THE GEORGIA straight

MAKING BABIES

Patricia Baird is helping us make sense of new reproductive technologies ~ By Lynne Melcombe

The way we use new technologies to address fertility problems will affect the way we regard human life and society, according to Dr. Patricia Baird. Lorne Bridgman photo-illustration.

Dr. Patricia Baird shifts in her chair when asked personal questions. She is comfortable sharing her considerable knowledge of health and ethics, but she shuns the limelight personally. That speaks volumes about the woman who took UBC's department of medical genetics from obscurity to renown, whose population-health research is used worldwide, and who chaired the Royal Commission on New Reproductive Technologies through four stormy years. *Proceed With Care*, the report that synthesized the commission's findings, was lauded internationally and formed the basis for Bill C-47, the Human Reproductive and Genetic Technologies Act.

With the election call in April, the controversial bill died on the order paper. The second of what were supposed to be three stages of government action on new reproductive technologies (NRTs), Bill C-47 followed a largely unsuccessful voluntary moratorium on certain technologies and practices, such as sex selection for nonmedical purposes, the buying and selling of eggs and sperm, and commercial surrogacy arrangements. It was intended to give muscle and teeth to the prohibitions and to be followed by the creation of a regulatory body to oversee implementation of acceptable technologies—such as in-vitro fertilization—and to screen new ones for acceptability as they became available. But the tempests that swirl around new reproductive technologies—and the woman who captained a national investigation into them—did not die with the proposed legislation. Far from it. The debate between those who hail reproductive advances and those who fear their social repercussions rages on, as does the disagreement between those who portray Baird as a rigid autocrat and colleagues such as Dr. Jan Friedman, her successor as head of the department of medical genetics, who describes her as "a compassionate woman with a spine of flint".

To those who know anything about assisted reproduction, the controversy surrounding it is understandable—now. Several decades back, when the only technique used to help infertile couples was artificial insemination, now known as donor insemination, it seemed simple. A medical student strolled into a sperm bank, leafed through a few skin books, and jerked off into a jar. A woman lay back, put her feet in the stirrups, and was inseminated. Secrecy allowed the woman and her husband to pretend that this was his biological child. A fee covered the sperm bank's operating costs and then some. A small payment provided the donor with enough cash to buy his biochemistry text. It seemed like a win-win-win situation.

Several decades later, Bill Cordray doesn't think so. Conceived by donor insemination in the 1940s, Cordray is among the most vocal of an increasing number of DI adoptees, as he calls them, to point out the problems with the way we handle DI—and, by extension, other NRTs—in Canada and the U.S. (He is an American living in Salt Lake City, Utah.) International research has shown that secrecy damages DI families, lack of knowledge about their biological heritage can leave DI adoptees with an incomplete sense of identity, and some DI offspring feel that cash-for-sperm transactions devalued their conception. As well, some former sperm providers report their own unforeseen repercussions.

Although DI is the simplest of techniques of assisted reproduction, it is surrounded by ethical issues that become more labyrinthine as the technologies become more complex. Therefore, it is not surprising that NRTs are the subjects of heated debate. But to those who admire Baird, the insinuations made against her as she navigated that maze were "perplexing", according to Mimsie Rodrigue, the royal commission's executive director. No doubt the replacement of four commissioners at Baird's recommendation exacerbated the criticism to which she was subjected—by several groups, but most notably by the National Action Committee on the Status of Women—but even before that, there was muttering about the adequacy of the commission's research, the secrecy in which it was held, and Baird's training as a geneticist, a profession that conjures notions of eugenics for some. The public criticism of Baird left many people thinking of her as a dragon lady. However, she laughs freely, speaks compassionately of the grief of infertility, and expresses her thoughts about Canada's future with the concern of an immigrant cognizant of the role good fortune has played in her citizenship.

Patricia Baird grew up in the English county of Lancashire. One of three children, she says her father inculcated in his offspring "a sense of right and wrong and the importance of sticking with what you believe", and that being accountable is "the only way to look at yourself in the mirror". She came to Canada at 17 to study at McGill University in Montreal, and she went into medicine because "it combined a rigorous knowledge base with interaction with people and trying to make the world a little bit better place." She chose paediatrics because, she says with a laugh and an accent that betrays her north-country origins, "I loov kids."

During her internship in Montreal, she married the chief surgical resident at the Royal Victoria Hospital. "He'd grown up in B.C. and wanted to come back," she says. "I said, 'Well, I've never been there, but let's give it a whirl.' " She applied for a paediatric residency at Vancouver General Hospital and set out across the country with her new husband. "He'd told me how beautiful B.C. was, but as we drove into the Fraser Valley it started to rain, and it rained solid for three days," she says, laughing. "But then the sky cleared and the sun came out and I've never looked back."

While working at VGH, she says, "I saw an awful lot of families and kids who were disadvantaged, and I was struck with the limits of ordinary medical care." That was when she became interested in genetic disorders, "conditions that are lifelong and have a real impact on children and their families". Baird thinks she was the first woman west of the Rockies to become qualified as a fellow of the Royal College of Canada in paediatrics, but she never was much for letting gender stand in her way.

"When I was a med student at McGill, only five percent of the class was female. It went over like a lead balloon when I was a pregnant resident," she says with a laugh. "When I had my second [of three children], I was doing a research year. I remember having this huge belly and trying to get my eye over the eyepiece of the microscope, and I couldn't do it," she says, laughing again. "Being a paediatrician, I knew how important those early years are to kids, and I wanted to be with my children when they were little. But it was also very important for me to continue [working] because you lose confidence easily if you give up entirely. I have absolutely no regrets about the seven years that I worked part-time, because I really enjoyed being a mum. It was terrific. I wouldn't have swapped it for anything."

While Baird was growing up on one side of the Atlantic, Bill Cordray was struggling on the other side with a "palpable" feeling that he wasn't his father's son. Like many DI couples, his parents had been advised to keep the insemination secret. A half-century later, psychologists understand the tragic impact of secrecy in families, whether it hides parental substance abuse, child sexual abuse, adoption into or out of the family, or the creation of a life through DI.

"I was 37 when I found out," says Cordray, now 51. His younger brother had died, as had their father a year earlier. During lunch with his mother one day, Cordray commented on the two men's ill health and wondered aloud about his own longevity. His mother blurted out the truth. Actually, he says, "It was liberating." Like that of virtually every other DI adoptee he's spoken with, his memory was filled with nagging inconsistencies. The older Cordray had inexplicably joined the army and left home just after his son's birth. He seemed curiously reticent to act like a parent. When Bill asked his mother if he was adopted, as was his other, older brother, she responded, "No, you're my child." Not "our child", but "my child". Most conspicuously, he did not resemble his father in appearance or temperament. In adolescence, he concluded that his mother had had an affair, and he lost respect for her—until the truth came out.

"This explained all these mysteries. [Finding out] wasn't traumatic; the trauma was the years of secrecy. My dad was a wonderful man, but the secrecy destroyed our relationship." Compared to many DI adoptees, Cordray got off easily. The secrecy surrounding DI often leads to divorce, substance abuse, and/or estrangement within the unit that is supposed to provide children with a foundation in life.

"I'm not an angry man," says Cordray, a successful architect who's been happily married for 28 years and has two healthy, grown children. "But I am angry at stupid policies and at people who lack a basic understanding of the psychological needs of the child."

Nanaimo mother Shirley Pratten, who has raised her DI child with the truth, is angling for a system to address another need. A member of the B.C.-based New Reproductive Alternatives Society, Pratten says: "We're lobbying for a registry like they have in Sweden," where non-identifying medical and genetic information is available to DI families from the start, and identifying information becomes available to the child at 18.

The impetus for passing on data about the medical and genetic health of parents is clear. Less obvious is a reason illustrated a few years ago when a horrified public learned that a widely respected American fertility specialist had fathered 75 children without informing his patients that he had provided the sperm. Admittedly, this is an extreme example of malpractice, and he is now in prison. But given the current lack of legal regulation of the number of children born of any one man's sperm and the practice of destroying records after six years, the spectre for DI adoptees of unwittingly partnering with biological half-siblings can only be addressed with adequate record-keeping and elimination of secrecy.

Although many sperm banks now adhere to voluntary guidelines established by the Canadian Fertility and Andrology Society, providing non-identifying medical and genetic information and limiting to 10 the number of children created by each sperm donor, there are no regulations to enforce the guidelines. Meanwhile, the debate over identifying information continues. Sperm banks fear that the prospect of being tracked down some day will keep donors away. And some DI recipients are as concerned as some adoptive parents used to be about openness. But to Pratten and Cordray, the primary issue is the child's right to know from whose loins he or she sprang. "We're not saying that donors should have financial or legal responsibility," says Pratten, but she says they bear "a moral and ethical responsibility to consider the child's need to make a connection".

Perhaps the most hotly contested issue in DI concerns payment. Currently, sperm providers receive about $50 per contribution, ostensibly to cover expenses such as parking fees or cab fare. "You can't convince me that there's any reason why a sperm donor shouldn't be reimbursed for out-of-pocket expenses," says Dr. Albert Yuzpe of Vancouver's Genesis Fertility Centre. But Patricia Baird believes there's one good reason: "the commodification of human life". Baird's detractors doubt that the no-cash system advocated in the royal commission's report would succeed, but it's likely that few of them have her experience in creating great things with little cash.

"It doesn't take a rocket scientist to build a department with $10 million," says Jan Friedman. However, with little more than "Scotch tape and baling wire", he says, Baird turned UBC's department of medical genetics into one of the finest in Canada. Not only did she lack the lure of a single tenured position, but many of the people she recruited came on their own scholarships or supported themselves with outside funding. "They'd work here for a few years," Friedman says, "and then Pat would convince the dean to pick up their salaries on the strength of their success."

When Baird became department head in 1978, there were only five faculty members (she was the only woman), and they lacked space and funding. She set three goals: increase research, provide services to people with genetic disorders, and improve medical and public education

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about the role of genetics in health. By 1989, when she stepped down to chair the Royal Commission on New Reproductive Technologies, the faculty had grown to 18. She had achieved gender parity; the first department head at UBC to do so. "My objective was simply to get the best people I could," she says, but Friedman credits her with "creating an atmosphere in which women are empowered to achieve their potential". Support staff had increased from five to 120, floor space had quadrupled, research funding had grown twelvefold, and the number of families served had leaped from 500 a year to 6,000. Undergraduate courses and enrolment had doubled, and graduate students had increased from five to 21.

Behind the numbers was the opportunity to teach, which Baird describes as good personal discipline because it forces a person to "really understand what you're talking about. It's easy to retreat into jargon and think you sound terribly complicated and wise, but the wisest people are those who can make a complicated subject sound accessible and simple."

Of her 11 years as department head, Baird says: "It was an exhilarating, fun time." Above all, she is proud that the values of the department's staff reflect her own. Expertise makes it possible for physicians to impose themselves on patients, she explains, but "respect for the other means you have to bend over backwards to make sure you never do that. Respect for the autonomy of the person you're interacting with and putting your skills at their service is really important. I feel this so deeply, [and] the people I've been fortunate enough to recruit have the same ethos."

Baird's respect for people runs like a thread through the background weave of the royal commission's report, forming the basis for its argument against profit motives in assisted reproduction. On the opposite side of the debate are the concerns of those whose interests range from fiscal to abstract to personal. When profitable sperm banks such as Ontario's ReproMed, Canada's largest, object to elimination of payment for sperm providers, it's hard not to hear the sound of coins jingling in their cash drawers. When private fertility doctors like Yuzpe express fears about shrinkage in the donor pool, the realities of running a business mingle with their concern for the childless couples they face across their desks each day. It's when people whose investment is more abstract hold forth that the debate gets interesting, and it's when those whose involvement is deeply personal begin speaking that it becomes compelling.

In June 1996, when Bill C-47 was introduced, Kay Stockholder, president of the B.C. Civil Liberties Association, wrote in the *Vancouver Sun*: "No harm comes to society from the sale of sperm. Men who contribute sperm do not suffer; many women depend upon sperm banks to conceive children." In a recent interview, she added that our rights would be harmed by "draconian" legislation that infringes on our autonomy by preventing us from making personal reproductive choices.

"Autonomy is extremely important," says Baird, responding to Stockholder's statement. "But my autonomy ends when it starts being exploitive of you. Autonomy is not a value that trumps everything else. It has to be balanced in a real-world picture of how the technologies are used."

Exploitation, schmexploitation, some might say. Orgasms are fun. What's wrong with a guy getting paid for it? What's wrong is that in the real world, virtually everyone involved in cash-for-sperm transactions—except the brokers, at whom the criminal provisions in Bill C-47 would have been aimed—loses something, starting with the couple who so deeply want a baby.

"It [money] gets rid of the idea that this sperm came from another human being," explains Diane Allen of the Toronto-based Infertility Network, recalling that she once heard a fertility-clinic worker refer to "doses" of sperm. Money minimizes and dehumanizes an incredible gift, perpetuating a cover-up about what's really going on and "protecting" the infertile male from facing and grieving his loss, she says. Often, male infertility is diagnosed, DI is recommended, and people are pushed through in a few weeks, Allen says. "This does no one a service." As all too many DI families have learned, infertility cannot be cured by DI or any other new reproductive technology, and the pain it causes is not erased by the presence of a baby.

Cash-for-sperm transactions also affect the children produced, as do other NRTs. When she appeared before the royal commission, Allen says, she had already had one child through assisted reproduction and was trying, unsuccessfully, for another. "I saw it as nobody's business but my own," she says, "but my perspective has changed. Now I think we have to look at the big picture." Allen stresses that she is expressing her own views rather than those of the Infertility Network, saying: "People don't know what they're getting into around third-party reproduction. The interests of the children have been overlooked, their need to know who they are, where they come from, how they feel about being brought into the world in a certain way." Think about it, she says: "Would you want to tell one of your children that their biological father was a man who jerked off into a bottle for 50 bucks?"

Even the men who give their all, so to speak, report negative repercussions from their actions. "We had a lot of input from sperm donors to the commission," says Baird. "Many of them went on to marry and have kids and then thought, 'Oh, my God, what did I do?' " Then there are the reactions of their wives, who, on learning that their husband may have had children who came out of a commercial transaction, feel that what they have created together is devalued. The commission also heard from parents of sperm providers who were distressed to think that they had grandchildren they would never know.

"I read somewhere," says Nanaimo's Shirley Pratten, "that DI may be a simple technique but is by no means simply a technique." And DI's ramifications become increasingly clear when one considers that current practices in sperm provision are being used as precedents for other, more complex NRTs. For example, because sperm providers are compensated, ostensibly for their time, inconvenience, and parking costs, greater compensation is paid to egg donors, who must undergo

"Would you want to tell your children that their father was a man who jerked off into a bottle for 50 bucks?"~ Diane Allen an invasive and sometimes painful procedure that can be immediately life-threatening in a small number of cases and can increase the donor's long-term risk of ovarian cancer. But greater compensation, usually about $2,000 to $2,500, increases the risk of exploitation, as can be seen in the U.S., where some women "donate" as many as a dozen times. It's no coincidence, says Baird, that "you don't get the well-off wives of clinic directors selling their eggs. You get students at their wits' end about paying their midterm fees."

The problem becomes clearer still when the discussion turns to commercial surrogacy, in which a woman who has been impregnated by the sperm of another woman's partner carries the child to delivery and hands it over for cash. "Most countries in the world, with the notable exception of the United States, have looked at what the situation really is on the ground," says Baird, "and come to the conclusion that commercial surrogacy should not be allowed because the potential for exploitation is simply too great. Women who are undertaking pregnancies are lower in education [and] socioeconomic status and position. The lawyer is paid by the commissioning couple and acting on their behalf. The assumption is that two parties are negotiating as equals, but that's untrue."

"Nobody," says Stockholder, "wants a situation where women of lower economic class are forced to carry baby after baby as a way of making a living. But if a woman *wants* to do this, is it really worse than cleaning office buildings?" Well, yes. Women who clean for money don't face a choice between becoming deeply bonded with their office buildings and having to give them away or cutting off their feelings during their cleaning experience in order to survive the grief of separation.

If it's okay to pay for adoption, why not surrogacy? In adoption, says Baird, a child is there and needs a home. In surrogacy, we create a human being to meet someone else's needs. And adoption fees cover legal services, travel expenses and sometimes medical care, not conception and gestation.

Even if commercial surrogacy is a bit like a manufacture-and-retail operation, it's a far cry from accepting $50 for a vial of sperm, isn't it? Maybe not. Conceptually, what really is the difference between selling life and selling its building blocks? And if we're not opposed, as a society, to selling the stuff of which life is made, why don't we permit the sale of other human tissues, like organs and blood? "The sale of organs opens up a clear and present danger to *third parties,*" *says* Stockholder, "and the sale of blood is a bad idea." The sale of eggs increases a woman's risk of cancer, which seems clear and present. And why is the sale of blood a bad idea? The component of exploitation? A component that's also present when one pays a person to masturbate?

It's not that creating a nonpaying system would be a trailblazing undertaking. Successful altruistic donor systems already exist in several European countries and New Zealand. Rona Achilles, a Toronto sociologist who researched DI for the royal commission, notes that although we know from surveys that we'd lose three-quarters of the current donor pool with elimination of payment, we don't know how many men would be willing to donate under a different system. "People volunteer their services in all kinds of ways all the time," says Achilles. "This can't be that different." Figuring out who would donate and how to appeal to them is largely a research issue, she says. In France, for example, recruitment campaigns focus on the pain of infertility. Donors tend to be older and have children of their own or to know someone who is infertile.

"Sperm donation may seem like a single, isolated act," says Baird, "but it's not." It has ramifications that no one predicted two or three decades ago. It has the potential to influence the way we use other NRTs. And the way we use those technologies has the power to shape the very way we think of human life and the kind of society into which we bring the children we create. That power, Baird believes, should give us pause for thought about the unforeseen and unresolved implications of all reproductive technologies.

But drawing conclusions from that thought is premature without first pondering the dimensions of infertility. All too often, infertility is trivialized by comparing the millennia-old, biologically inherited, culturally reinforced desire for a child with a deeply felt longing for a new car. Equally often, infertile people are "treated as if we're stupid", according to Jennitr Hillman of Surrey, who struggled with infertility for 15 years and is still involved with a support group. She says they're not just a bunch of "emotionally battered women fighting to have children".

In the first place, as much is 40 percent of infertility is male and is as much an assault on a man's self-image as female infertility is on a woman's. And although the person with the "problem" undoubtedly feels the loss most deeply, in a committed relationship both partners are affected. Furthermore, most infertile people are better-educated than the rest of us about human reproduction. Hillman says that much of the responsibility for misinformation lies with media portrayals of infertile people, invariably women, who have been "used and abused" by the medical system or who resolve their infertility with a surprise pregnancy or a quick adoption. "But they never get to the core of it," she says.

The core of it is many things, but it's not simple. On the one hand, the discovery of infertility is a health crisis, like any other. When people learn there's a problem, says Hillman, "they pull their socks up and educate themselves and decide what they're going to do, whether that be adoption or living childless or going into fertility treatments."

On the other hand, it's a health crisis like no other. After years of turning one's fertility off with contraceptives, the inability to turn it back on is like a betrayal. It's like some part of you has been cut off—or cut out. Once a couple steps on the infertility treadmill, the baby goal can factor into every decision, like whether to splurge on a holiday or save for college, buy a sports car or a minivan. Family gatherings become painful rituals during which infertile people paste on smiles, coo artificially over everyone else's children, and endure endless, tiring queries about when they're going to stop "practising". It's hard for people to understand the loss implicit in infertility; it's nothing anybody can touch or see. It's a cherished dream, unrealized.

Estimates of the rate of infertility vary, with many for-profit clinics using a conspicuously liberal definition. The royal commission defined infertility as failure to conceive after two years of unprotected intercourse. Using that definition, infertility affects seven per cent of us. "And that shouldn't be glossed over," Baird says. "We should give people the choice to have full lives without children, but I also think that most people are embedded in networks of relationships where family is important. We heard from many people that if they didn't have children, they felt cut off from the future. That consequence needs to be given due weight."

It was with an eye to balancing that consequence with the conflicting concerns of a breathtaking array of stakeholder groups that Baird embarked on writing *Proceed With Care*. By the time she had finished, she had covered every aspect of infertility, from causes to prevention, studied technologies from DI to in-vitro fertilization, and reviewed issues surrounding surrogacy and adoption. She had looked at related issues in genetics, concerns regarding research on embryos and fetuses, and judicial intervention into pregnancy. She had heard from infertile couples, homosexuals, fertility doctors, sperm banks, pharmaceutical companies, feminists, and people with disabilities. The resulting report is "daunting" in its

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scope, says Mimsie Rodrigue, the royal commission's executive director, and it was "nothing short of miraculous" that the commissioners, under Baird's supervision, managed to fulfil their mandate in less than four years.

But if *Proceed With Care* stands out as one of the most comprehensive documents yet written on the subject, the commission that produced it will be remembered as being more marked by controversy and hard feelings than any other royal commission to date. Perhaps it was inevitable that this would happen to any body studying a wide range of issues in which a diverse group of people had emotional investments. Or maybe Baird was guilty—as her detractors regularly announced to the media throughout the commission's tenure—of maintaining a medical-pharmaceutical bias and mismanaging the commission itself.

Regarding the perception of herself as irrevocably biased due to her background and training, Baird has this to say: "I think the organized feminist community saw I was a doctor and a member of the academic and scientific community and they simply prejudged. They thought they knew what conclusions I would come to....It was only after listening to what a lot of people said, and trying to sort out the information on its own merits, that we came to the conclusions we did, and I think a lot of people were extremely surprised."

As for the characterizations of Baird as rigid and autocratic, Rodrigue says that is the "exact opposite" of her experience. "I was at the commission from the beginning....I felt that [Baird] was extremely fair to work with and that she listened to all ideas, but they did go through a rigorous filter."

Although the personal attacks have made her more wary, Baird is far from embittered. On the contrary, she describes her four years with the royal commission as a privilege. "I'm really lucky to have had all those experiences, and I have an obligation now to use that and communicate it to other people."

And that's what she's been doing. Since finishing her work with the royal commission, Baird has given almost 100 presentations on NRTs across Canada and the U.S. and as far away as Paris and Jerusalem. She's received honorary degrees from two universities, a Commemorative Medal for her contributions to Canada, and an appointment to the Order of British Columbia. She is the first woman to be named a University Killam Distinguished Professor, a privilege that allows her to teach in any faculty at UBC that invites her. She is a member of UBC's Centre for Applied Ethics as well as the Centre for Health Services and Policy Research, she's vice-president of the Canadian Institute for Advanced Research, and she sits on the committee for the study of ethical aspects of human reproduction of the International Federation of Obstetricians and Gynecologists.

Meanwhile, *Proceed With Care* is back on the shelf where it sat for a few years before Bill C-47 was written, this time accompanied by the text of the dead legislation. Kay Stockholder, who believes that the legislation was based on "hysteria", is relieved, as is Albert Yuzpe, who fears the precedent-setting potential of criminalizing medical treatments. But Diane Allen, whose experience of NRTs is more personal, is fearful. "We're getting closer and closer to making babies out of spare parts. It's time to do something," she states simply.

Perhaps surprisingly, Baird doesn't think the expiration of the NRT legislation was entirely bad. "Bill C-47 [was] unbalanced," she says. It uncoupled prohibitions and provisions for access to the technologies; the latter were supposed to come in future legislation. But, she says, "the prohibition of selling sperm is a bald statement by itself, because then you truly are depriving people. You can only prohibit the selling of sperm if you put in place, at the same time, a nonprofit, publicly funded, accountable, quality-controlled, good record-keeping system that meets a social good and is underwritten by society." And many of the technologies could be publicly funded, she believes, if the provision of health care in this country were based on evidence of effectiveness.

"What we found as a commission is that most Canadians feel that having children is important enough to most people's lives that if there are safe and beneficial ways of providing services to do that, they should be available in an equitable way. That echoes our approach, in Canada, to the whole health-care system, the fact that we feel we should all be equal in the face of illness."

Not having a policy is still a policy, she says. And we don't have to look far to see where that leads. In the U.S., women submit to the risks of egg donation and paid surrogacy because they need money. Wealthy couples buy unlimited access to in-vitro fertilization while middle- and low-income couples exchange their "excess" eggs for services, perhaps wondering for the rest of their lives, if they never conceive, whether or not another couple is raising their biological child. And DI adoptees grow up with no hope of filling in their personal blanks.

"Canada is a decent nation because we care about each other," says Baird, and because we strive to balance the influence of the marketplace and the needs of individuals with the well-being of our whole society.

The new government must pick up the ball that was dropped by the election call, she says. "These issues are not going to go away. They're just going to get more and more pointed."

If there's one thing DI has taught us, it's that the appearance of simplicity can be deceptive. We have an opportunity to use that knowledge to create policies that ensure that people will benefit from NRTs rather then be harmed by them. The decisions we make will affect far more than the way we use the technologies. They will mould the society in which we raise our children and the kind of people they become. They will shape our future. ■