

June 21, 2000

CREATIVITY 2000

**Southam Hall, National Arts Centre
Ottawa, Ontario**

**Speaking Remarks
Peter A. Herrndorf
Director General & CEO
National Arts Centre**

9:00 Introduction of Hon. Herb Gray

Welcome, everyone, to the National Arts Centre. I'm Peter Herrndorf, the Director General and CEO of the National Arts Centre, and it gives me great pleasure to see all of you here today for Creativity 2000. We're very proud to work with the National Research Council and the Canada Council for the Arts to bring together so many people with a passion for the arts and sciences.

We're proud that the NAC has been chosen as the venue. Why here?

Why not gather across the canal at the Congress Centre to discuss creativity? Or across the street at the Chateau Laurier ballroom?

This afternoon, I'm going to have an opportunity to talk about the science of why this is such a great place for us to gather. But right now, let me get mystical about why we're here.

On this stage, the finest dancers of our times have performed. As you listen to the sound of my voice and my words, think about other voices and other words heard in this theatre - the greatest actors expressing the most subtle and profound thoughts from the greatest dramas of not just our time, not just the past hundred years, and not just the past millennium - the finest theatre going right back to the Ancient Greeks.

If a space can be infused with spirit - if there are « vibes » that linger when the physical presence is gone - then this is a very powerful place. Combine it with the Studio Theatre next door, and the Southam Hall at the other end of the building. In the 30 years since it opened, these spaces have had perhaps the highest ratio of talent-per-square-inch of any space in all of Canada.

And now that you're all here, the ratio has just gone up !

The National Arts Centre believes passionately in what we have come to discuss today. We believe there is a community of interest among everyone who enjoys the adventure, the exploration, and the fun of creativity - whether your means of creative expression is in the sciences or the arts.

We believe the arts and sciences have much in common and we look forward to examining what we have in common today.

And we believe that Canada's future, in a knowledge-based economy, will be shaped by creativity and innovation. The arts stimulate the brain's synapses. They get us thinking about things in new ways. The artistic capacity of a nation will have a direct impact on its ability to compete in this knowledge-based economy. For that reason alone - and there are many other reasons as well, I assure - but for that reason alone, Canada's public policy makers must champion the arts and sciences.

It's my pleasure, now, to introduce one such champion. The Honourable Herb Gray has served in Parliament longer than any sitting member. He has had a stellar political career since he was first elected to the House of Commons in 1962, and serves as the Member for Windsor West. He has served in ten Cabinet portfolios, as well as Leader of the Official Opposition, and is now Deputy Prime Minister. Prime Minister Chrétien also gave him responsibilities for the Millennium Bureau of Canada.

Mr. Gray has come to the NAC many times to enjoy the performances here. Minister, I know that your tastes in the arts are very eclectic. I know that you're a great fan, for example, of Bruce Springsteen, who performed at the NAC back in the 70s. You could probably tell this audience, even better than I could, about the range of talent that has graced this stage. It's an honour to have you bring us greetings from the Government of Canada.

Ladies and Gentlemen, please welcome the Honourable Herb Gray.

15:25 Introduction of Module 3

Welcome back from the break. We've enjoyed a very stimulating discussion this afternoon about how the brain creates. Now we move into a discussion about structure and space.

Let's start by listening to space ; listening to how structure affects sound. I want you to stop listening to what I'm saying for a moment, and listen to the sound of my voice. Listen to how it reverberates in this theatre. Listen to how it fades.

I am demonstrating theatre acoustics - a field that fascinates architects and actors, physicists and sound technicians. A room is a musical instrument. It resonates with the sound within it. It adds quality and tone to the sound.

People interested in acoustics speak in terms of diffusion, intimacy, spaciousness, and bass ratio - qualities that affect what kind of art can be performed in a particular space. Music has evolved in response to the sound qualities of the space in which it is performed.

Gregorian chant was performed in stone cathedrals with soaring ceilings, where sounds take five to ten seconds to fade away. The music suitable for that kind of space is slow and dreamy, full of open vowels.

Hundreds of years later, music was written to be performed in small rooms, with plaster walls, where it took sound only one-and-a-half seconds to fade. Composers like Bach and Vivaldi wrote music full of intricacies and polyphony. It sounds great in small rooms. It doesn't work in cathedrals.

Do composers know the science of sound when they write? Not likely. But they know intuitively what kind of music works in the rooms in which it will be performed. Did the builders of medieval cathedrals or baroque palaces think about how their buildings affected what could be performed there? Not likely.

But today we do know how the science of space and acoustics affects the art of creating music. Scientists, technicians, and architects still don't have all the answers to what makes great sound in a room, but they're getting closer. This is a 20th century example of how scientists, engineers, and artists have been collaborating.

But what about the 21st century? Technology is creating entirely new challenges and opportunities for artists and performers, scientists and technicians. In London, Ontario, the NRC has a Virtual Environment Technology Centre. Step inside its theatre, and you may find yourself in the prototype of the car of the future, or the inside of the human heart, or the streets of Renaissance Florence. Now that's a theatre!

Today, the centre is used by designers and engineers. The technology is available to the entertainment industry. What kind of art will evolve to take advantage of the ability to create an entire new reality for anyone steps inside a theatre? What skills will artists need to master? What features will the designers of the technology need to include? I don't have the answers. We need a dialogue between arts and technology about what is possible; between producers and audience about what is desired.

That kind of discussion constitutes a small part of the topic we will look at in Module 3 of our Creativity Forum. How do the elements of structure and space influence our thinking? What can human thought do to manipulate structure and space? I'm pleased to introduce a panel of very distinguished individuals who will approach the topic from very different directions.

Sir Harold Kroto won the Nobel Prize for Chemistry in 1996. His research involved a new class of carbon molecules, C₆₀, known as fullerenes. Earlier in his life, however, he was pulled very strongly toward working with another type of carbon altogether:

graphite, also known as pencil lead. He seriously considered a career as a graphic artist. Audiences in his native Britain are very familiar with Sir Harold as a science communicator and film producer whose programs are featured on the BBC. Sir Harry has strong connections to Ottawa and the National Research Council, where he held a post-doctoral in the mid-60s.

The work of our second panelist is very familiar to Ottawa. I have had the privilege of working our next panellist when I was Chairman of the Canadian Museum of Civilization. Douglas J. Cardinal is the architect responsible for that museum, as well as many other outstanding buildings in Canada and around the world. In 1993, his firm was awarded the design commission for the National Museum of the American Indian. His firm pioneered the use of computers in architecture, and remains at the forefront of applying technology.

To facilitate the discussion, we have invited Don McKeller. I have admired Don's work as an actor, writer and filmmaker for many years. Most recently, Canadian television audiences have seen him in his second season of Twitch City which he also created and co-wrote. The film community knows his directing work through the feature film, Last Night, which won the Prix de la Jeunesse at Cannes in 1998. I urge anyone who enjoys the music of the NAC Orchestra or our Baroque series to see another film in which Mr. McKeller starred and shares writing credits, The Red Violin.

I now turn things over to Mr. McKeller.