that all virtual relationships must have real analogues (or vice versa) but rather that virtual and real relationships are together part of one’s larger social circle. This is true at the very least in terms of the time one has to allot to relationships in a given day. Decisions to attend to relationships in virtual and real environments have consequences for each: The more relationships in virtual environments one has and to which one pays attention, the less time and attention can be given to relationships in real environments.

Professor Herman Wasserman (University of Stellenbosch) ‘Glimpses through the Windowpane: A South African Perspective on Universal Media Ethics’ (co-authored with Arnold S. de Beer). Citing the pioneering work of Clifford Christians and Michael Traber (….) The chapter asks how, in an era where boundaries between nation states are eroded by globalization on social, economic and political levels, moral notions of the good may be applicable on a global scale and in multicultural settings.

Communication ethics faces a monumental challenge at present. It has to respond to both the rapid globalization of communications and the reassertion of local socio-cultural identities. It is caught in the apparently contradictory trends of cultural homogenization and cultural resistance. Can theoretical models be developed that are explicitly cross-cultural? Can moral principles be identified that are universal within the splendid variety of human life?

Professor Robert S. Fortner (Calvin College) ‘Genocide as Civic Engagement: When the Public Sphere Turns Evil’. A connection not usually made when discussing violence is the impossibility of genocides or other mass atrocities on the scale seen during the last sixty years of the 20th century occurring in the absence of communication. It is more typical to hear communication promoted in the aftermath of atroc-
ity when efforts are underway to promote peace or reconciliation. But if communication efforts can effectively rebuild community or assist in promoting forgiveness, they can also promote or encourage the acts that made reconciliation necessary.

If communication is the basis for the creation of a public sphere where all manner of issues and activities can be discussed for action, then we must accept that communication is also the catalyst for the conduct of people engaged in this sphere. This sphere can be turned toward the reconstruction of trust in the aftermath of evil, but it can also be turned toward the construction of evil itself. What happens when the public sphere does turn evil? Is there any hope that, by intervening in a sphere that is taking this turn, the evil can be turned aside? Or is it inevitable, once evil infects the sphere, that it must run its course before effective intervention can occur?

Professor Kaarle Nordenstreng (University of Tampere), ‘Liberating freedom from libertarian myths’, focused on the concept of freedom. For journalism and mass communication, freedom is more than a concept; it constitutes a paradigm guiding our ways of thinking about media and society. However, in the Western tradition the paradigm of freedom is often highly problematic and even biased as it tends to alienate us from ethics by suggesting that values are obstacles to freedom. In this respect freedom as a universal value stands closer to evil than ethics. This paradoxical situation calls for critical excursions around the concept and paradigm of freedom.

Nordenstreng concluded by contrasting the paradigm of freedom against the notion of power as understood in philosophical traditions. This suggested that narrow-minded advocates of Western freedom are as fundamentalist as those Islamists who are typically named as such. The lesson is a call for continuous deconstruction of the freedom paradigm.

Professors David A. Craig (University of Oklahoma) and John P. Ferré (University of Louisville), spoke about ‘Agape in the Service of Journalism’. Agape, the New Testament term for the highest order of self-giving love, has received limited attention in the literature of media ethics. A 2001 study of the values of U.S. and Canadian journalists found that journalists of high as well as low religious orientation endorsed the principle of loving one’s neighbour as oneself. Such recognition, however, has produced little in-depth exploration of agape in relation to journalism, whether in a U.S. or international context.

Based on the observation that all journalism operates by implicit or explicit normative principles, the authors’ aim is to help fill that gap. Whether or not it legitimates agape as a norm for journalism, this exploration articulates questions that need to be addressed in any discussion of principles posited to guide news work. In particular, examining agape provides a test case for the application of religiously based ethical perspectives to journalism.

Professor Stephen J. Ward (University of British ColombiA) ‘The Journalist as World Citizen: Problems of Patriotism’. How much ethical weight should citizens give to demands for patriotism from fellow citizens and governments? Is patriotism dangerous in a global world when the survival of our species depends on international cooperation? Patriotism also creates problems for independent, impartial journalism. That journalists are partial and patriotic was a dominant assumption for two-thirds of modern journalism’s 400-year history. Patriotism only became recognized as a significant ethical problem in journalism in the middle decades of the last century.

Practically, the problem of patriotism is how to shield journalists from undue pressure to be patriotic from employers, advertisers, special-interest groups and audiences. If news media cave in to such pressure, journalism blurs into propaganda and truth-telling suffers. The conceptual problem is how to understand the relationship between journalism and patriotism. Can an impartial reporter be a patriotic citizen? In a global world, can patriotic journalists be impartial informers of international events?

The book that emerges from the passionate and in-depth discussions that took place at this conference will be a benchmark for media ethics in the 21st century.

Report by Philip Lee.