

## **Profile- Andy Shaw- International Journalist**

### **ANDY SHAW Your Guide to the World of Nano**

By C. A. Kennedy

Everyone conjures up mental images of how a writer writes. Some imagine a solitary figure typing away in the wee hours with a cat curled at his feet while others think of a journalist as a globe-trotting free spirit.



Mr. Andy Shaw is that rarity among those who manipulate words for a livelihood for he inhabits both literary categories with great ease. Most certainly Shaw does resemble that lone writer in the attic garret for it is his habit to pound away at the computer keys in the solitude of the early, early hours of the morning with his orange tabby, Murphy, pooled at his feet. Further, there is no doubt that the man does roam far and wide across the latitudes as a travel and technology writer describing exotic locales and interviewing fascinating people from all ranks of society, science, and business.

Shaw, a man of considerable warmth and instant bonhomie who immediately puts one on a first-name basis, is the host of NanoNEWS.TV, and he trails an impressive array of experiences and credentials as he assumes this groundbreaking role in on-line reporting of nanotechnology. Aside from his imposing 255-pound, six-foot four-inch stretch, which definitely reflects his life-long participation in sports, his voice is soothing and mellifluous with a pleasing depth. Shaw's confident manner- always tinged with humor- will set the tone for this new programming whose time has arrived.

Shaw's bio informs that he has logged more than 30 years in Canadian broadcasting, including many as a CBC-TV and Radio reporter. For more than 25 years his home was Ottawa where he was a member of the Parliamentary press gallery, and was the Ottawa correspondent for Technology in Government magazine. This is but the tip of the iceberg for as a book author, columnist, and radio and television commentator, Shaw reports on how technology is being applied to business, government and healthcare, not only in Canada, but also around the world.

In addition, Shaw is Vice President of the Travel Media Association of Canada. He is a freelance writer and columnist for national business and travel publications and has written for Reuters, The Canadian Press, CBC Radio, CBC-TV, CTV, TSN, Broadcast News, and magazines and newspapers, such as the Ottawa Citizen, and the Globe and Mail. Shaw holds memberships in the Toronto Press Club and the National Press Club in Ottawa; and, over the years, has written for the Department of Transport, Health Canada, External Affairs, the Prime Minister's Office, IBM Canada, the Bank of Montreal, the Information Technology Association of Canada (ITAC), and Intel Canada.

Now, all the preceding accomplishments would satisfy most folks, but we may also add that he has navigated the world as a roving sports reporter and broadcaster, reporting five Olympic Games and world championships from all points on the planet. He helped popularize the Crazy Canuck skiers through World Cup circuit coverage, and has worked with more than 50 national associations as a media and communications consultant.

Did I mention that he is the former Vice President of the Canadian Wheelchair Sports Association? Or that he wrote a book entitled "Musical Memories of Markham" to commemorate the Millennium, is the Parade Marshal for the Markham District Veteran's Association, and is a member of the Royal Canadian Military Institute? And that he was a commissioned officer in the Canadian Navy Reserve. Played in the Canadian Football League (CFL) with the Ottawa Rough Riders? That he still vigorously skis cross-country, though little downhill these days, and is an avid walker?

Shaw's distinctively resonant voice and his love of language (he speaks English, French, is studying German, and jests that he can order a stein of beer in fourteen languages) were probably genetically imparted by a Scottish mom from the town of Kirkcaldy and an Irish dad who hailed from Belfast. His mom emigrated from that land of fabulous singers, orators, and Robbie Burns to Canada at the age of 12, and later became an elocutionist who performed Burn's works in Toronto churches and community affairs. "I inherited the ham from Mom. Dad left when I was young, but I saw him regularly on weekends before he died and we shared some good times together."

Born in 1943, Shaw was only two years old when WW II ended and a new era began. "I was essentially an only child though later I did have half-brothers and sisters." Shaw agreed that his birth order was influential in his life, lending as he said: "...a certain independence of mind, I think." One can believe that subtle statement is a *passé-partout* to understanding the man.

Afflicted with a calcium deficiency in early childhood, his legs were not strong and special exercises were prescribed. "I was behind the eight ball as far as physical activity was concerned, but I came out of it and began riding a tricycle...running and getting stronger. I think I began sports competition just to prove that I could do it. In high school I was heavily involved in sports and football, but this was balanced by other activities." Perhaps pre-shadowing his later involvement in public relations and politics, Shaw was elected president of the student council, initiating the now-traditional "School Spirit Week" to encourage student participation in school activities.

Although Shaw carried three majors in Political Science, Economics and English and was President of his Year at Queens University, Kingston, he avows he was not that serious a student. "But, I was serious about learning and spent many, many hours in the library reading periodicals to find out what was going on around the world, and I kept going back to that corner of the library all the time." Even then, it seems, international journalism exerted a magnetic pull on the young Andy Shaw.

He succeeded so well in overcoming his early physical problems that after University he was drafted, as mentioned earlier, by the professional football team, the Ottawa Rough Riders, and played in the CFL for two years. Shaw will claim that he quit before they could "get rid of me," citing the "Peter Principal" requirement of rising to his highest level of incompetence, contending that if he really worked on it, he could probably have been an average player. More seriously he said that it was superior experience and could be a great joy, but the lifestyle of athletes, especially in those years entailed great financial and mental strain not conducive to a stable life. But, after it is over, he added, "You're glad you did it."

Post football, his interest in economics and the fact that his Mom was secretary to the chairman of the board of the Bank of Commerce, led him into a short-lived hiatus from sports and into bank management in Ottawa. "Then working as a co-host of a football phone-in radio show got me into the communication world. In speaking contests in school, I had found that I had the gift of gab...blarney, as it were."

This transition occurred, he said, when, "After a poor showing by Canada at the Mexico Olympics, the federal government allocated funds for amateur sports. With this support the National Sports Administration Center was formed, and Shaw was offered a position. "In the early 70's I became a director of communication for the National Sports Center, which housed all the associations that ran amateur sports, when they needed a professional in communications. Simultaneously, I got an audition for a national TV broadcast on Canadian Television. I then became the sports director for both radio and TV in Ottawa." Almost off-handedly, Shaw mentioned that he was editor of a budding sports magazine during the same time frame.

In his position with the National Sports Center, Shaw observed that Canada would send World Championship teams overseas and they would do very well; but that the good news didn't trickle back to Canada very satisfactorily, leaving Canadians in a news limbo about the successes of their own teams. Shaw devised a program that sent freelance writers along with the teams when they traveled to places like the World Cup Skiing in France, and the journalists sent back reams of photographs and radio releases. This tactic was such a resounding success that Shaw, the Director, stepped down to enlist in his own program as Shaw, the Reporter.

This new venture exposed him to every facet of reportage: "Newspapers, broadcasting, TV networks. I wrote, produced and directed - it was a one-man band. At times I directed the TV crews as well, and we did 35 different countries." As a sports reporter Shaw was on the scene in Munich on that terrible day of the Black September terrorist attack on the Israeli team. He managed to transmit the first radio report by eyewitnesses to the horrific attack back to North America. "It was a real baptism of fire...our own Canadian equestrian team observed the terrorists enter the Village but thought it was some kind of military exercise."

Recalling the state of communications technology in those earlier days, Shaw said, "International broadcasting was bound up in high costs and the difficulty of sending pictures by satellite. If you had your own satellite, it wasn't so bad; but using local host broadcasters was difficult, although the radio (transmissions) used the telephone. Newspaper copy went by Telex." Vamping just a bit, Shaw boasted that he possessed the most advanced technology available at the time...an electric typewriter equipped with a smidgen of memory, which elicited the curiosity and envy of fellow journalists.

Since most winter and amateur sports took place in Western Europe, it made sense for Shaw to base in Switzerland, so he moved his wife and their two young sons, ages five and nine, to Switzerland for four years while he worked as a freelance reporter. His sons quickly became adept in the French language; and the eldest, Trevor, went on to win a Canadian national high school debate championship in French, later taking an international law degree at the Sorbonne in Paris. Shaw's younger son, Dennis, employs French as a financial advisor in Ottawa. His sons followed their athletic father into sports: Trevor was captain of the Varsity Fencing Team at Queen's University, and excelled in rowing and archery. Dennis, also physically gifted, played as a center for the University of Western Ontario which won the Vanier Cup, the National University Football Championship in 1994, to his father's proud delight.

Shaw also counts his blessings as he speaks of his present domesticity graced by Lynn Waghorne, a graphic designer, who gifted Shaw with two stepchildren: Megan, now at George Brown College in Toronto preparing for a career in tourism and the hospitality industry; and David, who has been bitten by the golf bug and will attend a golf management school in Arizona. Shaw says simply, "They light up my day," and you hear the truth of that in his voice.

As another example of professional diversity, Shaw recounted the days he spent toiling in media relations for the Prime Minister's office during the 70s when he was responsible for the entire complement of journalists covering the convocation of the Commonwealth nations, which meet in a different country biennially. This major event included the presence of HRH Queen Elizabeth, herself. If that wasn't enough pressure, Shaw was also working with the sovereigns of all the nations, as well as the Press Secretary of Buckingham Palace. In the meantime he was dealing with all the complicated technologies involved, shepherding 8,000 journalists and making arrangements for their accommodations - up to that time the largest group of reporters ever assembled in Canada.

In a second dip into the political life, Shaw took on the daunting task as Wagon Master during John Turner's run for re-election as Prime Minister in 1988. The Wagon Master handles media relations and airplane logistics for reporters, and Shaw recollects crisscrossing the continent five times in eight weeks, and leading/guiding/directing 60 to 80 members of the media and all their accoutrements and various deadlines.

Interspersed among these various duties and multifarious positions, Shaw found time to establish a public relations firm "dealing mainly with media relations and interview training for national sports figures in amateur sports." Then in the early 90s, in another policy reversal the Canadian government elected to cut back on its investment in amateur sports. Subsequently, amateur sports activities were severely curtailed and Shaw's work with the National Sports Center evaporated. He and his partner reluctantly decided to close the business. Very suddenly it seemed to him, "I was on the street as a freelance writer for the first time in fifteen years."

Now based in Toronto, and flourishing professionally and personally, Shaw recalls his decision in 1993 to add to his writer's repertoire by specializing in technology reporting by building on an earlier fascination with scientific applications to problems. "In the late 60s I spent a couple of years in the Navy Reserve working in the Directorate of Recruitment National Defense Headquarters in Ottawa - similar to the Pentagon - where I was instrumental in the recruitment of technologies from community colleges. The applied science in various departments held a wonderful range of work, and I acquired a broad view of applied technology from coast to coast in Canada."

"As a journalist in the early years of the last decade, I recognized the great need for information - for technology reporters. Writers were needed to describe and inform as we moved through the vast transformation of all the communications. We needed reporting on things like air traffic control and navigation - the development of software - air navigation systems." Shaw soon discovered that the scientific arena was not so different from sports reporting. He found the people fascinating, articulate and helpful, and there was definitely the element of world-class competition in research and development. Shaw also authored scripts for a 13-part television series sponsored by AT&T on the future of technology which appeared on CTV and Canada AM.

While on a press junket to Switzerland last year, Shaw discovered his latest passion: Nanotechnology. Although conversant with the emerging science, it was on this excursion to the major scientific centers and universities of a country dedicated to becoming a leader in nanoscience that his eyes were fully opened to the present state of the science and its astounding inherent possibilities for the future. (Andy will be taking his 5th Journalist Tour to Switzerland in September 2005, he just can't get enough nano)

"It was an epiphany," he said, "I saw in six days what this could all be...it's in everything now. Nanotechnology will make life better in any dimension you can think of. Everything from filtering

blood to paint for cars...it touches everything. Things like medical masks are fabricated with nanofabric, helping hospitals deal with problems of air-borne infections. People will invent better communications and the different systems will be able to talk to each other. We need to understand the technology and try to explain it to everyone."

In an article for Canadian Industrial Publishing, Shaw spoke of nanotubes and millipede chips (1,000 times smaller than silicon chips). "New nanotube-based materials can be at once as flexible as rubber and as hard as diamonds. It's been speculated that such material could form cables for a "space elevator" that could run supplies up to an orbiting station."

"Since nanotubes can also be made into semiconductors, they, or millipede chips, could be invisibly blended or woven into a host material. So car bodies could clean themselves, heat or cool, and alter their size --all at the whim of the driver or wearer."

Further, he reported, "Nanotechnology computers (will be) so miniscule that researchers at the University of California and elsewhere are developing "smart dust". Within motes of this dust will ride the sensors, processors, networking, and power supply needed to make clouds of smart dust do the bidding of its developers." This could lead to extremely effective pesticides, or taken internally could provide information about the state of your health, or even lead to new weapons of war, he added.

And on a more cautionary note, he wrote, "...nanotechnology has its scientific skeptics. Some scientists believe the machine-like assemblers described above simply won't work. They know that at the nano level things don't behave quite like they do in the macro world. The physics change and become less predictable because it's where the much more chaotic quantum mechanics begin to take over."

"Yet, nature itself has shown that nanotechnology does work, at least in biology. The human cell is an exquisite nanostructure capable of self-replicating and assembling the most complex and intelligent structure we know of in the universe."

Shaw concluded with: "So the bet is that nanotechnology, now just in its infancy, will be multidisciplinary as it matures, needing the skills not just of the engineer, but the physicist, the biologist, and the chemist. Recognizing this, leading educational institutions such as the 'Ecole Polytechnique Federale de Lausanne (EPFL), are changing curricula, fusing engineering with life sciences."

As a wordsmith, Shaw derives sheer pleasure from putting the words of the budding science on paper...words like "buckyball" and "millipede chips." His amazement at the astounding ability to peer through an atomic tunneling microscope (ATM) to view atoms... to SEE models of live atoms...has not abated by a whit. Then there is the exquisitely sophisticated feedback of the scanning tunnel microscope (STM) that allows one to actually FEEL the surfaces of atoms using nano-size probes, he said, sharing a miracle of science with the listener.

About the concept of NanoNEWS.TV, a Webcast covering all aspects of nanoscience and nanotechnology, Shaw said, "It will be both interesting and educational, and it is needed if people are going to understand it (nano). I think nanotechnology is the right thing (for the future). People, students, artists - everyone needs to see it - to see the amazing visual effects. So much is happening... we need a clearinghouse of news and developments so that people can tune in and see what's the latest in nanotech. Archives should be available on demand for the scientist and the layman alike."

"I think there's a sea change coming: This (science) works at such a fundamental level it is going to affect everything and is a phenomenon that should be reported. What I enjoy reporting most is how it affects people, and how it does this for the betterment of all. The difference between nanotechnology and other technologies is that you can see the results, but you can't observe the process."

In addition to nanotechnology, Shaw is fascinated by how organizations function, especially non-profits, and he quoted Peter Drucker, a business writer, who avers that the work which non-profits do is more important than those of profit-oriented organizations in many instances. How people get together to promote common interests, and the insightful concept that non-profits are perhaps the only type of organization capable of filling certain needs, has become another avenue of exploration for Shaw. Perhaps this innovative concept is another harbinger of our future that Shaw has identified in its infancy.

As a multi-talented man of diverse interests, Andy Shaw just may be the ideal agent to demystify the esoteric science of nano for the layman while offering substantive information for scientists and entrepreneurs. NanoNEWS.TV has the possibility of affecting huge numbers of people by informing and educating all of us about nanoscience and appealing to audiences at all levels of expertise...and isn't that what every good journalist strives to accomplish?