Massive Change
A Manifesto on the Future of Design Culture

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The Canadian Club

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Ladies and Gentlemen, I am truly honoured to be invited to address Canada s business and policy leaders. I am delighted to have an opportunity to present recent thinking on the future of design a matter I have become more and more convinced needs serious consideration by the likes of the people in this room.

Now before I get started I need a little drink.

I m sure you will be surprised to discover that what I am about to drink is Singapore sewage. That s right, absolutely pure Singapore sewage. Using a process developed right here in Toronto by a company called Zenon, raw sewage goes in one end and pure H2O comes out the other. Singapore is marketing it under the brand name New Water.

By now you are asking, what does this have to do with design?

IWB

To answer that question I have a story to tell.

Flashback to the fall of last year. I am approached by Paul Carder at George Brown College to develop an educational project that is off the university grid. He invites me to come down and talk to the president, and meet with staff and students. During the discussion, two students tell me about the wonderful experience they have had doing a special project in addition to their assigned curriculum. They had launched a magazine and published it in the school.

I asked them what made it so special? One of them said, We had to learn everything .

I recognized immediately that that was the model for learning that I knew and understood.

That was the model for my own design studio. And that should be the model for my project with George Brown.

Universities have the burden of measurement, and therefore are forced to ratchet down to what can be measured quantity. We all know that real learning is not what is measured. Real learning changes your world. It s transformative. It s a chemical reaction that can t be undone.

We made an audacious proposal. We would collaborate with George Brown to launch the Institute without Boundaries.

Students would spend a full twelve months inside our studio, operating as a team what Bill Buxton would later call a renaissance team working alongside our other teams.

They would tackle a real public project, not a fabricated theoretical assignment, but a full-fledged public intellectual project, with real deadlines, real pressures and real outcomes.

As a project-based model, it meant we would have to develop the methods of producing an unknown outcome, and learning everything.

Not only did George Brown accept, they insisted that we begin immediately. We accepted our first group of students to the institute in January of this year.

Vancouver Art Gallery

Around the same time I received a call from the Vancouver Art Gallery. They asked if I could imagine a major exhibition as a manifesto on the future of global design culture. Our first reaction was that it was just too much. How could one do such a thing?

It would need to be global in scope and also in effect touring to seven global cities.

It would cross all the design boundaries and would include producing not only the exhibition, but also a book, a film, an online project, and a product line.

And it would have to open in June of 2004.

Massive Change

We realized that what Vancouver was asking for was everything we promised the students of the IWB, and we accepted the commission. The first project of the institute will be to define the future of global design culture.

As we began our research we set out to discover:

Has there been a change in design culture?

How do we define design?

Is there a global project something that connects seemingly disparate practices?

It is important to note that we took aesthetics off the table entirely. We don t care what design looks like. We are not interested in the visual. We are focused only on **design capacity** — what design makes possible.

We discover there has been a change in global design culture. In fact, what we discover is so audaciously hopeful, so advanced, so optimistic, so generous, and so global that we call our project Massive Change.

Toynbee quotation

That project is best described in 1957. Former Prime Minister, Lester B Pearson, wins the Nobel Peace Prize for inventing peacekeeping. He presents an extraordinary lecture that focuses on how cultures are being brought into contact with one another by new capacities for exchange. Pearson quotes Arnold Toynbee, saying, the twentieth century will not be remembered as an era of political conflict and violence, or as an age of technical invention,

(Who today can imagine it in any other terms)

but rather as an era in which we dared to imagine the welfare of the entire human race as a practical objective.

Now that is what I call design.

When I read that, I thought ***that* is the definition of design** global success as a practical objective. Not a utopian vision by definition unreachable *that* we leave to the realm of art but a practical objective that is design the intersection of art and science.

Toynbee s observation implies the central thesis of our project global well-being as a practical objective and our research bears this out. **There has been a fundamental radical change in scale in the capacity of design to meet human needs**.

Diagram: The new order

Within the natural order of things that has evolved over hundreds of years, the kingdom of nature remained the largest of all possible envelopes, a category that contained all other categories. Within nature existed a realm of human action we call culture. Within the realm of culture there existed the class of business, and design existed as an order, or sub-set of business. Most business and policy leaders would understand and accept this diagram of relative scale, complexity, and responsibility.

However, what we see over the last hundred and fifty years, and in a dramatically accelerated pace over the last fifty, is that design is changing its place in the

order of things. Design is evolving from its position of relative insignificance within business, to become the biggest project of all. Even nature even life itself has fallen or is falling to the power and possibility of design. At the same time we acknowledge the hubris and inherent paradox of the new situation. Namely that we have dominion over nature, and are also subject to its laws and powers. This new condition demands that design discourse not be limited to boardrooms or kept inside tidy disciplines. The ethical debate needs to be brought to the general public.

Design economies

To do that we abandoned the classical design disciplines in our research, and instead began to explore systems of exchange design economies° realms in which design is a driver. Instead of focusing on architecture, we looked at urban economies. Instead of looking at product design we looked at the economies of movement. Instead of isolating graphic design we considered information economies.

Perhaps the best example of what we are discovering comes from what we call the living economy the design of life itself. Until Watson and Crick unraveled the structure of DNA, life was a realm beyond the capacity of design, a mysterious zone outside the possibility of our intervention, except in the most clumsy and brutal fashion essentially rubbing things together. By rendering life

as a system of information, a system in which we could enter and manipulate outcomes, nature became a field of design culture.

Alvin Toffler wrote in The Third Wave, which was also an optimistic look at human potentials, Second Wave thinkers conceived of the human species as the culmination of a long evolutionary process; Third Wave thinkers must now face the fact that we are about to become the *designers* of evolution. Empowered as such, there s a responsibility to address the new set of questions that go along with that power.

Today biotech is a global design business worth more than 200 billion dollars, where the top five companies spend over $130, 000 per employee on R & D annually.

To make the project more concrete, let s look at some examples of massive change developments.

Golden Rice

Dr. Patrick Moore resigned from Green peace over this controversial product developed in Switzerland. Aimed at eliminating blindness for 500,000 children a year it is not a food product, but rather a first attempt at a delivery system for vitamin A in the form of beta-carotene.

Protato

An Indian product with a protein built into its genetic makeup.

Indian officials are now meeting with environmentalists worldwide to encourage them not to take a stand against a product they say will revolutionize the subcontinent.

Featherless Chicken

Designed to make growing chickens possible in the poorest regions of the world, which are also the hottest.

This seems like the worst nightmare of those against genetic engineering, but is in fact bred in the old fashioned way, of unnatural selection.

John Todd

Designer of a company called living machines. Someone we will be working with in our design of Downsview Park.

Designing nature with nature, his systems clean water using two hundred species to extract everything from particulate matter to heavy metals.

Now you see what Singapore Sewage has to do with design.

Now, one thing I would like to emphasize at this point, is that I am not promoting these developments. The object of our project is to analyze and document what is actually happening today in global design culture. It is not futuristic, except to the degree that what is happening today is always futuristic, simply because it is so poorly understood. We are attempting what Marshall McLuhan called predicting the present .

Urban Economies Los Angeles

The global project of design is to house the entire world population. Which in one century has gone from one to six billion, while doubling life expectancy.

Architectural education however, is locked to the idea of the singular, when in fact all of the problems are plural.

If car design was innovating at the rate of architectural practice, our cars would also still be made of wood.

Mobile Homes

In all the years that I have been working as a designer, I have yet to meet a mobile home architect.

A field off the radar screens of architectural discourse.

And yet, this is an area that is embracing the ideas and techniques of manufacturing, and this year will produce 33% of all new dwellings produced in America and already houses nearly 7% of Americans.

Manufacturing Economies

In manufacturing economies there has been a radical change from a centralized vector based economy where product goes out and never returns,

to a closed loop, where matter is continuously cycled, not recycled, in a process that adds intelligence and performance.

The pioneer in the field is William McDonough, who is working with Ford on the development of the disassembly line.

Movement Economies

Dean Kamen, is shown here meeting President Clinton in his iBot wheel chair that allows people confined for life to rise up on two wheels to relate eye to eye.

Dean Kamen s **Personal Transporter** is a great example of massive change.

It promises to do to the automotive business what the personal computer did to computers.

The Segway is not conventional product design, but rather a synthesis of new developments in computing, materials, energy, and manufacturing.

Sir Clive Sinclair, who in the eighties developed the Sinclair, one of literally thousands of attempts at producing electric city vehicles. A new Sinclair is now in development.

Materials Economies

Traditionally material has been something that design was applied to. Now material itself is a design project.

Tissue Scaffold

On the left is a biodegradable scaffold for the production of living tissue.

Self-healing plastic

A material with a repair kit built into it own substance.

Information Economies

Returning to Toynbee s formulation for a moment and considering information economies, one of the most important developments is the capacity to render global systems. This image of the ozone hole galvanized public opinion and governments worldwide and helped to change policies and practices.

The Rotary Club

Twenty years ago the president of the Rotary Club realized that they were in a unique position to undertake an extraordinary mission the eradication of polio. Since then they have raised more than a billion dollars and organized their system of clubs worldwide in that effort.

They are now down to less than a thousand cases a year, and are raising several hundred million more to finish the job before 2005, their 100th anniversary.

If they succeed, it will be the first time in history that a global disease has been eradicated, and it will be thanks to design of communications, technologies, medicines, and organizations.

What do these projects have in common? Potatoes with protein; rice with vitamins; pure water from sewage; a standing wheel chair; quiet, clean intuitive transport; the disassembly line; the global image; the eradication of polio. They are part of a global movement that is at the heart of our project the welfare of the entire human race as a practical objective.

Massive Change

Perhaps the most startling discovery in the research is the degree to which the story of Massive Change remains untold, how the media, with its mind numbing insistence on crisis and disaster has somehow ignored one of the most extraordinary stories in human history. Massive Change is a story about distributed problem solving, global cooperation, generosity, openness, and connectedness, and the collective production and distribution of wealth on a scale the world has never seen. When we say wealth we don t mean strictly monetary wealth, but rather the wealth of life, the wealth of liberty and health, the wealth of human thought and action.

It is as if we hand made a treasure map so beautiful, so pure, that we couldn t bear to look at it directly, so we cut it into a million pieces and offered a tiny fraction to anyone willing to take up the challenge of Massive Change.

What all of this suggests is that in future, if you are not a design business, you may not be a business at all, if your policy is not a design policy, you re not imagining our full potential. It suggests also that the dilemmas and conflicts in the design fields ought to be considered by the broadest public.

With our new capacity and power to affect outcomes from global environments to living beings, should come the responsibility to public discourse of the highest order. That is the ambition of Massive Change.