



change comes to canada

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change
comes
to canada

*Challenge of
the changing times:
a personal glance
by Lister Sinclair*

CANADIAN GOVERNMENT PAVILION
EXPO 67, MONTREAL

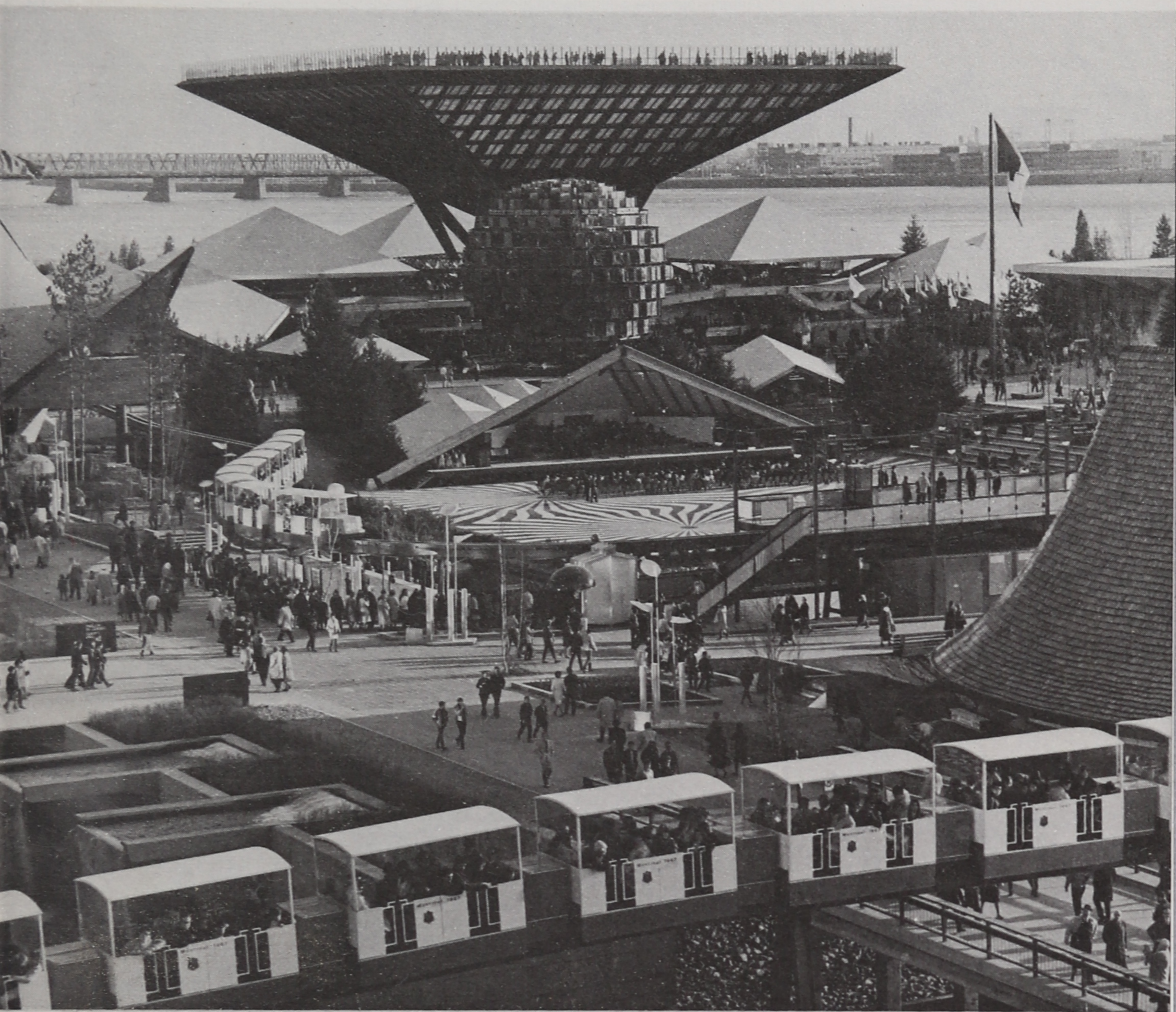
The Pavilion of Canada tells a story of a people and their country. That story will create many and varied impressions which may be merged and modified by memory.

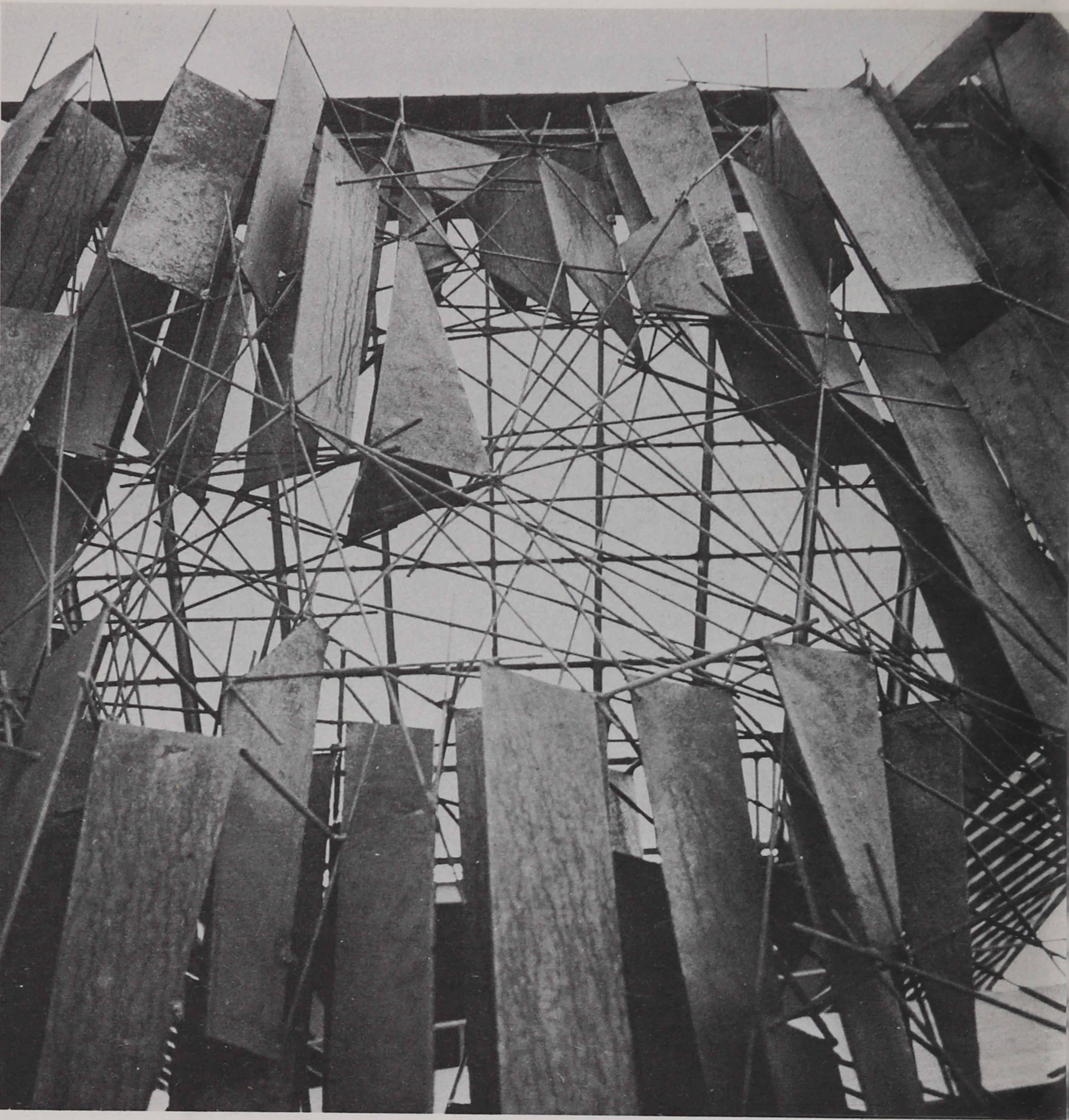
For those who wish to preserve their impressions, perhaps to enhance them, this series of brochures has been prepared. Taken together, they describe the overall theme of the Pavilion. Read separately, each presents a broader and deeper view of one or several aspects of the whole.

In coordinating the series, we have borne in mind that Canada has different meanings for different people. For this reason, each writer was left free to interpret the exhibits in his own light and to relate them, as it were, to his own thoughts. The diversity of styles and views apparent in these short essays thus reflects the broader diversity that is a trait of the Canadian people.

H. Leslie Brown
COMMISSIONER GENERAL

Lucien Parizeau
ASSOCIATE COMMISSIONER GENERAL





Canada: A Personal Glance

the inscrutable north

Nobody knows for sure where the name Canada comes from. Some say that it's an Indian word, others say it's Spanish. Canada: nobody knows what the word means, nobody knows what the country means. So everybody is free to find a private meaning of his own.

*our home
our native land*

Canada is an idea, a dream, a feeling, above all, a sense of home. Every Canadian who thinks about Canada (and most of us do at one time or another) has his own idea about the meaning of that dream. But if you talk to people from one side of the country to the other, you will feel that for all its variety, the idea of Canada still has a power to bind our hearts. In all its forms, it gives us a sense of home.

*five to
the square mile*

Canada is a big place, the second largest in the world, for sheer area. There are about twenty million of us. If we were spread out uniformly, we could put on quite a bridge tournament: there'd be just about five people to the square mile: four players and an umpire. Among industrialized countries, only Australia has a population density lower than Canada. Great Britain is well over a hundred times as crowded. But of course, we aren't spread out uniformly at all. Canada isn't like many European countries, fairly evenly covered with wall to wall population. Our population is clumped up in towns and cities strung out not far from the forty-ninth parallel, the United States frontier, the undefended border. But Canada's people mostly live in an archipelago, islands of population separated by oceans of wilderness. Drive across, and you'll know what it feels like: a fine country but it could do with a little judicious editing.

the urban archipelago

*an independent country
in America*

But wherever we go in Canada, we keep one anxious and fascinated eye on that peaceful border and what crosses it: ideas, feelings, money and people. Only Mexico shares with Canada the tantalizing situation of being next to the United States, rich, powerful, influential, glamorous and enticing. Much of our way of life consists in reacting to and from the Americans. For although we are an independent country, we are on the American continent, living in American style cities. In Canada, the West is still open. Almost three-quarters of our population still lives in the Great Lakes-St. Lawrence region, and the population continues to grow. Canada has one of the highest birthrates of any industrial nation.

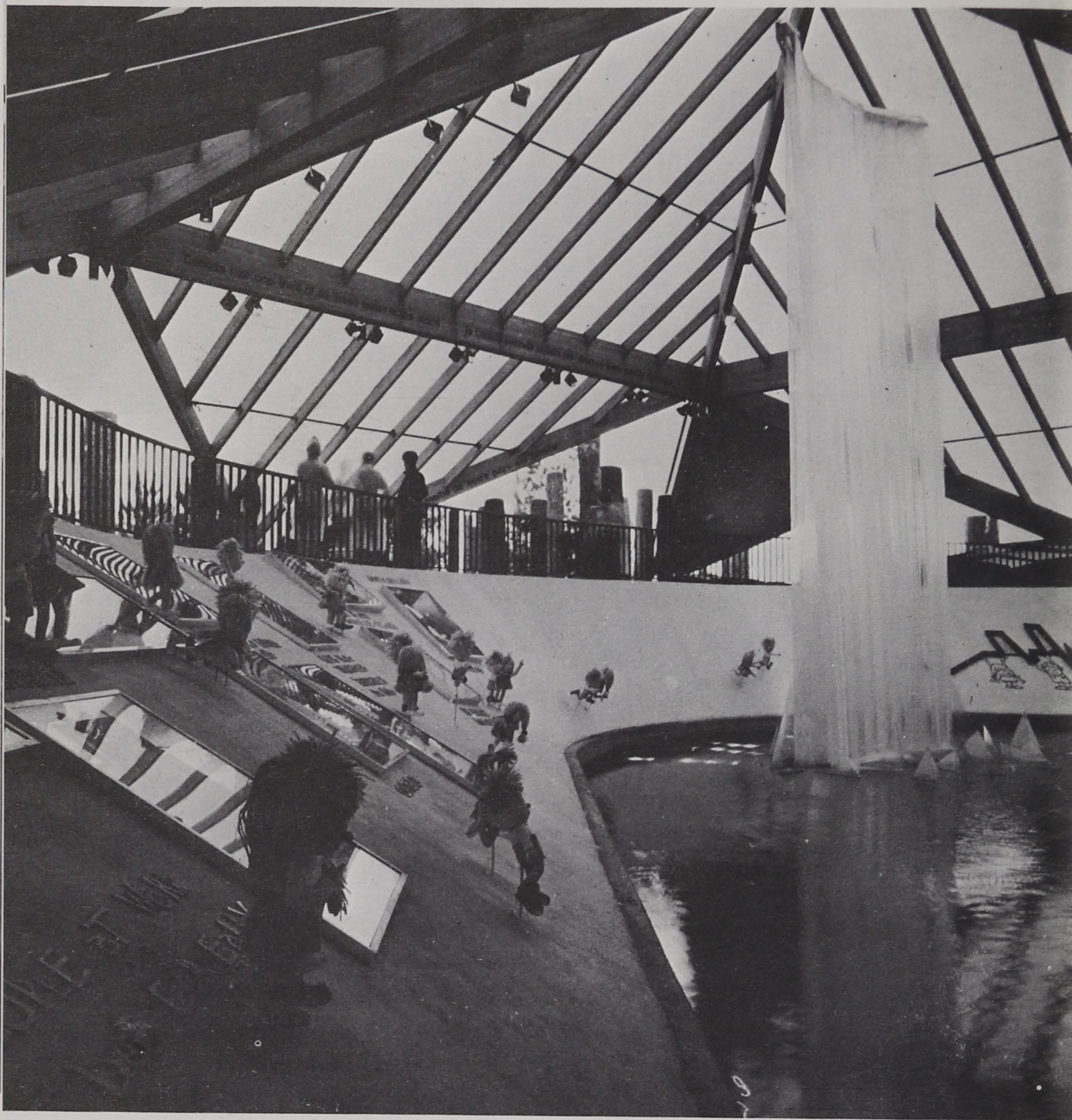
a land of aging youth

Canadians sometimes talk about Canada being a young country. Sometimes this is a point of pride; often it's used as an excuse. Either way, it isn't true. In 1967 Canada has lived under the same constitution (more or less) for a hundred years. Not many of the world's countries can say as much. It's hard to realise that even European countries with long and glorious cultural traditions, like Italy or Germany, have only existed a very short time as political entities. Compared with some countries, Canada's history is relatively short. But it is much in evidence. Canadians who feel a sense of injustice about today's economic, political or cultural arrangements often appeal to history.

the burden of history

Many Canadian historical events are still charged with emotion. The significance of the fall of Quebec, and even the actual events of the campaign, is still hotly disputed. Canadians do not agree on the complex personality of Louis Riel, who was hanged in 1885. But as what? A patriot-martyr, the victim of bureaucratic persecution? Or a traitor and a madman, a dangerous and wicked rebel?





*whose side is
Canadian history on
anyway?*

Canadian life today is full of conflicts over the interpretation of Canadian history. Sometimes they say that some historical event simply didn't happen. This is usually if they don't like what they think were the consequences. Others may say it happened all right, but it's been misrepresented and distorted and the older, better situation should be restored. Others will point to events in the past, and say that that's the way it was then, and that's the way it should be now.

In many Canadian political quarrels, Canadian history is brought to support all the different points of view. It's very puzzling, if you think Canadians are a young people with no traditions. It's not so puzzling if you realise that we have great faith in the magic power of tradition.

something right?

Still, to have lasted a hundred years, we must have been doing something right. But will it be right for the future? Canada is a country where nearly everybody has a future. Oddly enough, however, many Canadians feel bitter about what other people would call a rosy future. So far from feeling they are unusually fortunate, they harbour a deep sense of injustice. They sometimes look upon their neighbours in Canada and (even more) in the United States with indignation and resentment. In short, if something about Canada and the Canadians puzzles you, please remember, Canadians are not country folk. Oh, we're healthy enough (though not as healthy as we might be. We don't get enough exercise, and we eat too much, and so on), but most of us do live in cities. Three-quarters of the Canadian population live in urban areas of one kind or another. You may not be able to take the country out of the boy, but you can certainly take the boy out of the country.

citified Canadians

Lumbering is still an important industry, but if you show me a Canadian, I can't show you a lum-

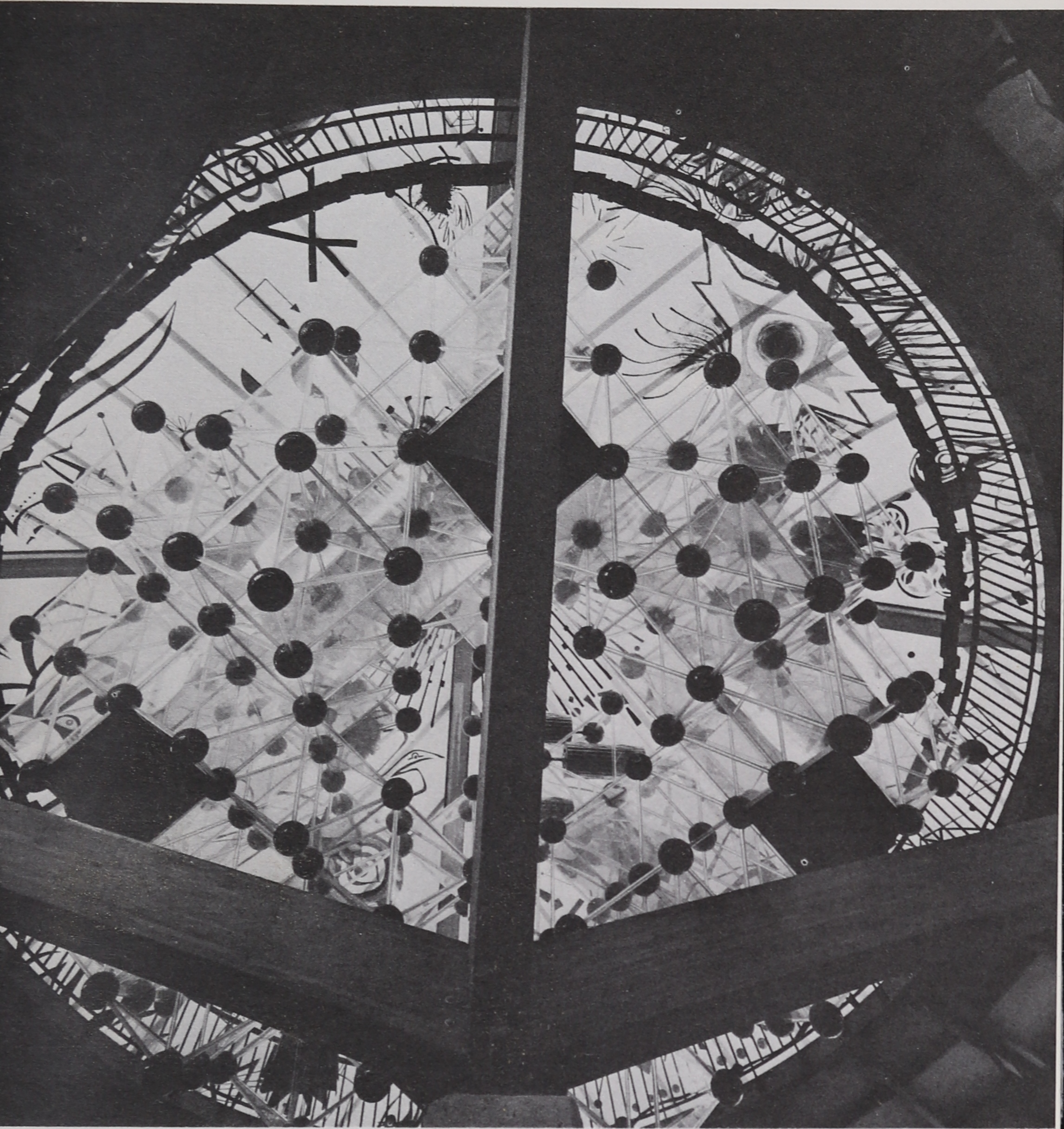
berjack. Most of us think the wilderness is a great place to visit, but we wouldn't like to live there.

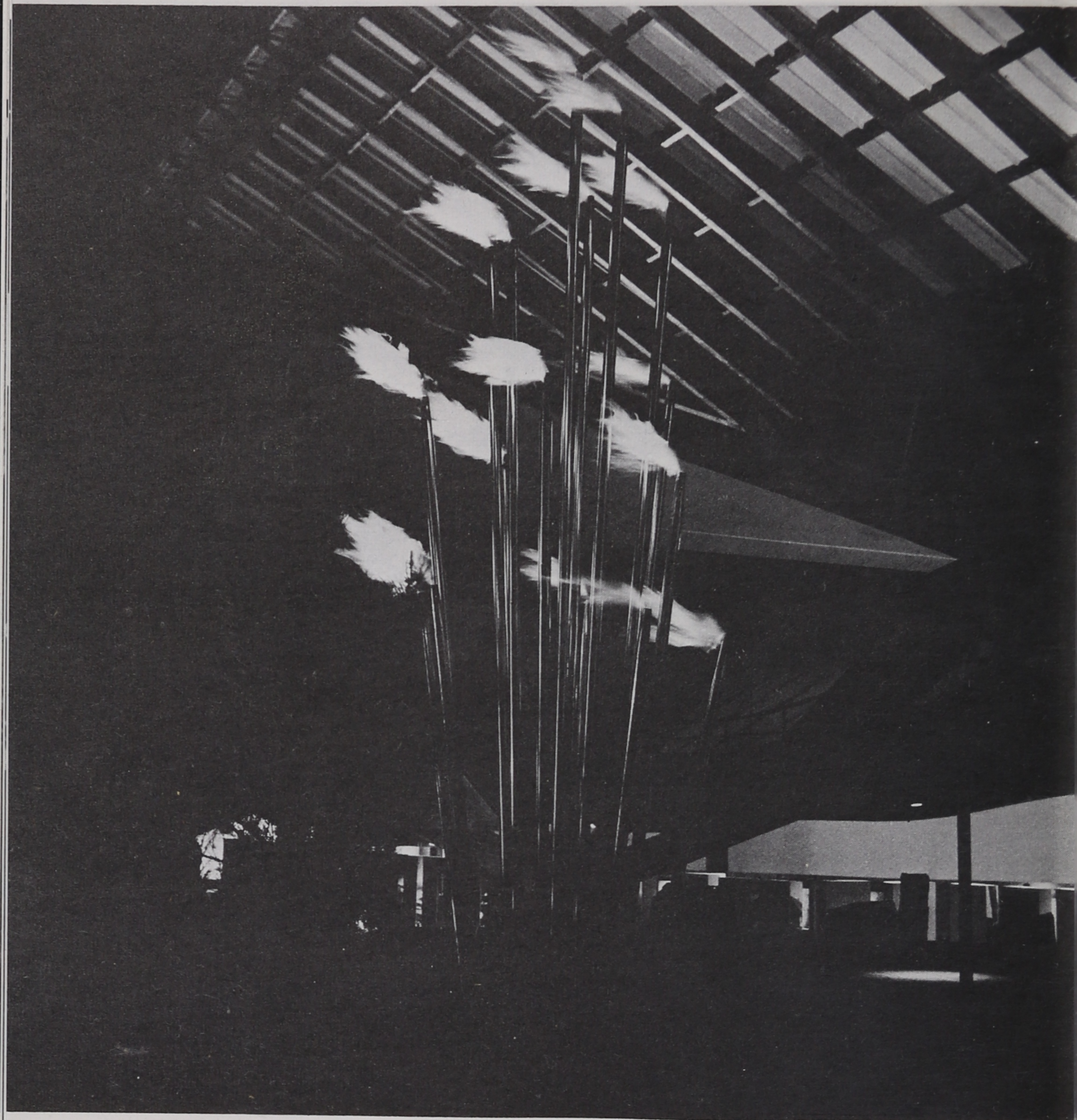
*nobody here but
us Canadians?*

Canadians are not simple minded, happy people, unburdened by traditions. What (for example) really happened on the Plains of Abraham? Who did what to whom, and who's paying for it? And Canadians put in a lot of time shaking their heads over their national identity. "Mirror, mirror on the wall! Is there anybody here at all?"

the shy giant

Canadians are not confident, hearty, self-assertive sons of the open spaces. Only sometimes. And sometimes not. The Canadian vice is to be grey and shadowy. Why do things by halves if you can do them by quarters? If he's all that great, why is he still here? But we're getting over it. Look around Expo, and see for yourself how we're getting over it!





Resources and Energy

The Challenge of Resources and the Canadian Response in the Use of Energy

energy is wealth

Man has harnessed the powers of Nature. We begin with Energy, because it is Energy that makes us rich. One way of measuring a nation's development is to ask how much energy is available for every person. By this standard, Canada is rich. One reason we are rich is because of our nuclear energy program: completely peaceful and completely non-secret. Canada is a world leader in the development of economic nuclear power. Our nuclear program is based on the metal Uranium, which is everywhere present and nowhere abundant. The slow radioactive decay of the Uranium in the earth's crust helps to keep the planet warm. Measurement of the rate of this slow decay is the way we know that the rocks of the Laurentian Shield are among the oldest on earth.

Power stations run by nuclear energy can be placed where no other power is available. The old bitter joke of the hungry thirties is no longer true: "Canada's vast untouched . . . and untouchable . . . resources." The energy is now available to get at the resources.

*Canada
— a land of minerals*

Since minerals are a non-renewable resource, Canada's great size is an advantage. Her vastness contains vast resources. The lowly figure of the prospector is one of the glamorous characters of the Canadian wilderness. But nowadays prospecting is a scientific business. The solitary explorer may still have a place, but he is backed up by sophisticated apparatus, aircraft, and teams of experts working

new metals for old

with maps and computers. The familiar old minerals, gold, silver, and other precious metals, are being replaced by the metals of the space age, aluminum, titanium, magnesium, by the fertilizers that the world's growing population needs so badly, such as the potash under the plains of Saskatchewan, and by oil, natural gas and tar sands. The mineral industry is Canada's third largest (in terms of output) after agriculture, and forest products. This is largely due to oil production. Canadians are the second greatest users of oil in the world (after the Americans).

*Canada:
a land of white spaces*

In Canada maps must cover four million square miles. Even today there are plenty of white spaces to fill in. Canada has had to be mapped by new methods, and Canadian map makers have taken these new methods all over the world.

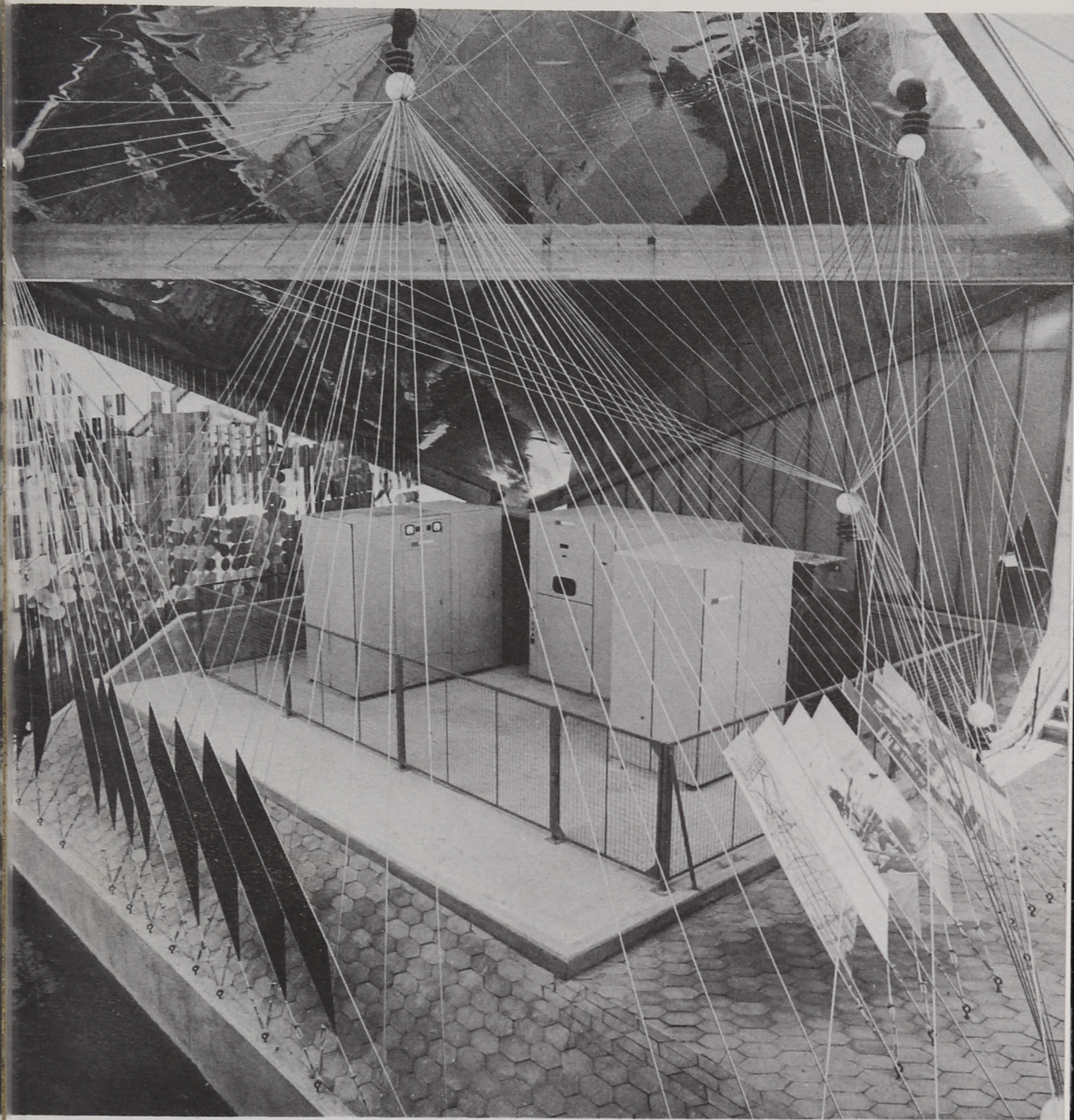
*where and what is it?
how far?
how big?*

As a Centennial Project, the Department of Mines, Energy and Resources is mapping the whole of Canada on a scale of 1:250,000, which works out at about four miles to the inch, and is very good for general reconnaissance purposes. When the project is finished, 922 maps will have been made, completely covering the whole of Canada. Canada is the second largest country in the world. The U.S.S.R. is about two and a half times larger. Canada is next, very closely followed by the United States, Brazil, and China, which are all about the same size as Canada.

*Canada:
land of extremes*

*we spend lots of
energy to live and
work in Canada*

And one of the extremest things about the country is the climate. Canada has a wet, dry, hot, cold climate. It takes guts and earmuffs to live in Canada, if you don't have central heating. Of course, nearly everybody does. All the same, coping with the climate has important economic consequences. It takes time, and trouble and money. Suitable clothing affects the cost of living. You need more high





le Canada ne connaît pas encore tous ses gisements

Map of Canada with text: "le Canada ne connaît pas encore tous ses gisements"

Informational display board with a map and text.

protein foods in winter. Houses need special foundations and roofs, insulations, double windows, furnaces and interior piping.

You pay a lot for fuel (or for airline tickets to warmer climes!)

Agriculture and forestry are affected. Snow, ice and fog often clog transportation. Icebreaking and snow removal are expensive.

*extremes turn climate
into weather*

Human beings are comfortable (in the raw) within a range of about 30 degrees F. The Canadian temperature seasonal extremes range over about 190 degrees F. And this doesn't include the wind chill factor. Nowhere in Canada can you find the comfort range all the year round. The temperature change in a single day can be as much as 50 degrees F. in one city. And about four-fifths of Canada do not have enough precipitation for productive agriculture or forestry.

The lowest official temperature ever observed in Canada: -81.4 degrees F. (-63 degrees C.), at Snag, Yukon, February 1947, and the highest was 115 degrees F. (46.1 degrees C.), at Gleichen, Alberta.

*Canada is an
agricultural nation*

Plants come first, for although the sun is the source of life, plants are the solar conversion machines, converting raw sunlight and land chemicals into food, warmth and shelter.

the farm background

Even though three quarters of the population now lives in urban areas, many Canadians have a background of farm life somewhere in their family. Farmers are still important people in Canada. In the early 60's, we had almost half a million farms. In the east, they averaged 153 acres; in the west 582 acres. It is not likely that farming land will be increased in the near future. In fact, at the moment the trend is to consolidation of farms, and increased production through better land use.

*agriculture
produces more*

Canadians consume almost three quarters of the value of Canadian farm production. Agriculture employs about one tenth of the total labour force, and produces about one sixth of the exported commodities.

*Canada is a land
of forests*

Forests make up almost half of Canada's area. But in the Arctic and the sub-Arctic regions there are a million square miles without a tree. Ninety-five per cent of the forests are owned by government, mainly provincial governments. Economically, the forest is the most important natural vegetation.

trees are a crop

Forestry is Canada's leading primary industry. The forest industries account for about one-eighth of Canada's manufacturing production, though they only employ five per cent of the labour force. They provide one quarter of Canada's total exports. Canada is the world's leading exporter of lumber and pulp and paper products. Newsprint production of seven million tons a year is more than three times that of any other nation, and supplies half the world's total.

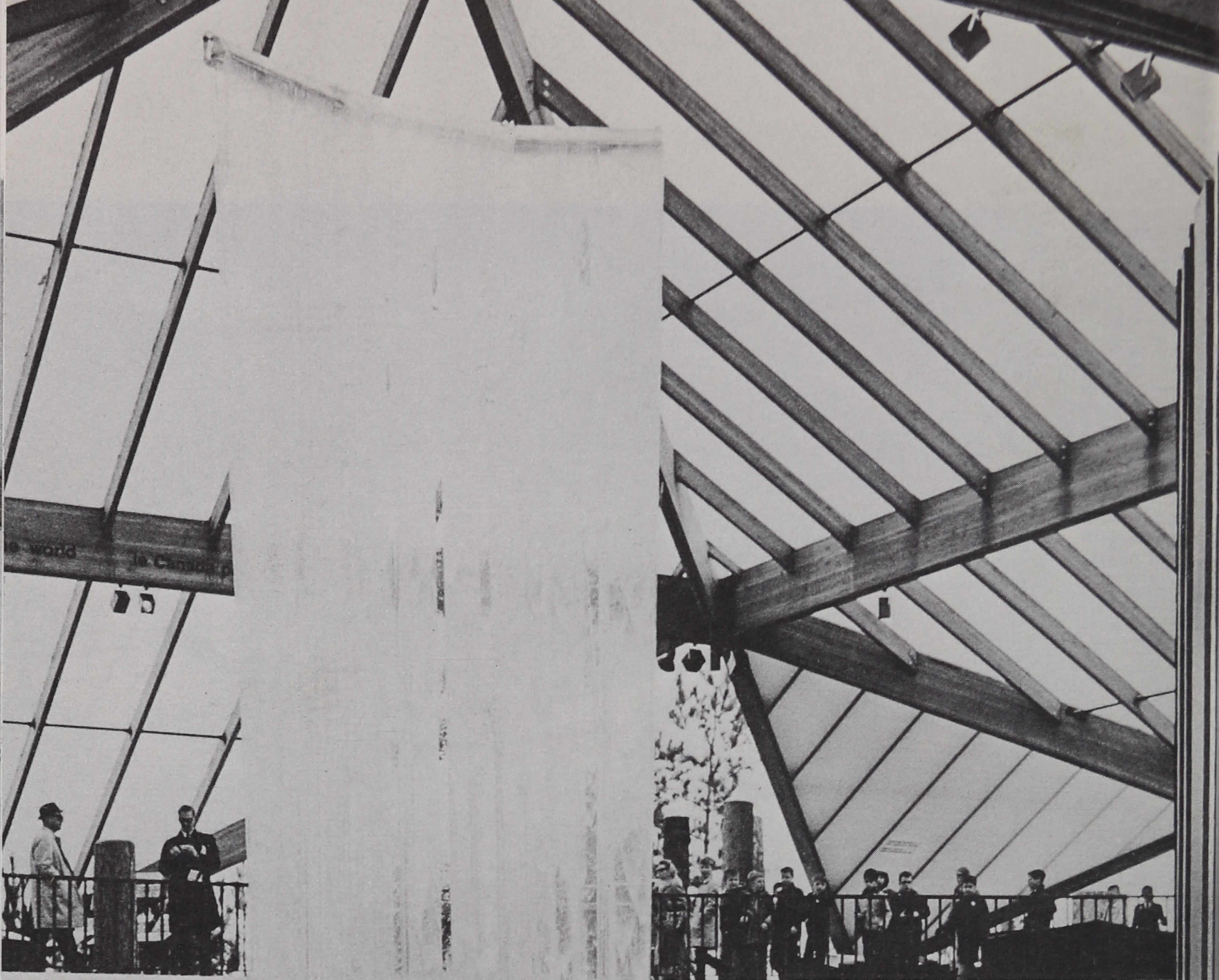
*Canada is
a fishing nation*

Not all food comes from the land. Canada is also a nation of fishermen; about eighty thousand of them, three quarters of them working in the sea fisheries that produce 90% of the total value of the catch.

Traditional fishing needs hard work and luck. We're replacing hard work by mechanisation, and luck by scientific study. Canadians consume about 30% of the total catch and export the rest. But we eat all our oysters, and three quarters of our salmon.

In terms of quantity landed, Canada ranks sixth after Japan, China, Peru, the U.S.S.R. and the United States. But Canada is exceeded only by Japan and Norway in value of the fish exports.





*Canada is
an industrial nation*

Canada's factories turn out new materials with new properties. The fact is no one is really interested in materials, but in their properties; not steel, but strength; not asbestos, but insulation; not glass, but elasticity; not rope, but tensile strength; and so forth.

But Canadian industry depends on sensible use of Canadian resources. In particular, all modern industry depends on water.

*live water in danger
of death*

Water is 8% of the total area of Canada. Only Finland has a higher ratio (10%). Of the water in the world:

keep it alive

97.2% is salt
2.0% is frozen
0.8% is fresh.

keep it clean

Canada has about one third of the world's fresh water. By 1990 Canada's demand for water will increase about four times. It takes 770 gallons of water to refine a barrel of petroleum; 65,000 gallons of water to turn out a ton of steel; 600,000 gallons of water to make a ton of synthetic rubber. Even an acre of corn gives off to the air about 4,000 gallons of water every day.

keep it working

*Canada is
a trading nation*

About one fifth of Canadian production is for export. Canada is fifth among the world's trading nations, after the United States, Germany, Britain and France. Canada is the biggest customer of the United States, and the United States is Canada's biggest customer.

*trade requires
money at work*

Canada has more branches of chartered banks per person than either Britain or the United States:

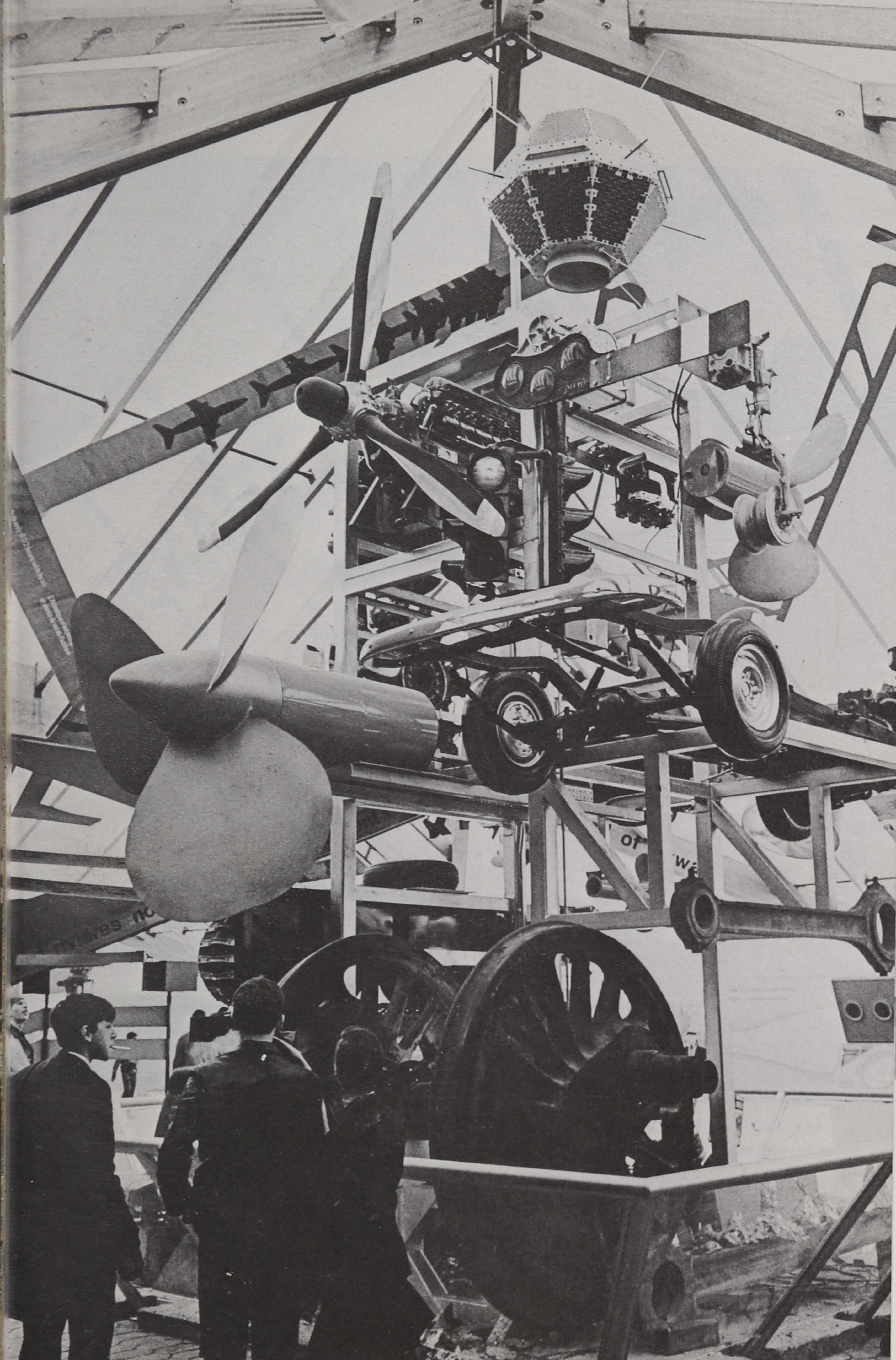
CANADA: one for every 3,500 people

BRITAIN: one for every 4,000 people

UNITED STATES: one for every 7,300 people.

*trade requires
people at work*

The language of trade is universal. Trade among men is the beginning of peaceful exchanges for common benefit.



AVIATION

TRANSPORTS



Transportation and Communication

*The challenge of Distance
and the Canadian response
in Communications and Transportation*

Canada began along the shores of the great river, the St. Lawrence, whose estuary points to the heart of the continent like a silver arrow. The Europeans settled by the water and moved along the water. In this they were simply following the behaviour of the Indians. In any case, there was nothing else they could do. The great forest that covered so much of the country was almost impassable, except along the waterways and where forest fires (the Indians started some of them deliberately) had made temporary clearings.

Further west the great plains were covered with a sea of grass and flowers, the home of the bison, and the plains Indians whose lives depended on the bison.

*the barrier and
the bridge*

The prairies, like the ocean, were a barrier and a bridge; a barrier until we knew how to deal with them, a bridge when we learn the art of navigation. If the camel was the ship of the desert, the horse was the ship of the prairies. Horses had originated in North America, but became extinct long before men came into the continent. For thousands of years the Indians lived without horses until, soon after Columbus, the Spanish Conquistadores brought horses into what is now the south west United States, and, gone wild, they went into the prairies. The great plains were made for the horse, and the horse was made for the great plains. For three hundred years the Indians of the bison herds be-

came rich and powerful and successful because they also became horsemen.

But the great ocean of grass with its comparative freedom of movement was sealed off from the west coast by the mountains, and from the St. Lawrence Valley by the wilderness of rock and lake and spruce forest that is the Laurentian Shield.

man against nature

But the Pioneers struggled through the northern forests. Explorers became traders, traders became settlers, and each settlement, connected to earlier settlements, became a new part of Canada. The history of Canada is not so much a story of wars, of man against man, so much as a story of the wars of man against nature. Canada's story is an endless string of travellers' tales. Canada has meaning today as a nation because Canadians, their goods and their ideas, travel back and forth fast and easily across the whole country.

People who come to Canada from outside North America usually see us as a nation of travellers. What else can you say of people who may be willing to drive a hundred miles or more to go curling or bowling, or to see a hockey game?

the need to travel

The challenge of Canadian distance has given rise to the response of Canadian transportation and communication. The distances are great, but the need to move is greater. From the system of lakes and rivers, with portages, which carried the first settlers, Indian and European, the transportation network has spread over Canada by water, land and air. Icebreakers on the three oceans that surround the country clear the routes to our northern harbours. Ocean going ships travel twenty-three hundred miles inland on the St. Lawrence seaway. Roads cross the ocean of wilderness to link our island settlement. And even where the roads have not yet reached, other wheels roll over swamp, forest and tundra.

The railroads, that first gave the land a backbone of steel, still carry trade from sea to sea. Above these moving patterns on land and water, the invisible highways of the sky trace lifelines to the north and cut the continent in hours.

Canada lives by transportation and communication.

*Canada is a land
of many voices*

Information is the characteristic product of the Twentieth Century. Canada has a remarkable technology for transporting information. Even at the speed of the turning earth, it takes four and a half hours to carry the dawn across the country. But information, travelling with the speed of light, makes the journey in less than one fortieth of a second.

words conceal thoughts?

We try to communicate with each other through words and pictures and symbols. When we fail to communicate, it's not as a rule because English ears are listening to French, or the other way around. The problem is to communicate between cultures. While it is true that the different language needs a different culture, it is also true that Canada contains many cultures, many regional ways of life, within the same language. The problems, outlook and feelings of British Columbia on the Pacific are not the same as those of the Maritimes on the Atlantic. What do the Crow's Nest rates mean to Newfoundland? What does the Prince Edward Island causeway mean to Manitoba? Communication between them depends on empathy and understanding more than technology, but in Canada the technology is available whenever we seek understanding.

*the great telephone
talk-fest*

Canada is a land of many voices. We are part of the great North American system of inexpensive, reliable telephones. Combine this with a long, hard winter, and it's not surprising that Canadians spend so much time on the telephone. In fact, we are the world's most talkative telephoners. But in Iceland

people make nearly as many telephone calls per person as we do. And when we aren't chatting on the telephone in two-way talk, we're often listening to one-way talk.

the one-way conversation

Radio reaches the unoccupied ears of people with busy eyes. Housewives ironing, children drawing, teenagers strolling and doing homework, motorists driving home through the rush hour traffic, all listen to the radio.

They have quite a choice, for Canada has three-hundred and six radio stations. These messages used to be transmitted by wires and cables. Canadian streets are full of overhead wires of all kinds, to the astonishment of some visitors. In self protection we often find them almost invisible. But there are efforts to get them out of sight under the frost-hardened ground. In any case, wires and cables are old fashioned. Microwave is more versatile than either. The two-faced towers of the microwave networks carry most of Canada's communication across 3,900 miles from coast to coast. You need towers every twenty or thirty miles because the very short radio waves of microwave behave rather like rays of light, they only work in line of sight. Telephone calls, telegraph messages and TV signals are all carried by microwave. One piece of equipment can carry as many as 600 telephone calls at a time.

microwave has many channels

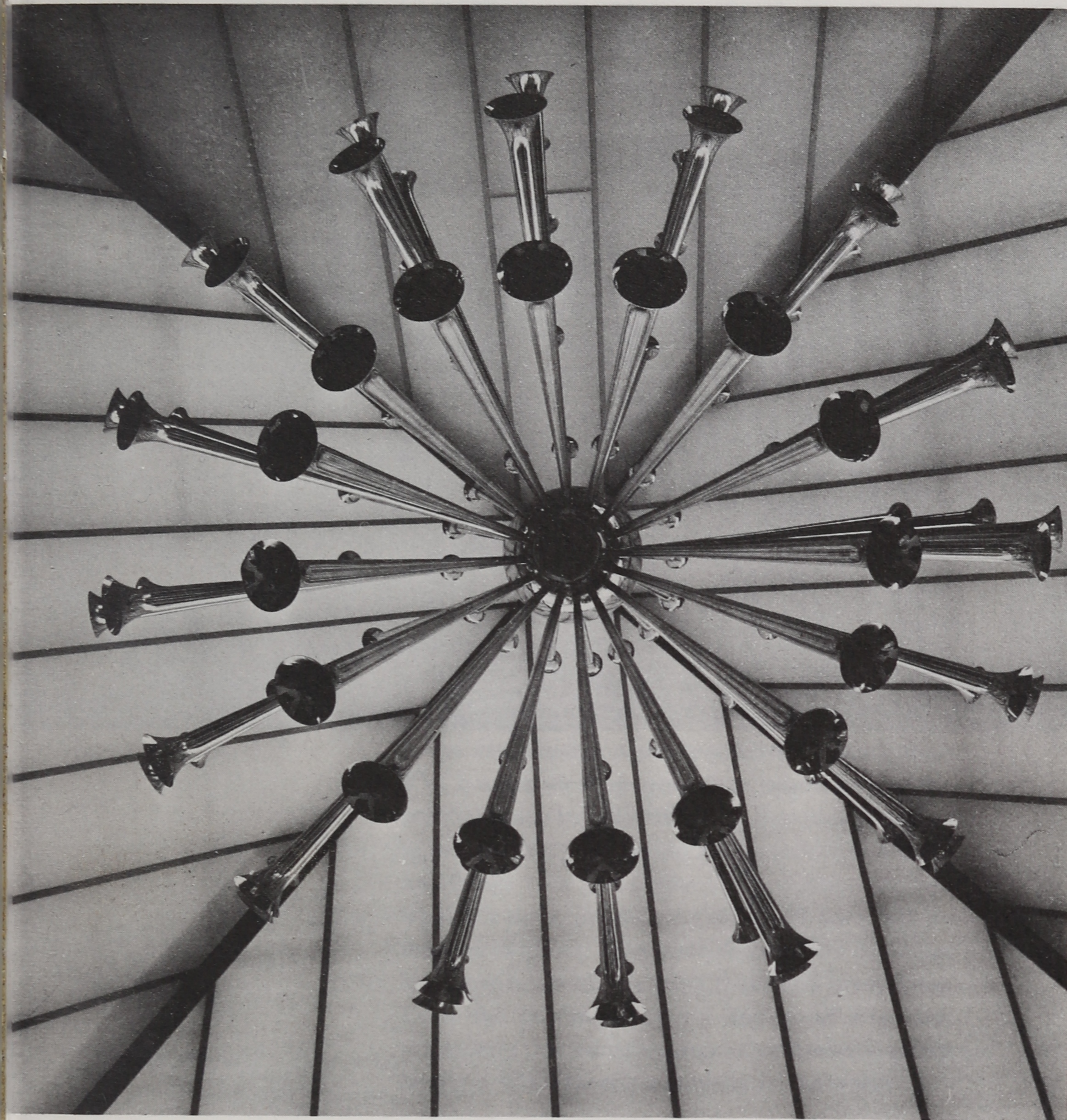
But soon, perhaps, even the microwave chains will be replaced by communications satellites hanging in orbit, stationary over Canada.

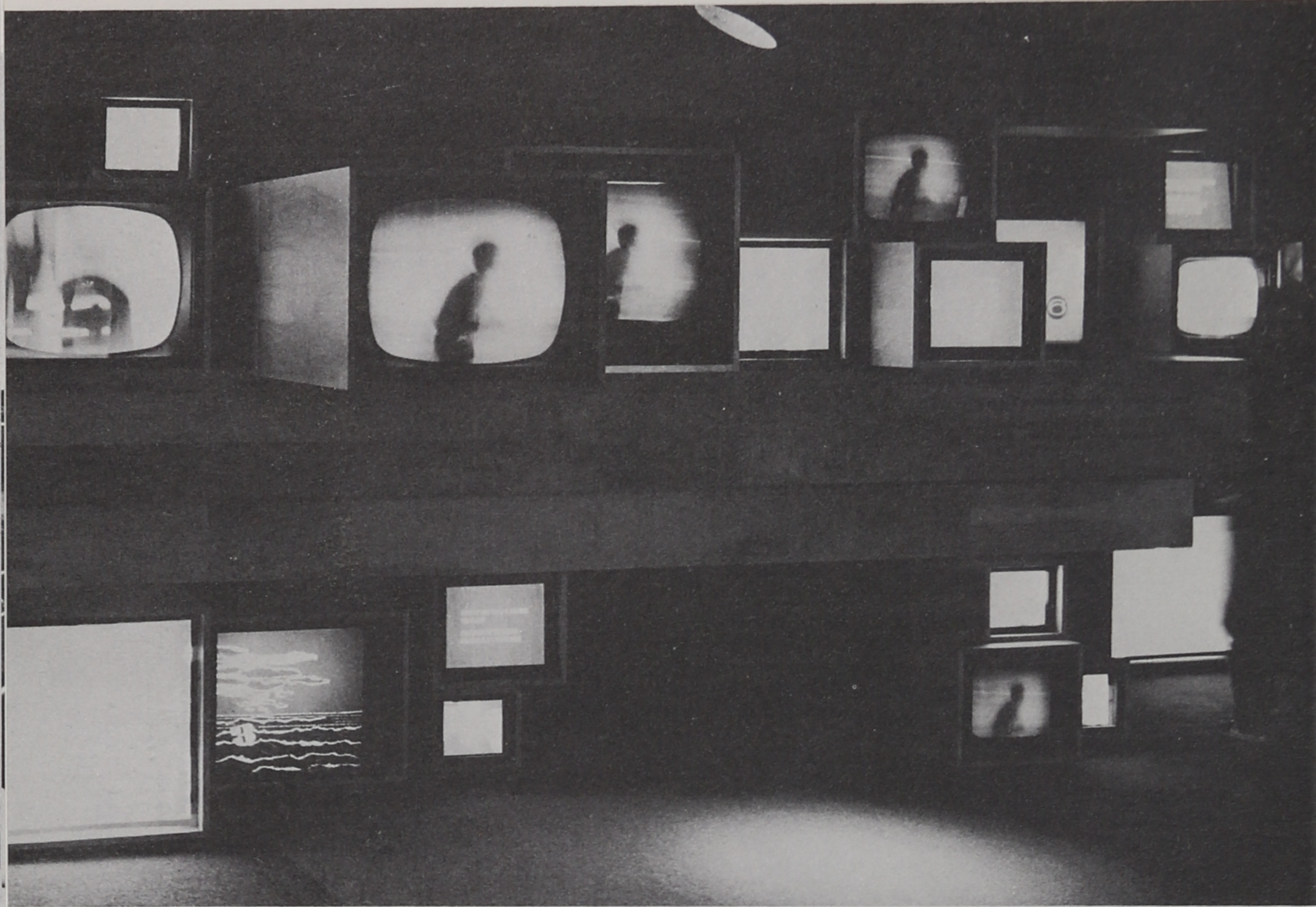
television

It's become commonplace to say that television can be a window on the world, even if the window sometimes opens on a back alley crowded with peculiar junk. Nonetheless, Canada is firmly in the TV era. In the fall of '66, Canadian TV stations began transmitting in color. TV shows us to each other.

the undefended border?

Canadian TV is carried by the longest microwave network in the world and 94% of the popula-





tion is in reach of television. Those of us who live near the United States border (and that means most of us) are within reach of United States television. To judge from the complaints of some intellectuals, U.S. television programs are raping Canadian culture. To judge from the television ratings, most Canadians relax and enjoy it. It takes two to tango, and even in French-speaking areas, TV sets are often tuned to the ubiquitous United States programs — in English.

TV makes where and when into here and now, but what do you really prefer to see? Perhaps you are getting the mass media you deserve.

intimacy coast to coast

The paradox of television is that TV reaches a very large audience of private persons. When you watch TV, you experience the program at home either alone or with a friend or two. The people that make successful visits through that little tube are the ones that seem intimate, but the intimacy is distributed over the whole country in hundreds of thousands of pockets of concentrated privacy. Nowadays film reaches a much smaller audience than TV, but the viewing groups are larger, and so the reactions may be quite different. You may do things in private that you wouldn't do in public, but there are things that you might do in public that you wouldn't do in private; get swept off your feet by tears or laughter. Everybody knows that comedies are more fun with the gang there and everything. Even the private, intimate appeal of television makes sure that we eavesdrop on enthusiastic group laughter when there's a comedy in the works.

TV shows us the score

film

“It is the film's power of dramatic statement, not its power to illustrate facts, that we regard as important.” — John Grierson, first Director of the National Film Board of Canada.

industry and art

Canadians have been making successful films for many years. Most Canadians are very surprised to

hear this, but outside Canada Canadian documentary films are famous. In the past five years, Canadian film makers have won over 400 international awards in the modern art form of the film. But so far we have no feature film industry, although there have been a few Canadian feature films.

*film states human
problems*

Many Canadians are discovering their country through films, and through films we are becoming better known abroad. The trick of film making is not unlike the trick of writing poetry. Somebody defined poetry as the right words in the right order. Put like this, both poetry and film making sound easy. But it needs an artist to tell right from left, and right from wrong. The right order is hard to come by, but when you get it, it brings to both poetry and film the power of the image, of making people feel that things are really different when they thought they were the same, and making people feel things are really the same when they thought they were different. It is the art of the film to make connections through pictures, and the art of connection is the very heart of the creative process. For this reason it's often said that the most important thing in making a film is the editing. This means taking a piece of film and deciding what should go before it and what should come after it.

*film dignifies human
effort*

Something similar? Something to reinforce the effect?

Something very different? Something to contrast the effect?

Every picture in a finished film has two qualities, first the quality of the picture itself, and secondly the much greater quality that it gets from its context, from all the other pictures that lead up to it and that lead away from it.

The same piece of film showing a man smiling looks quite different following a picture of a laughing child than if it follows a picture of a mangled corpse.

film explores life

*film takes us out of
this world*

Film is one of the most modern of the lively arts, but its creative power rests on one of the most ancient and powerful of all dramatic effects: This is dramatic irony, a quality that a word, a gesture, a scene, an episode derives from its context, from the audiences greater awareness of its setting. Twenty-five hundred years ago Aristotle saw that dramatic irony was the life of Greek tragedy. Today, film is a modern art form because the power of selection and arrangement, of editing, of dramatic irony in short, turns movement into meaning.

*the printed word is
stronger than ever*

Information continues to be accumulated at an ever increasing rate. Already the problem of storing information, and above all finding it when we want it, is getting out of hand. The computer, with its high-speed electronic index, can be a great help, if you need a computer, can afford one, and know how to use it. The day may be approaching when every home will be linked to a central computer. Already an engineer's wife has had a computer read-out installed in her kitchen to help her work out her recipes. Information and references may soon be handled this way for nearly everybody, just as fantasy, escape and relaxation are piped into a home through the television tube, in both cases eliminating books, newspapers and magazines.

In the meantime, however, the printed word has not vanished as a handy source of information and entertainment. The printed word retains its ancient power to help us to enjoy life or to endure it. With a hundred and sixteen daily newspapers, nine hundred and sixteen weekly newspapers, eight hundred and thirty-one magazines and trade journals, and an annual consumption of nine million books, Canadians in Centennial year continue to use the printed word. Even in the electronic age, print retains the fatal permanence that gave such force to

the old Arab curse: "Would that mine enemy would write a book!"

*Canada is a land of
energy production*

The first thing you saw when you walked in the resources section of this Exhibition was a display on energy. This is because energy is civilization. Man begins by using the power of his own unaided muscles, a small fraction of a horsepower. Even with a simple machine to help, man's muscles alone can't do very much. Connect a bicycle to a generator and see how hard you have to peddle to keep a 60 watt light bulb going. Nowadays very few people in the world have to rely on their own muscles for their only source of energy. But some countries in some parts of the world are much more fortunate than others. Among the most fortunate is Canada.

In the early sixties, Canada, the United States, Norway and Switzerland produced the most electricity per capita. Canada's per capita production is four times the world average. Electricity is convenient energy, easy to control, easy to move.

*a line costing \$150,000
a mile moves energy
24 hours a day*

Electric grids based on hydro-electric and other power stations cover the populated areas of Canada. But once again our climate is a nuisance. For example, when a sleet storm arrives and freezing rain covers the wires with a thin layer of ice, electrical transmission wires become converted into miniature airplane wings and "gallop" in the wind, so that huge waves may pass along the wires from one end to the other. Sooner or later two of the wires can get too close, a spark jumps, and that particular section is out of commission for a while. The movement of energy in the form of electrical power is one of Canada's most important means of transportation. But the challenge of the Canadian climate keeps our engineers and research scientists continually on their toes.

*the great Trans-Canada
pipeline*

*it takes gas seven days
to run through
the pipeline*

*Canada is a
land of waterways*

Fluids are things that flow, like liquids and gases. Under certain circumstances a suspension of solids can flow and therefore be a fluid; quicksands, for example. Under other circumstances (vibration, for example) wood chips or sawdust can be persuaded to flow. The old fashioned sawdust burners made use of this property, and so does the hourglass.

Pipelines carry fluids, but under the influence of technology, many things can be put into a fluid state and transmitted by pipeline. There were no pipelines in Canada until 1950. Now there are thousands of miles of them, and their growth has been faster than any other form of transportation. The longest pipeline in Canada is the 2290 mile Trans-Canada pipeline. You can transmit many fluids, one after the other, through the same pipeline, but you need to know when one ends and the next begins. A convenient way of doing this is to put a trace of some radio active substance at the beginning of every new batch. Then a geigercounter tells you that something new is arriving and it's time to switch over.

The pioneers came to Canada by water, and moved across Canada by water. Canada still has the longest coastline in the world and northern outposts are supplied by ship during the short summer season. Modern icebreakers have made it easier to keep Canadian ports working longer. Seagoing ships now follow the route of the voyageurs into the center of the continent. The St. Lawrence seaway is open nine months a year, and last year carried a million tons of cargo. It's a thirteen hundred mile long escalator to Lake Superior. In the course of their journey ships are lifted by the seaway locks for a total of six hundred feet, almost the height of a sixty-storey building. Modern ships are safe, cheap ways of moving bulk cargoes.

*Canada is a land of
airways*

“The whole history of the Canadian north can be divided into two periods: before and after the aeroplane.” Hugh Keenleyside, 1949.

Air transport shrinks the long Canadian miles. Canada is only 8½ hours wide by air. The airplane may be a dull way of travelling, but it is a marvellous way of reaching your destination, quickly and comfortably. In any case, most of the Canadian north is inaccessible, except by air or on foot. The Eskimos and other inhabitants of the north went from the stone age to the air age without any intermediate steps. It was a dog’s life in the north until the airplane flew in!

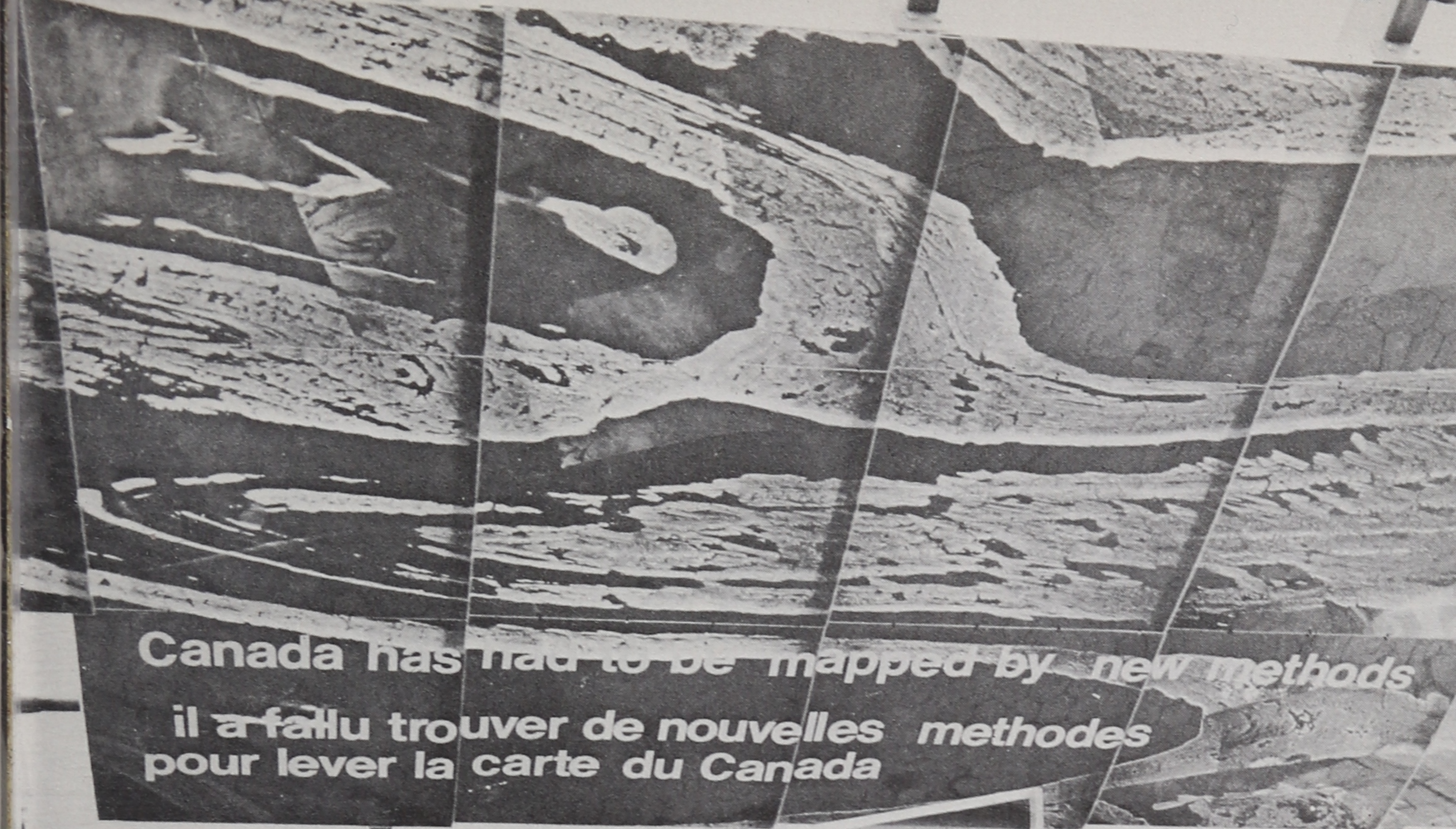
Canada lies at a crossroad of air routes. It’s easier to see this on a globe than on a conventional map, so perhaps it is not surprising that the two most important world aviation bodies, the International Civil Aviation Organization, and the International Air Transport Association both have their headquarters in Montreal.

*Canada is a land of
railways*

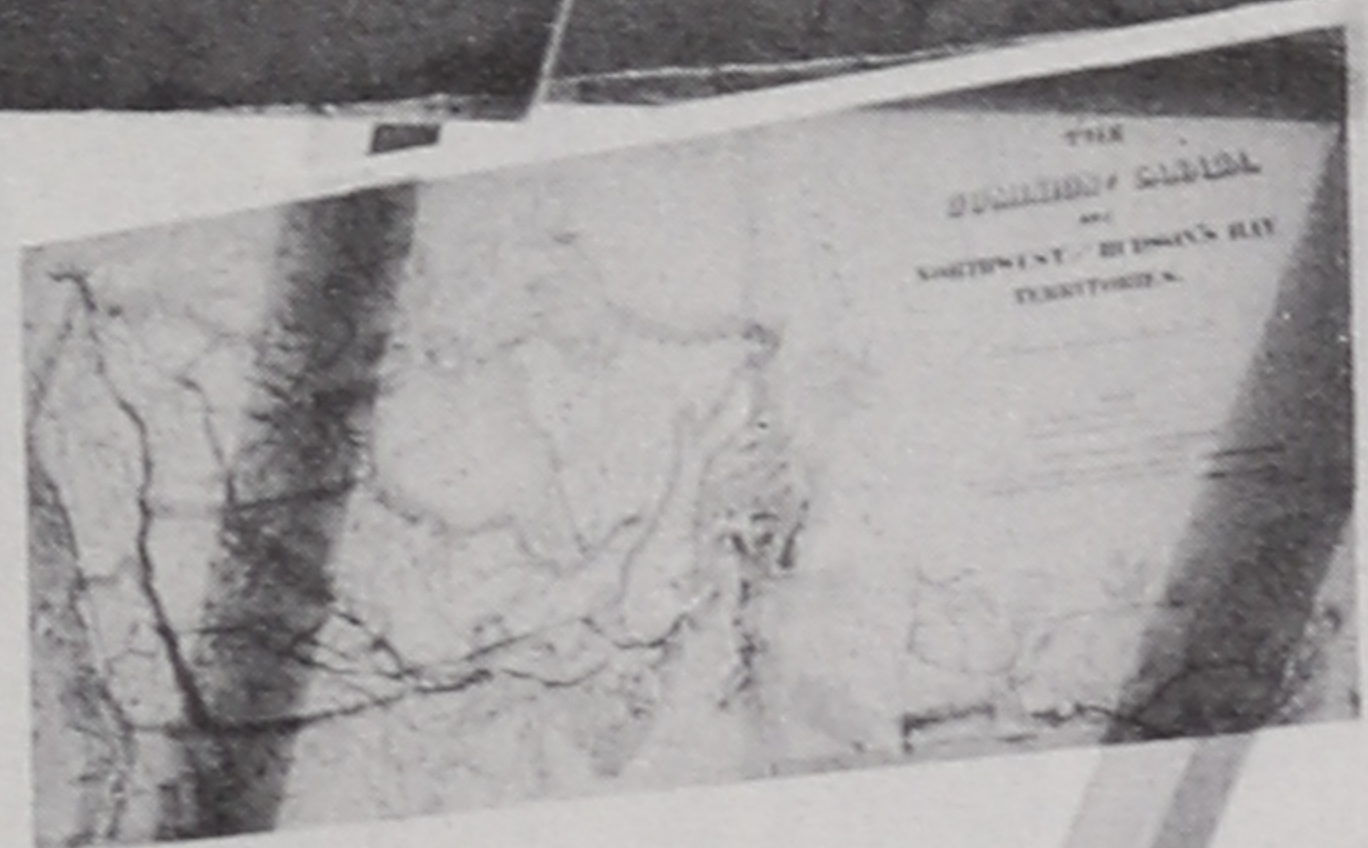
“With the construction of the railway, the country will be populated by Englishmen; without it by Americans.” Toronto Globe, 1870.

The Canadian National is the continent’s largest railway system. The Canadian Pacific is the world’s largest privately-owned railway. Canada has the highest *per capita* rail mileage of any country in the world.

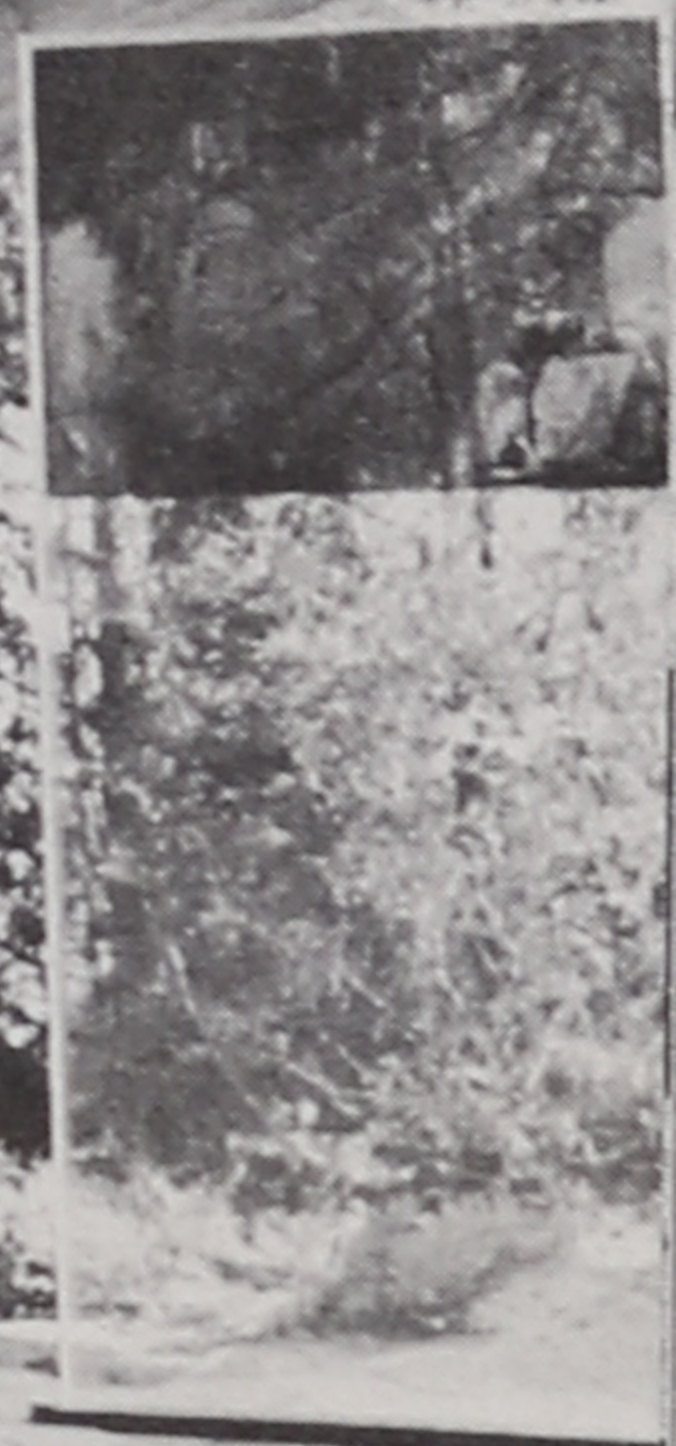
The building of the trans-continental railway is a story of statesmen and rascals, rogues and heroes, good guys and bad guys. Often the same man comes on as all those things at once. It’s been the same all over the world, a mixture of bravery and bravado, bribes and threats, impudence, persuasion and sheer force of circumstances that have given the word railroading its peculiar flavour everywhere in the English language. Now the swashbuckling engineers and single minded financiers of the early days

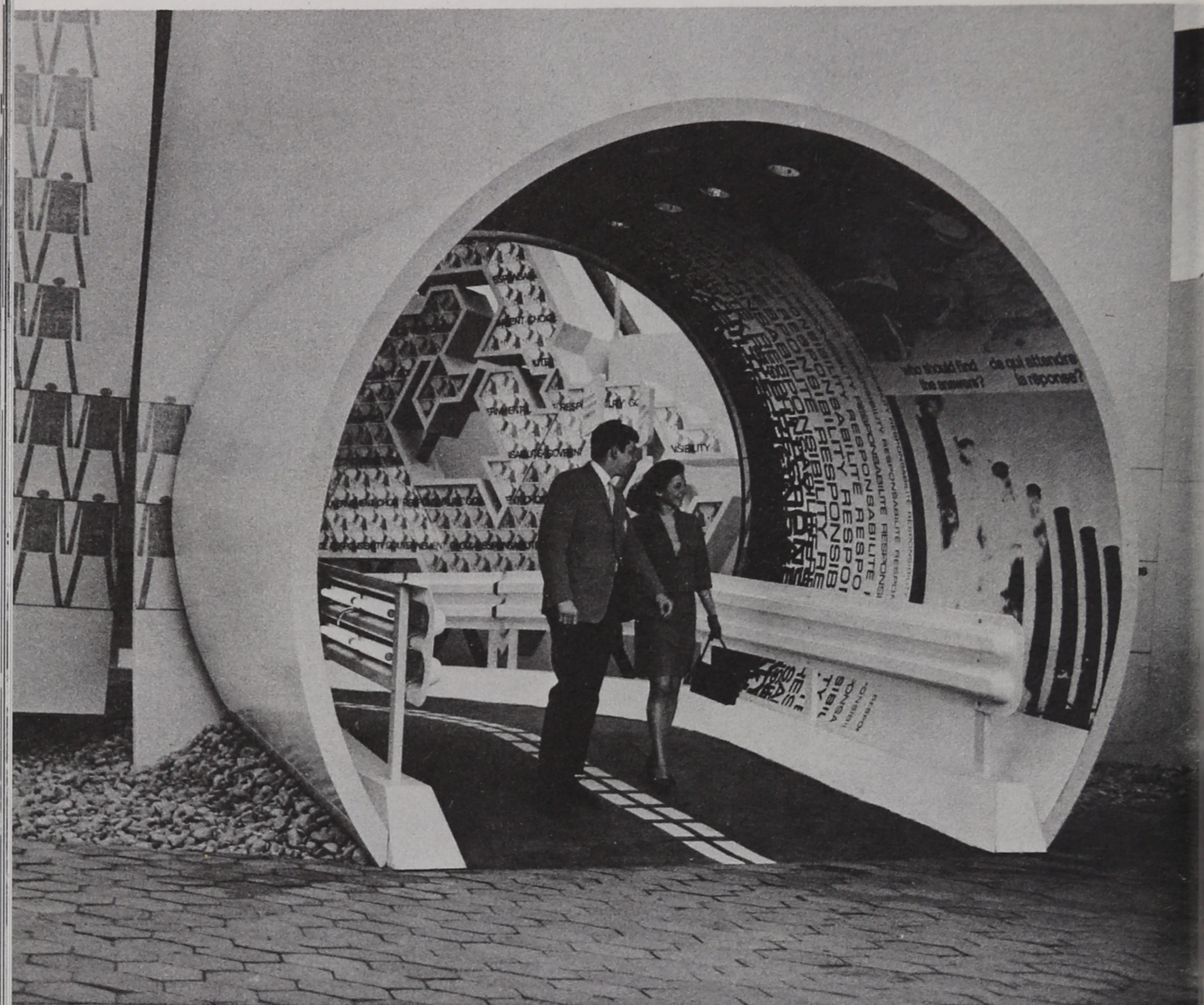


Canada has had to be mapped by new methods
il a fallu trouver de nouvelles methodes
pour lever la carte du Canada



IN CANADA MAPS MUST COVER A MILLION SQUARE MILES
THE CARTOGRAPHY EXPLORE
IN 1858 & 1859





have all become sober, bearded, Victorian patriarchs, and have mountains named after them. The Canadian Rockies look down on the steel that still runs through the gorgeous passes with the glamorous names: Yellow Head, Crows Nest, Kicking Horse. And railways are still opening up the country. Canada now runs trains past the 60th Parallel, on the way to the Arctic circle. The "Pioneer" track-laying machine lays track at the rate of a mile a day. The 432 mile route from Roma, Alberta, to the lead-zinc mine at Pine Point, Northwest Territories, has opened up a large area of mining, agricultural and forest land.

modernized railways

Canadian railways are keeping up to date with modern techniques. For example, the two major railways are among the largest truck operators in the country, and pioneers in the field of piggy-back transportation. Piggy-back means truck trailers carried on trains. For greater convenience and speed and handling, all the things with funny shapes are packed in standard containers so that everything we ship is shaped to fit together easily and quickly. Handling is also cheaper and safer; there's much less loss from pilfering. This is called "containerisation", a long word that saves time, money and trouble.

Canada is a land of roadways

For all levels of government, the second largest expense (after national defence) is roads and highways. The paved highways of Canada would go twice around the world. We are one of the most technologically advanced societies in the world, and this means, of course, that we are one of the most technologically dependent societies in the world. The automobile has bred a new race of centaurs, half man, half wheels. The development of cars and the development of roads went together. Improvements in one depend on improvements in the other. In Canada, there is no easy road to progress. Frost

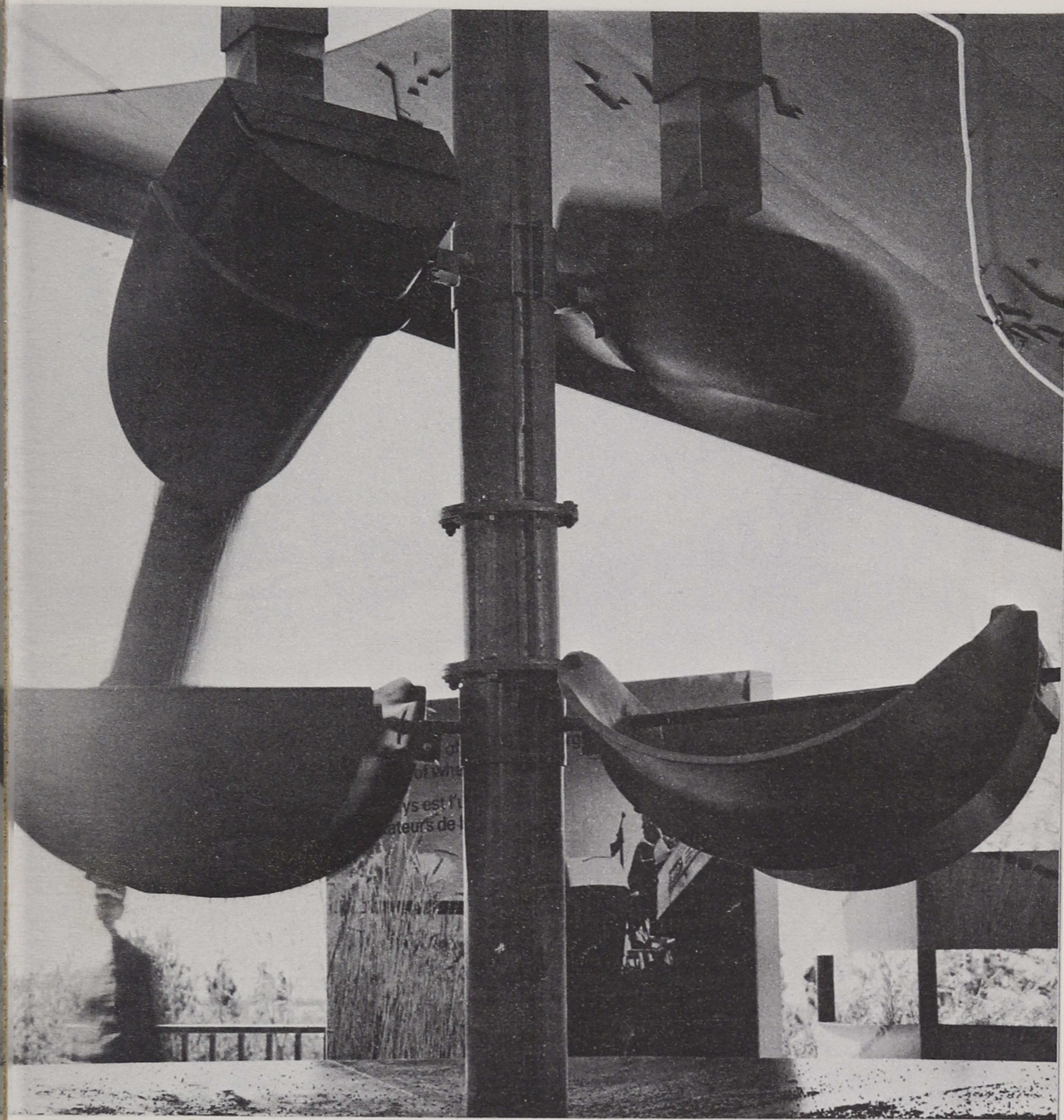
bites into ground, a foot, three feet, even more. The best laid road surface heaves and cracks. The best drained foundations may turn muddy in the spring before the deepest ice has been melted out by the rain. Canadian roads are not only an achievement, but a process. The new subway systems in Toronto and Montreal are popular, yet Canada has more cars than households. The average Canadian household spends about one-tenth of its money on a car or cars. In the early sixties, the average Canadian drove about 8,500 miles a year, using about 625 gallons of gasoline. And the roads were getting crowded. There were about a dozen motor vehicles of all kinds for every mile of road and street. Perhaps one day all the roads will be filled with cars bumper to bumper. Then we can just roof in the coast-to-coast traffic jam and start all over again!

*Canada is a land of
wheat*

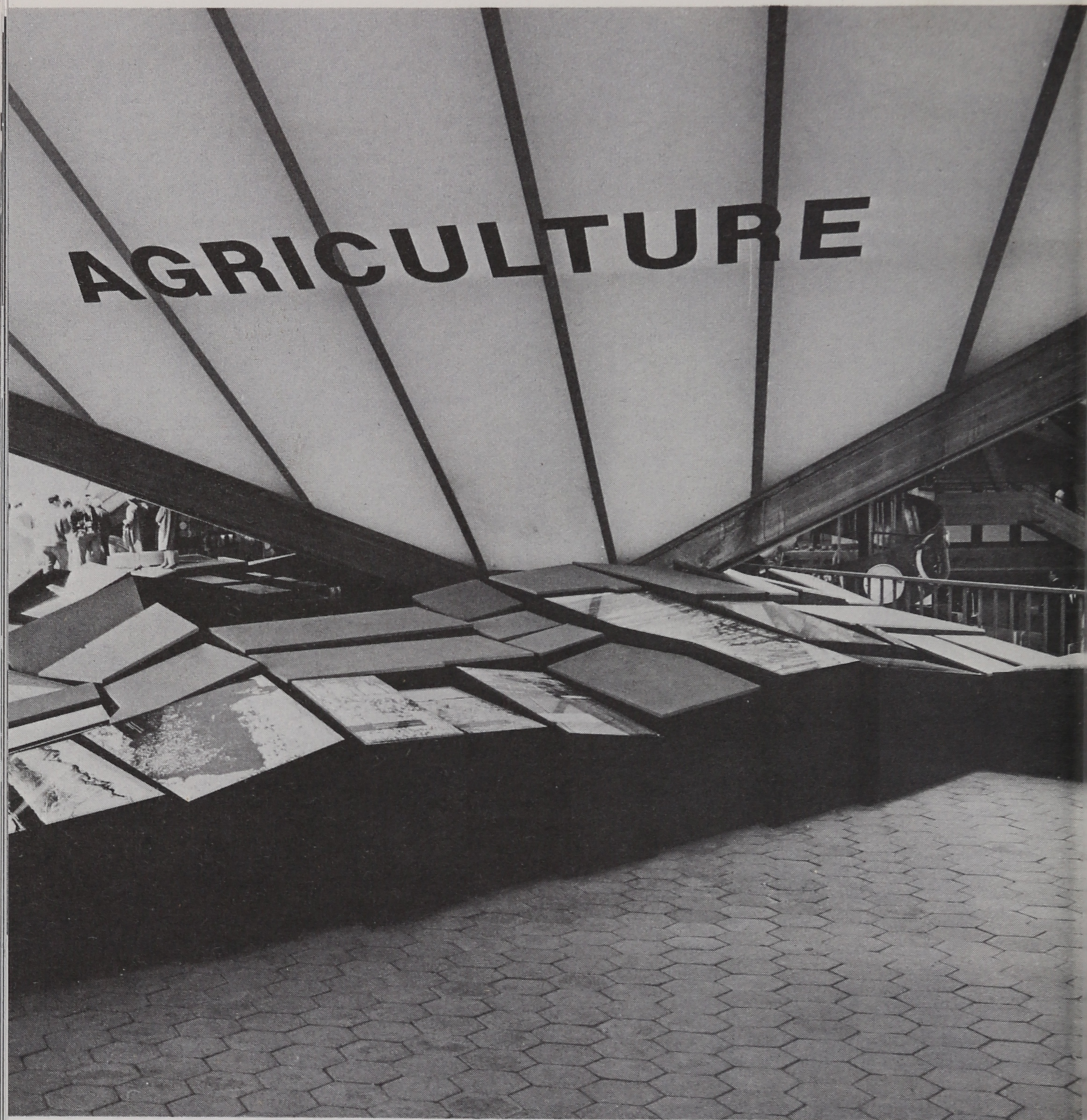
The great prairies of the west were naturally covered with grasses. And grasses are what they still grow best, particularly the rather special precious grass that we call wheat. (The seeds of wheat and other grasses, such as rice, rye, oats, barley, help to feed the hungry bellies of mankind.)

The Canadian prairies are a very stern environment. True, the soil is rich, and the early settlers found plenty of sweet grass that fed the herds of bison. But the prairies have a continental climate — very cold in winter, very hot in summer. This is the characteristic climate of places inland in a huge continent, far from the moderating influences of the sea.

And rain-bearing winds from the Pacific have to cross the Rocky Mountains. Most of their moisture has dropped before the air reaches the prairies. On the other hand, the wheatlands are comparatively far north, so that the long hours of summer daylight help to compensate for the short growing season before the autumn frosts set in. New strains of wheat



AGRICULTURE



wheat in transport

had to be developed to thrive in these conditions. The pioneer name is that of Sir Charles Saunders who developed Marquis wheat, the strain that started the Saskatchewan wheat bowl as a world producer.

Nowadays, Canada is one of the world's largest exporters of wheat. The variety of our transportation network is called upon to get the wheat from the farms to the hungry people. Wheat moves by road from the farm to the railhead, then by rail from country elevators to terminal elevators at lakehead and port. Finally it moves by water from the terminal elevators to the ports of the world. In 1966 a record high of 18 million tons of Canadian wheat moved like this. This involved the resolving of one of the greatest logistic problems in transportation that man has ever faced.

A Challenge and a Response

changing times

A few hundred years ago, technology changed slowly, if at all. A man usually worked in his father's trade, and knew that he would pass on his trade to his son. An occupation ran in the family, and was handed down from generation to generation.

Then about a hundred and fifty years ago came the Industrial Revolution. Technology changed, and the world began to change. A man no longer worked in his father's trade. His son, too, would learn a new trade as a lad, and then work at it all his life, but it would perhaps be different from anything his father did.

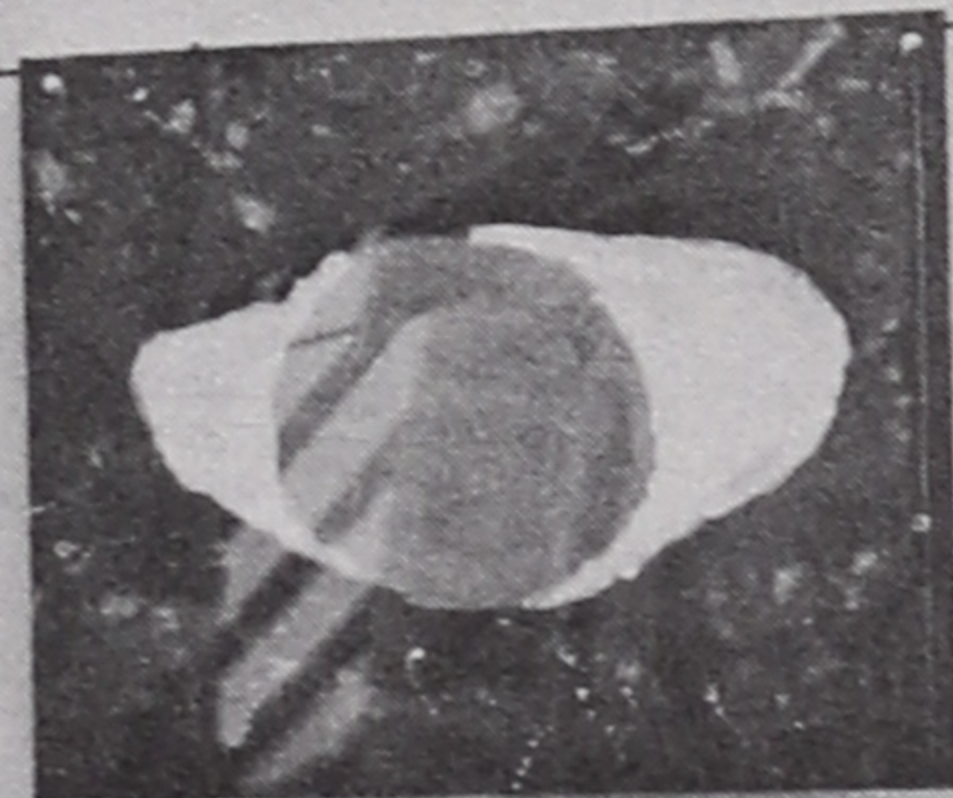
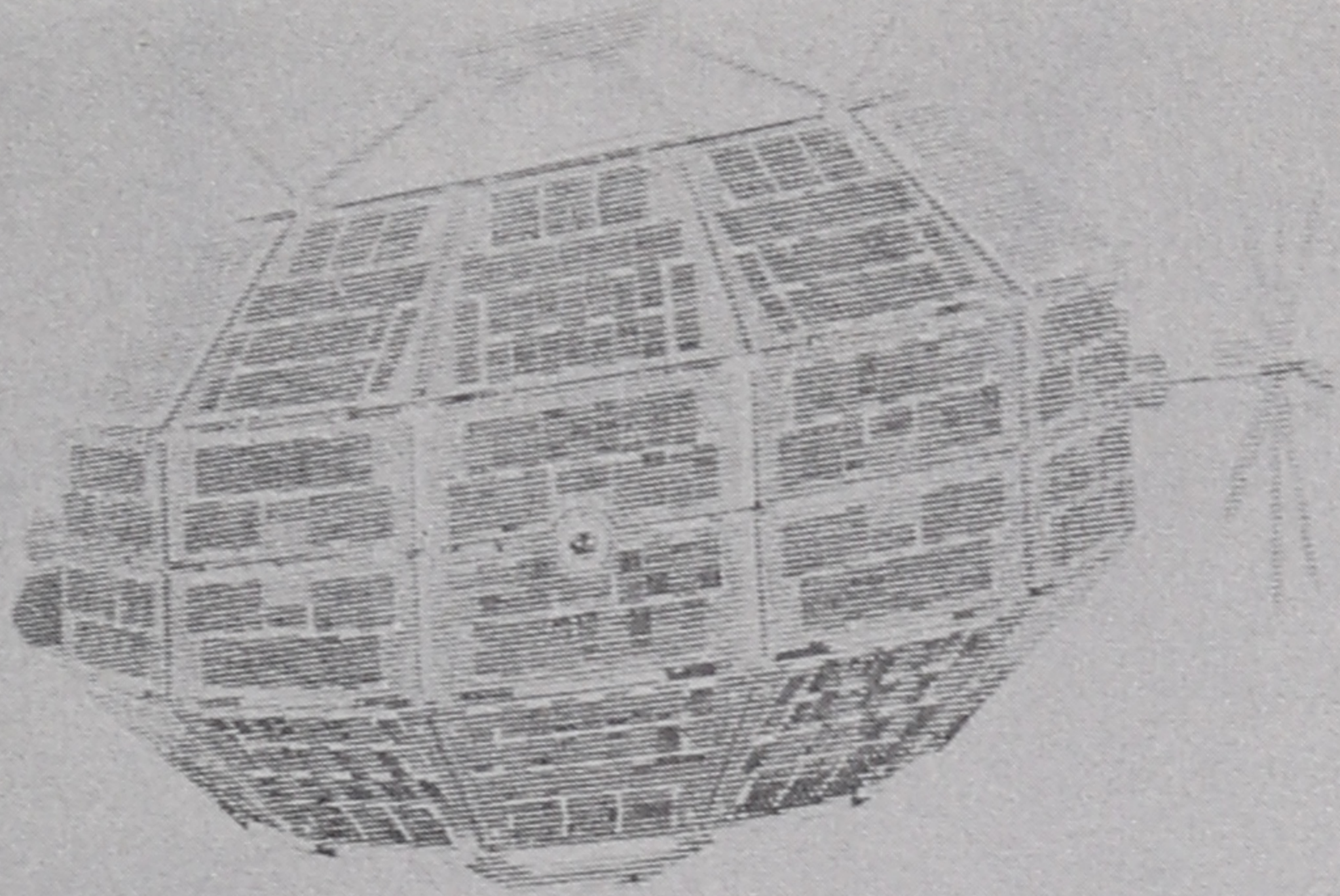
Now technology has accelerated once again. The world of the computer has speeded things up enormously. We are in the midst of another Industrial Revolution: a revolution of information carried at the speed of light.

more learning

Again, technology has changed, and the world is changing with it, but much faster than ever before. Nowadays, most people will have to learn several trades during their lifetime. What you learn as a youth will be obsolete by the time you are thirty. Each man in his life will have two or three trades. Learning and working will go hand in hand.

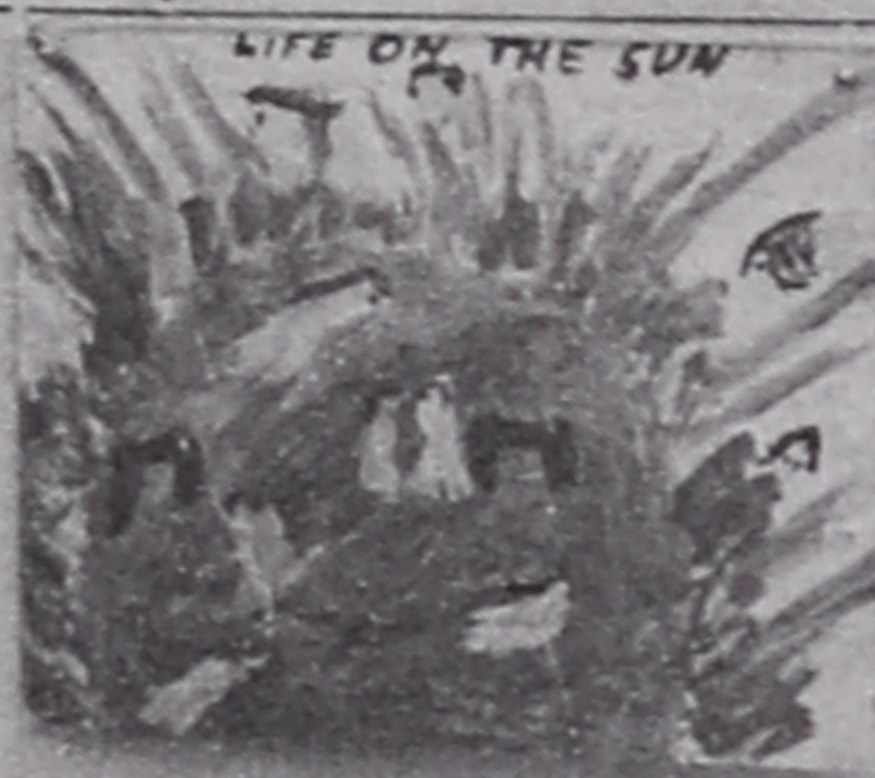
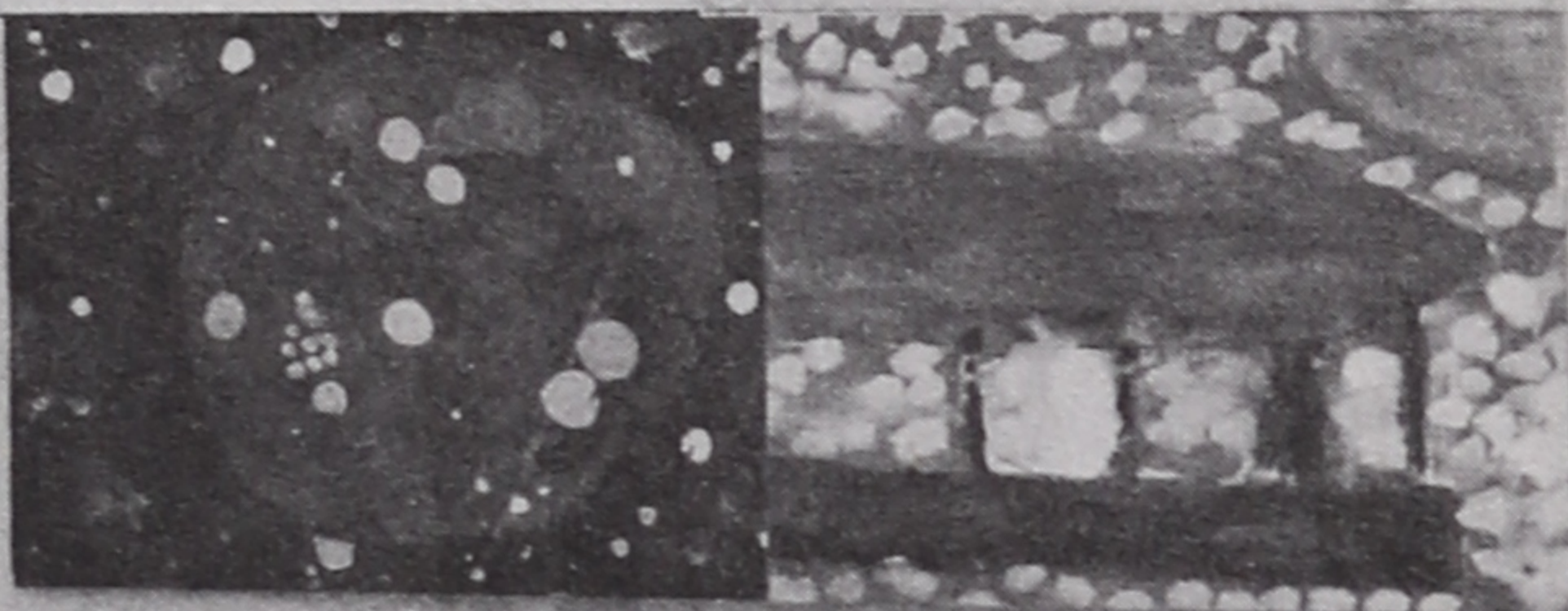
more leisure

At the same time, there will be much more leisure for most people. More leisure means more time to spend as you choose; more time for yourself. Once more: the need to learn. Or, if you prefer it, the *chance* to learn. Learning is an opportunity, not a burden. Many people don't like to learn at school, or at work. But they often choose a hobby that means endless learning of new skills, physical, mental, social, spiritual.



In the bright world of children,
the way things look is the way
things are

L'enfant nous livre sa vision
enchantee d'un monde qu'il
ne comprend pas encore

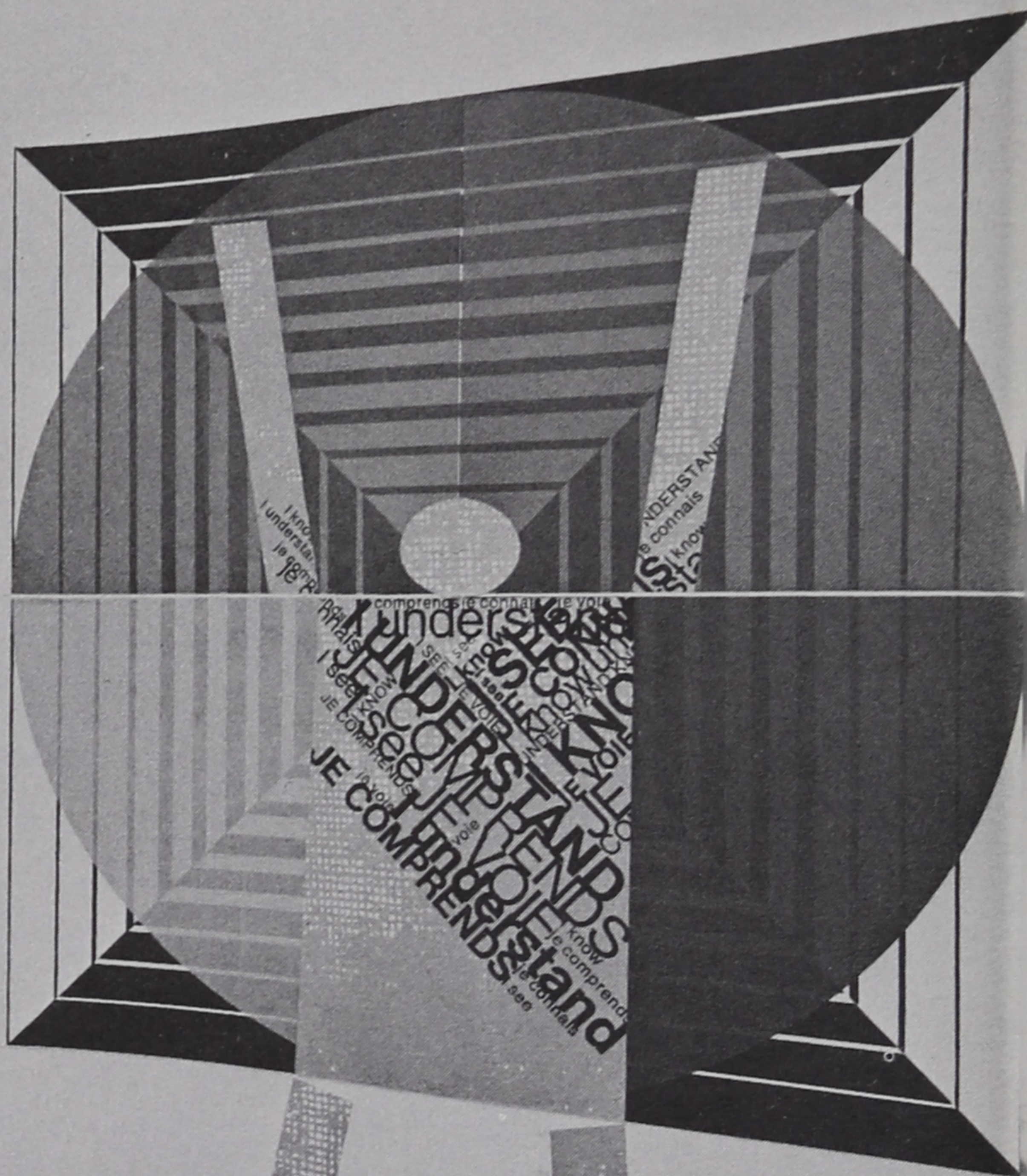


**learning
for living**

**savoir, c'est
mieux voir**

Knowledge creates wealth of
another kind. It broadens our
perspective on the world within,
on the world without

La connaissance affine les sens
et delie l'esprit: elle change
l'optique dans laquelle l'homme
se voit et voit les autres



Canada is one of the great technological nations of the world. Nowadays, technology is changing rapidly in the grip of the new Industrial Revolution. In the first two sections of this Pavilion, the Challenge of Resources and the Challenge of Distance, you've had a glimpse into the new world of tomorrow's technology. Now, in the Challenge of Changing Times, we give you a glimpse into the new world of tomorrow's learning and leisure that tomorrow's technology may bring about. Never has there been such an opportunity to live more abundantly, more richly. And never has it been easier to learn.

*what does change
mean to you?*

In the new knowledge of our times, we hope to find deeper insights into the nature of Man and His World.

time for learning

Learning is child's play. But ever changing technology means that we have to keep on learning even when we are no longer children. The technology that forces us to learn also helps us to learn. More is known about how to learn and how to teach than ever before. For instance, scientific investigation has shown what good teachers knew already: that you can teach much more by carrots than by sticks. Every animal (even an octopus) can learn something. But no animal can learn anything like as much as we can; or in so many different ways. We can not only learn to know more and to think more, we can learn to feel more, to be more aware of the world and of other people; in short, we can learn to be more alive, and more human.

Teaching machines can help make it much easier to absorb essential facts. You may still have to work hard, but a good work program means that none of the effort is wasted, and the work comes easier because you enjoy doing it, and feel pleased at what you accomplish.

time for each other

Man is a social animal. We live our lives in and through groups. We are born into some groups. We are born male or female, Caucasian or Indian. These are large groups, and our membership in them profoundly affects the whole of our lives. We are also born into groups that train us from birth; for instance, we are born into a French-speaking family, or an English-speaking family. Our native language is not something innate; we must learn it, but the group whose language we first learned to speak also affects the whole of our lives.

We may join other groups through choice. We may decide to study law, or change our religion. We join some groups without exactly intending to, although, of course, choice of some sort is involved. Our choice of neighbourhood may finally lead us into one kind of home and school association rather than another; and, of course, the neighbourhood itself may be an important kind of group by which we judge others and are ourselves judged.

time for rights and duties

Through all the groups of Canadian life, large and small, we belong to our society. When we want to act on our society, to change its politics, its morals, its habits, or for that matter, to prevent them from changing, we must act through groups; the family, the neighbourhood, the church, the political party. And when the society wishes to act on us, it does not act as a whole, but through the many groups to which each of us belongs, even the most solitary. And this is as it should be, for man cannot live by himself or to himself, and it is through groups that he expresses himself as a social animal.

time for living

Philosophers sometimes remind us that some things make you happier than others. Most of us knew this without being reminded. But life is full of small sorts of passing happiness. Perhaps you know how to find, enjoy and share every kind of happi-

TS?
PASSER
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● FAUT-IL
ADOUCCIR OU
RAIDIR LA
DISCIPLINE
SCOLAIRE?

ET UNE BONNE
CANADIANS
NEED TO
CHOOSE

DES QUESTIONS

• You choose

Are you prepared
to spend more
to educate your children
and yourself for
the changing times?

• L'alternative

Êtes-vous disposé à
consacrer plus d'argent
à votre propre éducation
et à celle de vos enfants
pour mieux affronter
les temps nouveaux?

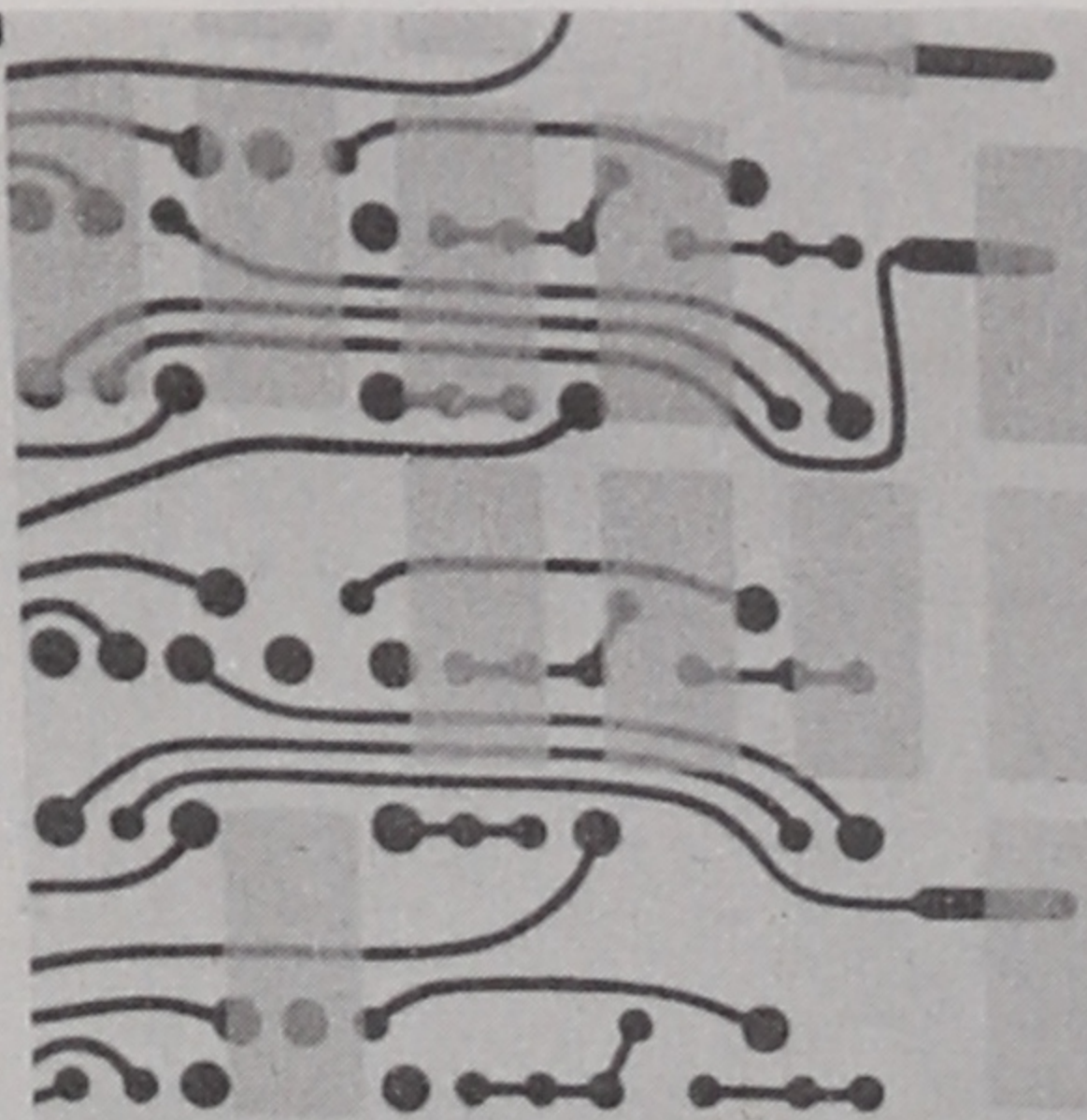
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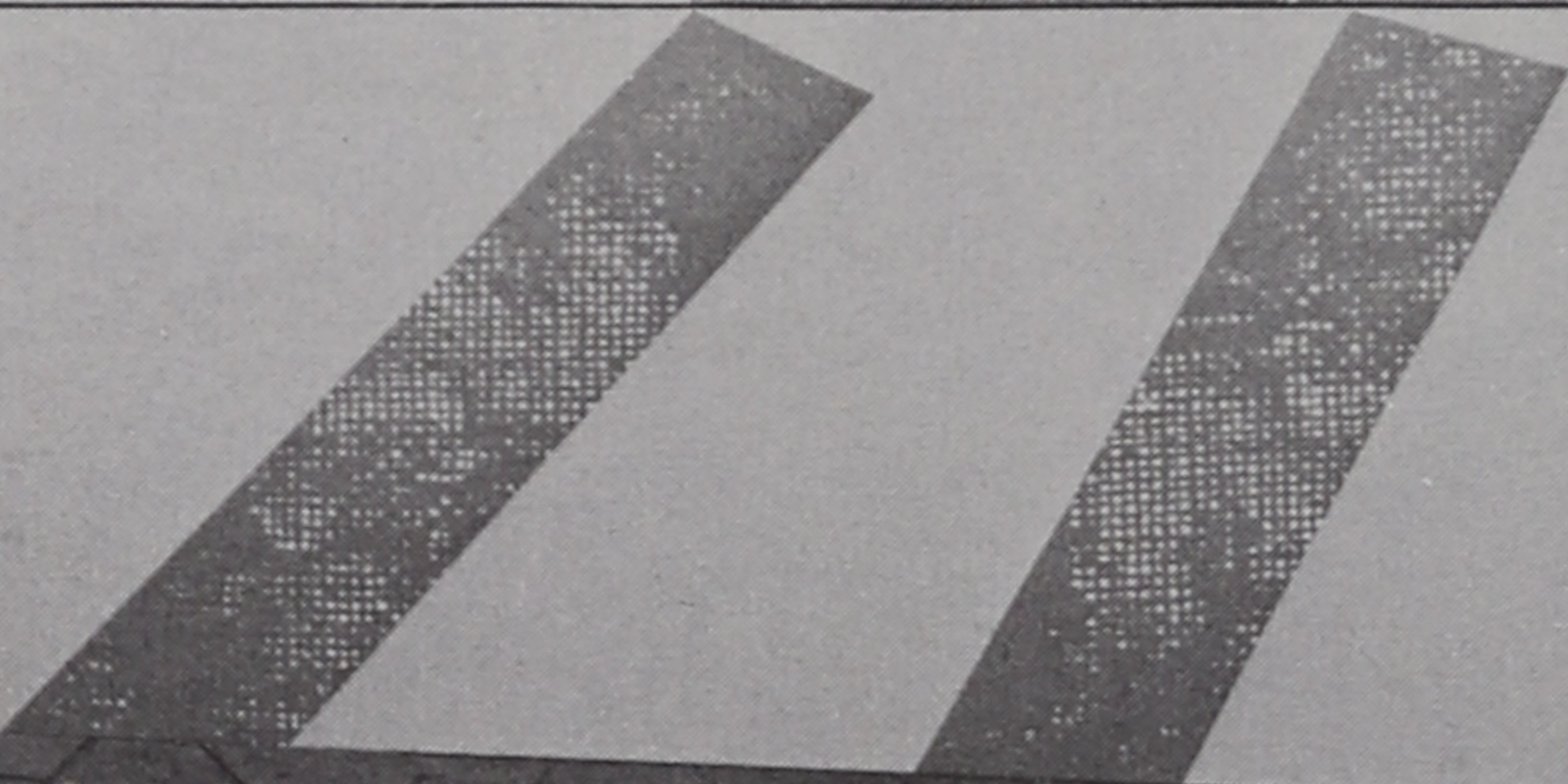
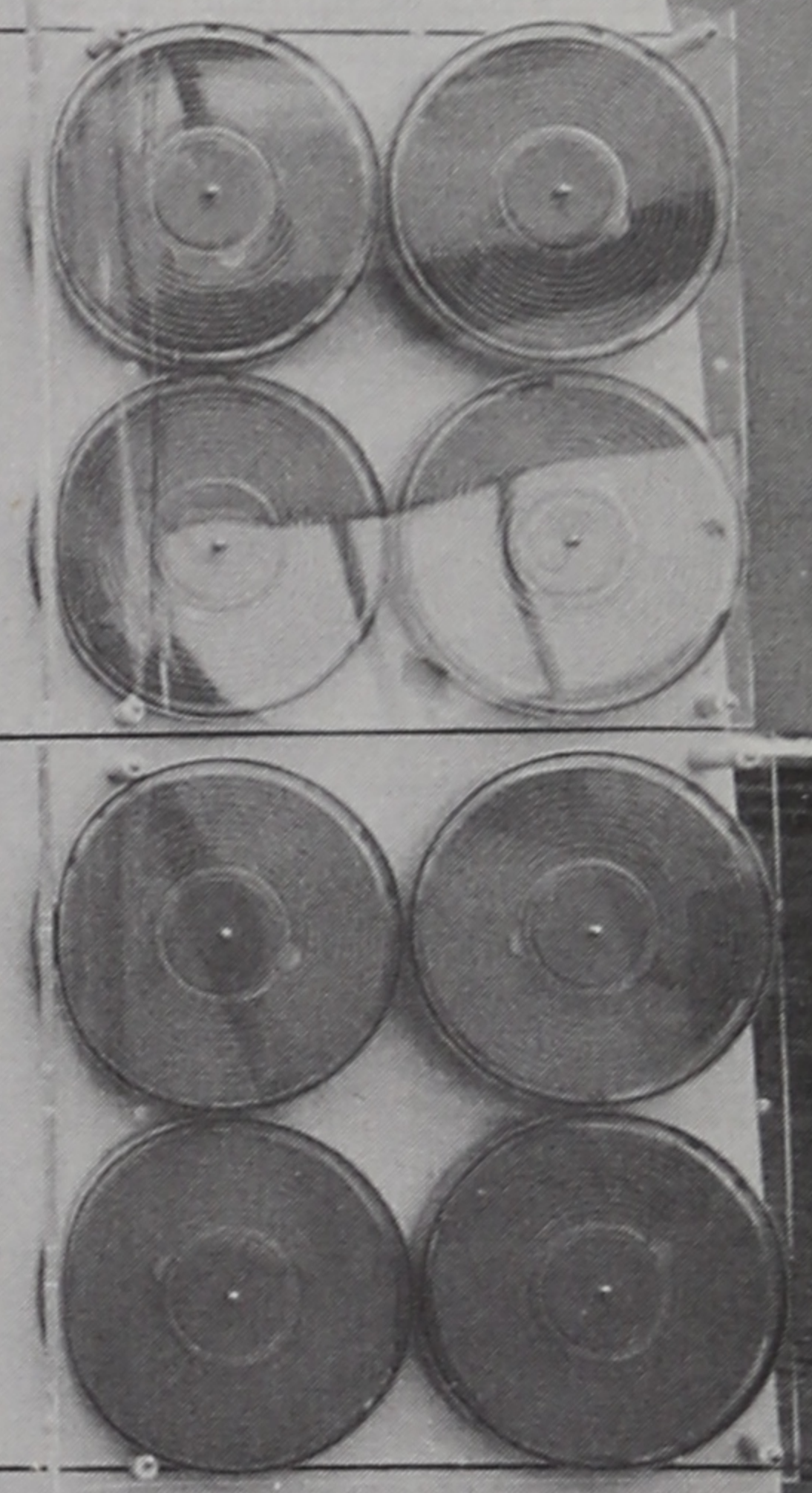
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In the maze of modern knowledge
are many doors—we find a lot to
learn. In the maze are many keys—
we find a lot to help us learn

La science nous livre a la fois
ses mysteres et la cle de
ses enigmes: pour qui le veut,
toutes les portes s'ouvrent sur
l'aventure de la connaissance

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ness, every kind of zest, from the deepest and wisest to the most innocent and trivial. For many of us, the raw materials of a vacation are sun and water: in summer, water to swim in, to fish in, and to boat on; in winter, frozen water to ski on and to skate on. A good hobby is fun for everybody. The hobby entertains you, and you entertain your friends.

What shall it be? Chess or cheese? Sunday painting or Monday quarterbacking? Bird watching or word botching? Scouting for boys, or scouting for girls? Singing or swinging? Hunting jaguars, or driving them? Curling up with a good book, or just curling? 5BX or 10W 30? Sails or sales? Knitting, netting, nutting or nothing? Modern technology is shrinking even Canada, huge as it is. More and more of our people live in cities. It becomes harder and harder to keep in touch with the deep rhythms of life: the re-creation of the spring, the golden swell of summer, the harvest of the fall, and the expectant rest of winter. Man is a natural creature: human nature is part of the world of nature. But among the turmoil of the cities, we find it hard to find rest and refreshment, and a green space to grow the soul in.

no man by himself

At the same time, most of us like to live in cities. We are an urban people. In 1831, Alexis de Tocqueville visited North America from France, and shrewdly observed that even on the frontier there was no sign of a peasant society. He saw that the home of the pioneer, even in the depths of the forest, was not a peasant dwelling, but rather "an Ark of Civilisation". The humblest settler of those days brought with him a book or two, often the Bible.

One of the first things he and his neighbours did was to lay out towns in the wilderness, clear the land and begin a settlement. And one of the first settlers was often a pioneer printer who would start up a newspaper.

And in many ways, we have not changed much since Tocqueville's day. In spite of our image as a

bunch of husky lumberjacks, in spite of the old political pretence that Canadians have their hearts back on the farm, we are, and remain, an urban people, not a peasant people. The great (but diminishing) Canadian wilderness surrounds our cities like an ocean of Nature into which we plunge from time to time. But we have no wish to turn back into noble savages. Our farmers do not live on the land as peasants, but as captains of their own individual arks of civilisation. They ask for the comforts of the city wherever possible: plumbing, electricity, TV and all-round mechanisation. Once more technology makes the society that makes the technology.

But the longing remains. Only nowadays we can, if we choose, live in the Great World, and not in the little world. Time for living: the changing times are full of tensions.

Tension confuses. Our vision blurs. But in the natural world we may find new strength and a fresh outlook on the world. Each of us can find something in nature. In her soil and waters: the bounty of food. In her rocks and trees: the means of shelter. In her animals and plants: the stuff of clothing.

something in nature

In nature's creations: a model for our own.
In nature's mysteries: food for our thoughts.
In nature's beauty: havens for our leisure.
Each of us can find something in himself.
Man improves upon nature.
Man escapes his earthly bonds.
Man teaches death to keep his distance.
Man unravels the substance of his universe.
Man reaches for the stars.
At the end of man's quest is freedom.
Freedom of the heart. . . .

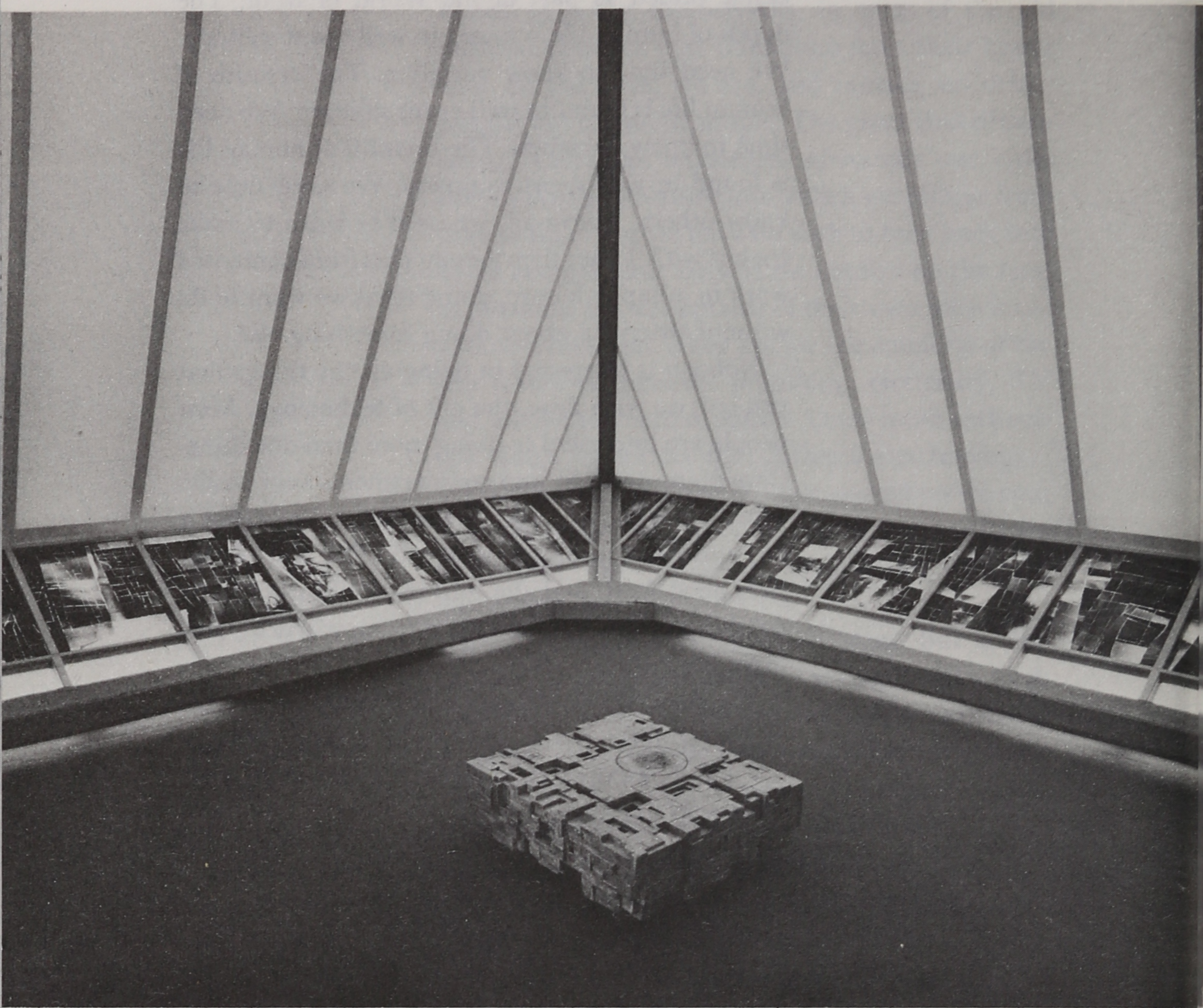
enjoyment has many faces

Time is the enemy; but time can be a friend. Time well spent is contented time: the sense of being useful, of being worthwhile; of living a life that is motivated by love and guided by reason; the sense of

being valued as part of the World of Man. The depth of human life is found in well-spent solitude. We need time to know ourselves. The breadth of human life is found in well-spent solitude. We need time to know ourselves. The breadth of human life is found in well-spent company. We need time to know others. Above all, we need to learn to make friends with Time; then we can pass from contented work to a happy leisure, doing what we want to do without worrying about doing something else.

Nobody is interested in doing all the things that you can do with time, the gift of technology. Most people are interested in doing more than one thing. Canadians don't fit into compartments very easily. The hockey fan also goes to the opera. The tailor is an outdoorsman at the weekend. The truckdriver likes good food, and the university librarian (who put himself through college driving a truck) portages his canoe.

We show you a glimpse of possibilities. But the real possibilities are in you; the things you remember and look forward to, the things that make your life worth living.



Ô Canada, mon pays, mes amours



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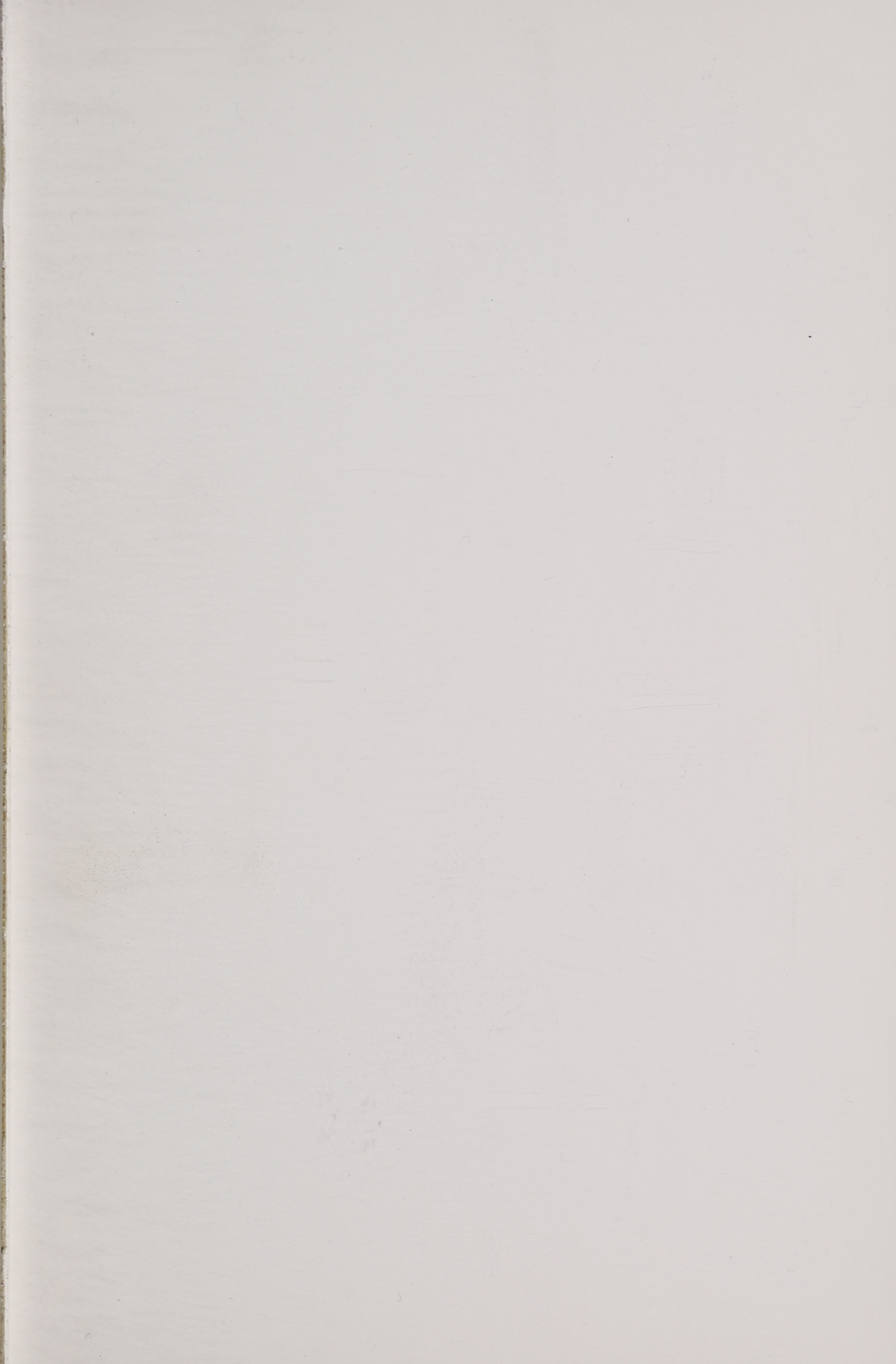
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resources and energy
transportation and communication
changing times |
| C-3I-2 | II | <i>my home, my native land</i>
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