Speaking of Crumblinks
Who says all writers are effetes? Harold Horwood (page 23) is still able to lick his weight in wildcats at age 40, thanks to living a clean, handworkng outdoor life. (Well, that's his story.) Anyway, he's now writing for us and we know of no one better qualified to report on Newfoundland. There, over the past 20 years, he has published a literary magazine, been a labor organizer, served a term as member of the provincial legislature and been reporter, associate editor and politi-
columnist of the St. John's Eve-
ting Telegram. He's a naturalist, hunt-
er, fisherman, canoeist and since 1958 a full-time freelance writer. He lives at Beavertail Cove, an outpost which, happily for him, has no tele-
phones, electricity or TV reception. There he wrote his first novel, Habita-
tion of Dragons, to be published by McClelland & Stewart this fall.

'Ve made a reputation as a novelist so I can get away with publish-
ing a serious book of philosophy,' he says, and by the way, if you're still won-
dering what crumblinks are, they're dry, twisted pieces of wood. Surprised?

'Does Your Magazine Look Different Lately?'

Has anyone noticed that we're us-
ing single quotation marks in the Re-
view now? Art director Ken Rodmell
asked the other day.

"Are we?" we said, in surprise.

Of course, we had noticed, but so far, not many readers have. At Rod-
mell's suggestion, the February issue introduced single quotes to our knowl-
edge, the Review is the only maga-
zine in Canada using them. Author-
ities on English usage accept either double (" ") or single (' ') quotation marks but prefer the latter. We hope the less cluttered appearance will make your reading easier. The Febru-
ary issue of our French counterpart, La Revue, also sported changed quota-
tion marks. In it, we now use guil
dantes, which resemble chevrons lying on their sides, like this: <<A c'est de votre revue vous a-t-il semblé différent récemment?

The instigator of single quote usage, art director Ken Rodmell, came to the Review just a year ago, after graduat-
ing from the Ontario College of Art (he worked his way through by playing jazz trombone), and was a graphic de-
signer for more than seven years—in-
cluding a stint in London, England—
before joining us. He's won half a dozen awards from typographical de-
sign organizations in Toronto, Montr-
eal and New York.

'What else?'' Well, Rodmell plays touch football and also plays with toy cars. He's one of a group that meets periodically to race miniature electric cars on a miniature track complete with curves, banks and straightaways. It's the hottest hobby since model railroading.

Cover: Bees in his bonnet? Not quite, says photographer Roy Nicholls, but it did take time to find a bee with enough vanity to pose quietly for his portrait, against Ken Rodmell's back-
ground of typographical 'flowers'.

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EDITORIAL

How Much Profit is 'Enough?'

A curious thing, profit. Everyone wants some of it—but hardly anyone understands it.

Every wage earner, for instance, hopes to have some-
thing left from his pay cheque after paying the rent, light, heat, water, taxes and other expenses of everyday life.

In a sense this is the case, the little extra he can have set aside for education or a better house, is his profit.

It's not much different with small or large businesses. But people who are not in business for themselves tend to think that companies are made up of characters in top hats who are quietly salting away 'profit' by the millions for their own private gain.

The fact is, our kind of economic system—which most of us prefer to other kinds—can't exist without profit. Let's see how it works in a typical company. The com-
pany's total income may be derived from sales or invest-
ment or both. Out of this comes the cost of materials, rents, labor (this includes the boss salaries), depreciation on equipment—and for some companies—the using up of natural resources which cannot be replaced. And there are taxes, excises, taxes, sales taxes and interest to be paid on debts.

What's left from this is the company's earnings. A large chunk of it goes for income tax. For 1962, for instance, Imperial Oil was charged $82 million in taxes against the company's income.

The rest is called net profit—but it isn't all money in the bank. Part of it pays dividends to shareholders. The rest helps to pay for expansion, improvement in product quality and to provide for emergencies.

Profit inspires people and companies to greater effort. It inspires people to invest. Investment creates expansion. Accumulations of profit finance more expansion. A

healthy expanding economy allows for better wages and for the taxes to pay for government services for everyone. But perhaps the major and unique role of profit in a market economy like ours is to guide the most efficient allocation of resources. The profit motive is an imper-
tial and automatic watchdog over waste. It leads people to produce what consumers want, at prices they will pay. It even leads to an imaginative anticipation of consumer needs and desires. It directs productive resources into areas where capacity is short and away from areas where it is in surplus. It puts continuous pressure on producers to be efficient.

Profit thus provides a system of signals. When there is no profit, this signals surplus capacity, inefficient produc-
tion methods or failure to meet consumer wants effective-
ly. Of the 106,596 companies on which the federal government had full information regarding taxes, profits and income in a recent year, 35 percent operated at a loss. This was bad news both to the investors and to the em-
ployees of those 37,358 companies.

It is, in short, a company's duty—not morally but in terms of sound business practices—to make a profit. Most people will admit to this. In fact, they are ready to reward successful companies rather handsonly. Last year an independent opinion survey asked the Canadian people how much profit they thought the oil industry made on each dollar of sales after taxes. The answer: 23 percent. Well, how much would be a fair profit, the interviewers asked? Most people said about 10 percent.

And how much does the industry make? Well, speaking strictly for ourselves in the past five years, Imperial's earnings, as a percentage of gross income after all charges and taxes, have been about seven percent.

Writer Harold Horwood
An Eye
for An Eye

The Biblical injunction makes new sense when a dying person can pass the gift of sight to another human he will never see. Jack Nunn now looks at the world, in more than one way, with new eyes.

by JACK NUNN as told to TOM ALDERMAN

No one knows for sure why it happens. But one night you’re reading a newspaper, and for a few seconds it’s as though it’s raining and your windshield wipers aren’t working. The words blur, dissolve into double images.

As I did, you tell yourself you’re tired and go to bed. But those fuzzy spells keep coming—more regularly, lasting longer and longer. You get headaches trying to keep your eyes in focus. At a movie, looking out a window, driving along the highway, at Imperial’s quality control laboratories in Sarnia, where I worked at the time, it would seem as though I had opened my eyes under water. Playing tennis I’d find myself trying to hit five tennis balls instead of one. I’d see my racket and the net as though I were looking through a prism.

“You’ll be blind in that eye within a year,” an eye doctor told me, “unless you get a corneal transplant.”

A generation ago, I’d have been blind within a year—period. Corneal transplants then were often unsuccessful. People like myself could do little but wait for those hazy gray shadows to close in permanently. Now one Canadian every three days trusts his failing eyesight to this newly improved technique of grafting a part of one man’s eye to another’s. If enough donor eyes were available, more than 1,500 of Canada’s 25,000 blind could have the chance of restoring their vision, estimates the Canadian National Institute for the Blind. Hundreds more—not yet legally blind because they can still barely see at 20 feet what those with normal vision can see easily at 200 feet—could sharpen their eyesight. If tomorrow you accidentally splashed your eyes with chemicals, or your child playfully poked a pencil into one of his eyes, your damaged cornea needn’t mean you’d go blind... if there were enough spare eyes around.

The cornea is that dome-shaped section of clear tissue—about one-twenty-fifth of an inch thick—in the front of your eyeball overlying the color. It’s the eye’s window. As in a camera, light rays enter the eye through the cornea, are focused by the lens onto the retina where they’re picked up by the optic nerve and passed on to the brain for conversion into the visual images we call sight. For reasons often unknown, the cornea can cloud over so badly that light rays are distorted and the lens can’t focus them correctly on the retina. The only proven way to restore transparency is to cut out the damaged part of the cornea and replace it with another, usually from a dead body.

It’s a delicate operation. The first completely successful one was performed less than 50 years ago. The technique has improved, mostly within the past 15 years, and is still improving. I’ve had transplants on both eyes, the right one 17 years ago and the left 17 months ago. That first time I had only a 50-50 chance of saving my eyesight. The second time I was wheeled in, about the time the 1962 Grey Cup game in Toronto was fog-bound, the
odds were about 90 percent in my favor that my own eye would roll back.

Now, with contact lenses to correct slight distortion, I have normal vision. I've been lucky, batting two for two. Things some people take for granted I appreciate more intensely: to see my wife, Vero, and my children, Mark, 12, Robin, 10, and Vicki, six, to be able to hold a job (I'm Imperial's western regional representative in the supply and export sales department).

Others haven't been so lucky. Walking down a street in Edmonton, I get tears in my eyes when I see a blind person. Tears of shame, because I made it and he didn't? Tears of gratitude? Tears of helplessness, because there's nothing I can do for him? I don't know.

My right eye first began to blur about halfway through my third year in physics and chemistry at Hamilton's McMaster University. It was hard to study except by bringing the text books up against my nose. An oculist recommended contact lenses and advised against work that demanded close visual concentration. Those $200 lenses helped for a time. I went to work for Imperial in Sarnia. But two years later, the headaches and multi-images returned. I had keratomeotic—a conical cornea—which means the cornea in my right eye had for unknown reasons started growing into a pyramid shape, rather than remaining its usual conical shape. Light striking the cornea was deflected into a bewildering number of overlapping images—almost the way I imagine it would be like looking through stretched, wet cellophane.

**Varied Reasons for Corneal Trouble**

Doctors can often guess why corneas break down. Herpes simplex, the virus that causes the common cold sore, sometimes invades corneas. Sometimes the damage can be easily traced to injuries, chemical burns or ulcerations; in such cases, successful transplants are difficult because the damage is often widespread.

Doctors attribute some cornea trouble to infections such as syphilis or tuberculosis. In other cases faulty nutrition is the culprit. Some corneal trouble is congenital. Still other cases are traced to old injuries. I've often felt that my years as an amateur welterweight boxer at McMaster didn't help; I used to average a black eye per week. But that's only conjecture.

Conical corneas, which account for many transplants, are the most mysterious. Though laboratories the world over are working on this, including the department of ophthalmology at the University of Toronto's Banting Institute, no one knows for sure why a cornea suddenly grows cockeyed.

But it happened to me, back in 1947, and I needed a transplant. The only specialists who could do it were in New York and most were charging $2,000 for the operation. I knew I'd go into hock, but sight is priceless. Imperial put me in touch with Dr. D. B. Kirby and Dr. R. Trowley Paton, who'd recently founded North America's first eye bank. They put their names on the New York list of doctors wanting eyes at the bank. I took a nearby hotel room and waited for their call. It's important to transplant a cornea as soon as possible after it's been removed from the dead body, otherwise the tissue loses its transparency.

'I've got one,' Dr. Kirby phoned me a few days later. 'A woman with a non-cancerous tumor at the back of her eye. The eye has to be removed, but the cornea's still in good condition.'

A few hours later, under a local anaesthetic, which is all they were giving in those early days of transplants, I was staring into bright operating room lights. I felt giddy, as though I were flying in the clouds. A trepan, a hollow metal tube one-quarter inch in diameter and sharpened to razor-sharp keenness at one end, came at me. It felt like a needle had gone right through my eye and out the other end. The whole of the pyramidal portion of the cornea had been scraped out. For a few seconds, hazy sight exploded into pea-soup-thick grayness. Then something nestled into the cavity of my eye. The new cornea. The mist cleared a little before it was fixed with eight cross-stitched sutures made with black sewing thread. And the eye was bandaged.

For two days I lay on my hospital bed, under orders not to move a millimetre. I was fed through a tube. With bandages over both eyes (so that the good eye would stay still and not set up an involuntary switch in the other), all I could do was think—and listen. A 50-50 chance, doctors had warned me. I cried a little. I cursed myself for not learning Braille while I could still see. I got annoyed with a patient across the hall who moaned during the night: 'I don't wanna be blind. No, God, I don't wanna be blind.'

A nurse with a you-all, Southern accent talked to me encouragingly. I tried to imagine what she looked like: a slim, brown-eyed, shiny-black-haired beauty, doubtless. I wanted to see her creamy skin, her elegantly carved features. I wanted to see—

Even when Dr. Kirby inspected the stitching, and I could see vague fingers waving through a bloody mesh, I wasn't reassured. I knew it would take months before we were sure the new cornea had taken in its new surroundings. Each cornea is an individual problem. An allergic reaction between host and cornea can take place as long as two years later. When that happens it means another transplant—or a blind eye.

It wasn't till three months later I could go back to work with any assurance that the mildest jolt wouldn't knock the transplant out of kilter.

Few grafts performed because of keratoconus are perfect. Almost always, they need contact lenses to remedy

---

Immobile under a general anaesthetic, a patient sleeps through the delicate corneal transplant operation that will restore his sight. Hospitals hope people will soon get into the habit of pledging their eyes to an eye bank.
don’t know what it is about the cornea that gives it its transparency. Until they find out they’ll never know for sure why one graft fails when a similar one succeeds. Research goes on across the world. At the Massachusetts Eye and Ear Infirmary, Dr. William Stone has developed artificial plastic corneas—still unproven. A Tokyo doctor claims he’s miraculously transplanted a child’s cornea to a 14-year-old girl. Others have tried it with pigs and rabbits. Results haven’t been proven conclusively. And an eye surgery clinical meeting at the University of Toronto two years ago was told of experiments with a drug called LDU. Though also not proven, it’s of value in treating some corneas infected with the virus herpes simplex.

One of the Banting’s main preoccupations is storage. Most eyes are snapped up within hours by doctors who’ve been on the first-come-first-served waiting list for months. But occasionally, especially in summer, it’s necessary to keep eyes a few days or more. Up to two days, the eyes are stored at four degrees C in an ordinary refrigerator. For longer periods, it’s necessary to slowly deoxygenate the eye, placed in a 15 percent glycero solution, to —79 degrees C.

At that temperature, the eye can remain indefinitely. But then it is good only for lamellar corneal grafts, a less serious type of graft, in which only a layer or two of the cornea’s five layers are replaced. For perforating grafts, like the ones I had, in which all layers of the cornea are cut out and replaced, only tissue from freshly obtained eyes can be used successfully.

Never Enough Eyes

So it’s a constant search for fresh eyes, of which there are never enough. Each day a patient waits for a new cornea brings him a day closer to total opacity of his damaged cornea. When that happens, a transplant won’t help him. For them with rapidly deteriorating corneas, every day counts. Often it’s necessary for Toronto’s eye bank to fly eyes to other provinces. Occasionally, Toronto eye bank executive secretary Mrs. Anne Wolf has to beg an eye from eye banks in other parts of Canada and the U.S. The U.S. has 30,000 waiting for new corneas. So before she calls New York, Mrs. Wolf would hunt the hospitals, try to persuade the relatives of the dying to donate the eyes of their next-of-kin.

It’s no agreeable task to round them from their morose depression enough to think of others. Many doctors on religious grounds, though all religious leaders counselled the practice. Many fear it will disfigure the eye. It doesn’t.

Eye banks depend essentially on pledge cards providing about 100 eyes yearly per 12,000 pledges. But even this number is still astounding. If a pledge doesn’t care with him, often too long after death (eight hours in an eye bank is laudable). But despite the pledge’s signature, the next-of-kin must sign a release as soon as possible after death. If the pledge hasn’t discussed his wishes with his next-of-kin, there’s often delay that can ruin chances of using the cornea. For the same reason, it’s easiest to pledge your eyes in your will. Wills often aren’t read until days after death—too late to save the corneas.

For me at least, the price of corneal transplants is one thing that doesn’t figure in the rising cost of living. My 1974 operation cost $1,440 in surgery, hospital and traveling expenses. (Imperial Oil helped me find a surgeon who charged less than the normal $2,000 fee.) Surgical fee for my most recent operation was $335 (it’s $250 for a lamellar graft) but most of my medical bills were paid by Imperial and other health plans.

Corneal Cost Nothing

The new corneas come free. Nor does the eye bank buy corneas, although occasionally—especially around Christmas—people will offer their eyes to the bank for upwards of $2,000 each. It’s against the law to receive an eye from a living person for other than medical reasons. A corneal transplant won’t solve all eye problems—just those involving damaged corneas. Too often people think a transplant is all that’s needed to dismiss corneal, glaucoma or detached retinas.

But for some reason, the bank can use almost any kind of eye. And astigmatism, near and long-sighters don’t affect the cornea. Only those eyes of people who’ve died of cancer, tuberculosis or some other infectious disease are shunned with suspicion.

Experiences like mine change your perspective. When your sight’s in danger, you think of all the things you could have done but didn’t when you were healthy. You promise yourself it’ll be different if you can just get well again. You try to enjoy a little of your order to nature.

When I’m not traveling through B.C. and the prairies for Imperial, I coach hockey and baseball in Edmonton’s Otter Valley Optimist CIub and have directed summer camps for boys at the Pigeon Lake Ymca Camp. I take extra courses in economics, accounting and commercial law at the University of Alberta. Small things, perhaps, but they represent my efforts to repay the gratitude and kindness of the unknown persons who gave back my sight.

There has been no moment when I’ve regretted my own sight—nothing at all. It was one. Years after my first operation, I took a sentimental journey back to the Manhattan Eye and Ear Hospital. I wanted to look up at the south terrace of a nurse who’d you’d all my money away. How glad she would come to my eyes of her as a brown-eyed, shaggy-haired cutie with exquisite facial features and fetching physique. I wondered. Was she the same girl? She was in fact, a patient. I was led into and saw a wide, red-eyed, blue-lipped person peering guiltily from behind her cover. For just a fraction of a second, I wished that operation hadn’t been so successful.

Jack, you bke something to smile about. With corneal transplants and contact lenses we have everything more clearly, including his responsibility towards others less fortunate.

(including 3,000 Canadian Legionnaires) who’ve signed cards pledging their eyes after death.

All the 1,800 eyes received by the bank since it opened have been used, though only about half are actually transplanted. In Ontario, after the next-of-kin have given consent, the eyes are taken from the body by a doctor. This must be done within eight hours of death, sooner if possible. Then, placed on a doughnut-shaped cotton swab dunked in saline solution, they’re packed in a cylindrical tube within an ice-filled metal container, and sent at 50 miles per hour by plane—into the eye bank laboratories at the Banting Institute in Toronto. Here the eyes are inspected for flaws and sterilized with antiseptics. If usable, they’re taken to the operating room where a previously alerted doctor waits with his patient. If the corneas are flawed, at least the vitreous fluid inside the eyeball can be transplanted to save the sight of people whose retinas become detached and who’ve lost their own vitreous fluid as a result.

Any left-over eyes and parts of eyes are used in research by a team headed by Dr. P. A. Slat, 42-year-old director of ophthalmic research at the Banting Institute. There’s plenty that needs researching. Doctors still
A Slice of Time

400 million years ago, when Canada was partly covered with steaming, swampy jungle, fern spores fell to the forest floor and were forever suspended in time and stone.

The strange shapes shown on these pages are fossilized grains of pollen that fell 400 million years ago from plants growing in tropical rain forests in parts of what are now British Columbia, Alberta, the Gaspé, New Brunswick and Nova Scotia. Found in rock thrust to the surface by ancient underground disturbances or in rock cuttings turned up by drilling bits, these fossils are helping scientists at Imperial Oil’s Calgary research laboratories in the search for oil.

To the naked eye the grains look like yellow dust, so fine that 10 pieces would fit on the end of a human hair. Magnified 500 to 1,000 times, as they have been here, they take on intricate shapes and patterns which vary according to the age of prehistoric time in which they were produced. In this way, scientists can determine the approximate age of rock in which the pollen is found. Knowing the age of various rock layers gives drillers a few more clues on where to probe for oil.

For years paleontologists determined the approximate age of various rock strata by studying fossilized remnants of plant and marine life. Only recently have they looked to pollen fossils for similar information. The new science is called palynology.

Palynologists at Imperial’s Calgary laboratories pulverize, then dissolve the rock surrounding the pollen in strong acid, leaving the grains free for study. The chemical composition of the pollen is such that it does not break down in the acid.

How did the tropical forests that produced the pollen come to grow in Canada? What kind of plants grew in these forests? How was the pollen buried and preserved?

About 400 million years ago the earth had a uniform climate, similar to that now found between the Gulf coast of the United States and the equator. One explanation for this uniform climate is that the earth’s surface was still relatively even, with no mountain ranges to block air currents and set up temperature variations. (The Rocky Mountains, for in-
stance, were not formed until about 50 million years ago.)

Large areas of the earth, including most of what is now North America, were covered by seas. All of the present day prairie provinces and the plains area of the United States, for instance, were one vast sea. But in swampy regions along the shore, the hot, humid climate produced steamy, tropical rain forests.

The seas were inhabited by fish (the first fish appeared 500 to 550 million years ago) but there was no animal life in the forests until about 350 million years ago when the first amphibians and insects appeared.

The type of plants growing in the forests varied with time. Four hundred million years ago the forests consisted of giant plants resembling ferns and palms—tall trees with trunks up to six feet in diameter. Then, 300 million years ago, in the geological age called the Pennsylvanian, an ice age broke the chain of plant evolution and when the ice receded plants resembling present day conifers—evergreens—began to grow. One hundred to 150 million years ago the first flowering plants appeared. Fossilized remains of the plants that grew in the ancient forests are found most frequently along what are now the Rocky Mountains in rock 360 million years old; in coal producing regions of Alberta in rock 90 to 100 million years old; in 350 million year old rock in B.C.; in the Gaspe and New Brunswick in rock 490 million years old; and in coal fields in Nova Scotia in rock 300 million years old.

Some of the pollen that fell from the plants in these forests was carried by wind and water into the ancient seas. Over a period of millions of years the seas were filled in by sediments, washed into them by great rivers. As the sediments piled up the pollen was buried. The weight of succeeding layers eventually compressed the sediments into rock.

As well as trapping pollen, the sediments buried plant and marine life which contained hydrogen and carbon—the basic elements in crude oil. Scientists believe that oil was formed in these ancient sediments.
NOW
Everyone can play our great new
GASWORD PUZZLE

ACROSS
1. This sets the ceiling on gasoline prices. If it isn't reached, you might pay $10 a gallon.
6. A mile or so beneath this, oilmen find oil—sometimes.
7. See 22-across.
8. Geologists do this before oil companies drill for oil.
9. He sometimes hauls gasoline from refinery to service stations, and this cost is part of the price you pay at the pump.
13. Almost a well-known brand of gasoline.
15. These happen in the gasoline business when dealer markups are high or when there is a surplus of gasoline.
17. What the dealer says bitterly when accused of making too much profit.
18. We do this to bring oil to the surface.
20. Man who sells you gasoline. In normal times he sets his own markup or "margin" out of which he pays his expenses and earns a small profit. This, plus the wholesale price, plus the government tax, makes up the price you pay at the pump.
22. Gasoline is not...but a combination of hundreds of ingredients.
24. Every...Canadians use 15 million gallons of petroleum products.
25. Put this together with T-across and you'll know what kind of puzzle this is.
26. What the driller says when he strikes oil.
28. Imperial's researchers and refiners produce a gasoline for both the winter and summer.
31. Gasoline prices are...in various parts of Canada, partly because of different dealer markups, differences in provincial gasoline tax, differences in operating costs and differences in shipping costs.
32. Abbreviation (2 words). Farmers use this fuel in their tractors.
33. Oil companies run these in newspapers to help their dealers sell products.
36. If oil companies and dealers don't cover their costs, they'll end up in this.

DOWN
1. This sets the floor on gasoline prices. If an oil company doesn't meet this, it'll go broke.
2. Crude oil has a strong one.
3. Debonair, handsome, good-natured head of household who usually buys the gasoline.
4. Governments set these. They account for 50 to 63 percent of the price you pay for gasoline.
5. If you had an outboard motor but no gasoline you'd have to...not a living.
9. So, every company and dealer tries to make some of this.
10. This stuff is pretty crude but we wouldn't be without it.
11. One of the hundreds of fractions of crude oil.
12. Gasoline in this state is no good to the refiner. That's why some of them sell surplus gasoline at distress prices, a contributing factor in price wars.
14. You'd feel this way, too, if you could see how refiners and researchers turn that black oily stuff into gasoline.
15. Out of the 1056 exploratory wells drilled in western Canada last year 508 turned out to be...
19. If you don't break even on 1-down, you'll end up with this.
21. Our service station dealers are...to serve people (we hope).
22. A dealer who doesn't ever make some 8-down, might as well put this around his neck and jump off a ledge.
23. Thousands of years ago this place on the Euphrates river was the site of the world's first big industrial complex.
25. Discounters are always knocking a few cents...the price of gasoline. It's another contributing factor to price wars.
26. Millions of years ago the oil we use today was starting to be formed at the bottom of...
29. We're almost here, in this puzzle, and we're glad.
30. Now we are...the end. Aren't you glad too?
They’re Giving the Culture Back to the Indians

The great, fierce-looking totem lay on its back in the grass, looking oddly helpless. Vancouver’s wind flung the screams of eagulls around the small compound at Brocken Point where the young Indians squatted, carving a new piece of cedar to replace the rotted section of the old pole. ‘It’s something like grafting new skin to an injured person,’ he explained, resting for a moment to wiggle his fingers. ‘These old totems, they mean much to my people once, but the tribes scattered—many Indians went to the cities to work, and the old customs disintegrated with the totems. But now white men are interested in their national heritage and, for the first time maybe, their interest seems to include the Indian.’

Whether the young Indian with the wise eyes was right about the reason for the reviving interest in Indian arts and crafts is debatable. But there is interest—so much so that, for the first time, some Indian artists are earning small but adequate incomes from their art. Only 30 years ago the B.C. Indians were dying out, their once virile folk art had degenerated to mass production of small, cheap, tourist totem poles—‘idiot sticks’ they called them—and nobody much cared, including the Indians.

West Coast Indians Doug Cranmer, finds himself involved in an almost constant struggle to produce art he believes in without denying his racial heritage. On this page, traditional baskets and beaded moccasins share the deserted sand of Vancouver’s Spanish Banks with a ceramic bottle from Alert Bay.

Today, in Victoria’s Thunderbird Park, tourists jostle each other to watch two Kwakiutl Indian woodcarvers, Henry Hunt and his son Tony, carve totem poles (their annual salaries are paid by the B.C. government). Ellen Neel, a Kwakiutl and one of a few female carvers, was the centre of curious crowds at 1960s Stratford Festival as she tapped, chipped and chopped at a 22-foot totem, part of an exhibition of B.C. Indian art. The University of B.C. campus sports a Haida village, recreated for the University by Haida Bill Reid and Kwakiutl Douglas Cranmer. Several new Vancouver stores are doing a thriving business in Indian crafts, from beaded moccasins to gentle watercolors. Paintings. Some 200 years ago, when B.C. Indian art was at its peak, the province’s mild climate and ease of living (fish, game and wild fruit were plentiful) gave the tribes time and leisure to decorate almost anything that didn’t move. Towering cedars in their back yards inspired them to carve tall poles crowded with distinctive, sometimes grotesque, animal and human forms—and when the carving was finished, most time was spent painting the totem. Ladies and spoons were given carved handles; baskets for storage and cooking were made with intricate designs, as were cedar household chests, blankets and canoes. Nothing escaped the exuber-

by RENATE WILSON
and HELMA BICKMAN

International art collectors are making B.C. Indians as ‘in’ as Eskimos.
ant artists—not even the wooden killing clubs, which were used with equal enthusiasm on fish, seals and unfriendly neighbors. Secret rituals, mythology, art and beauty were as much a part of daily life as eating and working.

Then around 1800 the white man arrived in force to B.C., carrying diseases and a way of life which decimated the tribes. The lavish 'potlatches' or ceremonial feasts were officially forbidden. Ceremonial dances and tribal warfare alike were discouraged. Totems were frowned upon and often destroyed as heathen idols. The Indians slowly sank into a cultural twilight. Art became a sporadic commercial proposition. As late as 1939 Robert B. Inverarity, in his book 'Art of the Northwest Coast Indian,' remarked that 'it is only a matter of time before the culture of the Northwest Coast people will disappear entirely.'

**Population Ups and Downs**

At their artistic peak in 1830, B.C.'s Indian population of about 50,000 declined to about 22,000 in 1872, where the level remained for some 15 years. Then, for no known reason (probably better health and medical care), the population began a steady increase. In 1939, there were more than 40,000 B.C. Indians, and more artists among them, filled with the urge to make their native arts and crafts known to other Canadians.

The ubiquitous totem pole is now being promoted by civic, provincial and federal authorities to many other cities and countries. Banks, business corporations and universities have decorated their buildings with Indian motifs. Some of Vancouver's most stylish women wear jewelry decorated with Haida designs.

Probably the biggest boost the artists got was from B.C.'s centennial celebrations in 1958, which ran riot with Indian-type decorations and hoopla'd the province's Indian background. The late Mungo Martin, long acknowledged by anthropologists and Indians as a master carver, was commissioned by the B.C. Centennial Committee to carve two magnificent 10-foot-tall totem poles. Martin, never a gregarious man, hardly glanced at the crowds—as many as 1,000 people per day—who swarmed to watch him work. (At the dedication ceremony of the poles Martin pulled the plug on a flood of Kwakiutl speech which was roundly applauded by smilling B.C. politicians. Martin, however, was merely voicing his objections to government liquor laws.)

Mrs. Ellen Neel, who is Mungo Martin's niece, is often impatient with tradition.

'I think it's wrong to expect us to keep strictly to what our ancestors made in their heyday,' she says. 'I mean they had the freedom to create what they wanted, so why shouldn't we. Of course, there are certain fundamentals which make our art distinctive and which we should adhere to. For example, all the figures we use—thunderbird, grizzly, whale, raven, salmon, and some human and subhuman forms—are quite stylized and unnaturally symmetrical. They must all flow into each other, and they each tell a story.'

Mrs. Neel carves in the traditional manner, and her totems have been sent all over the world, including England, Denmark, France, Korea, U.S.A. and South Africa. The minister of fisheries in Russia has one, as has Queen Elizabeth and Bob Hope.

**Haida Life Reincarnated**

Bill Reid, grandson of the last great Haida silversmith, began tinkering with jewelry designing during his years as a CBC announcer. He specializes in gold and silver jewelry, decorated with Haida motifs. When U.B.C. was given a Canada Council grant to enlarge its small collection of totem poles, Reid suggested instead that they reconstruct part of a Haida village. He and Doug Cranmer spent three years carving totems, recreating parts of the native village. They erected the memory of particularly powerful chiefs and held the remains of the chiefs in a box at the top of the pole, a long house and a mortuary house. 'We both used typical Haida heraldic symbols; the wolf, eagle, bear, thunderbird, shark and whale, but somehow we ended up with completely original poles,' says Reid. 'I suppose that's where our inherited visual memory comes in; many of the totems we'd been told by the old fellows appeared in our carving.' In this mood, the two carvers created one of the village's most attractive pieces, a six-foot high sea monster that is the delight of small children.

**Wood, Walrus and Whale Tooth**

Since finishing the village Reid has concentrated on his jewelry making, while Cranmer and a young Kwakiutl apprentice, Peter Scoe, rent a small workshop and showroom on Granville Street in Vancouver's south end. Scoe is a U.B.C. student and he hopes carving may prove a more profitable way of earning his tuition fees than fishing, the occupation of most coast Indians. 'I could get all sorts of handouts,' he maintains, 'but I've fed up with the idea that the white man owes the Indians something and all we need to do is hold out our bands. I'll make my own way.'

The store displays ceremonial masks, feast bowls, snowshoes and wall plaques. Both Indians use red and yellow cedar, and they have many of the pieces unpainted to show the natural grain and color of the wood. 'Colors were always used sparingly in the old days, but we've also found that unpainted carvings are easier to sell. Probably they go better with modern furniture,' says Peter Scoe, who is determined to make his own success. Cranmer must sometimes be a frustrating business partner—when a customer picks up an item, he's been known to protest, 'But I don't want to sell that, I've just finished it.'

Wood isn't the only medium for today's Indian carvers. New England whalers arriving in the Queen Charlotte Islands around 1820 liked to whittle walrus tusks into small totems (whales and walrus teeth). The Haidas adapted whittling and carving into argillite, the soft gray slate found only near Skidegate. Thousands of small totems and

Masks, totems and rattle in Vancouver's Stanley Park are exuberantly decorated, in contrast to Bill Reid's sophisticated gold and silver jewelry. Reid (top of page) works on a thunderbird and Ellen Neel carves a 'Roman of the Woods' mask. Some Vancouver stores specializing in Indian crafts find customers first buy Indian art after seeing U.B.C.'s reconstructed Haida village.
Symbol of traditional Indian art, a Haida totem pole thrusts its way toward the sky. Although younger artists are growing away from this form of expression, the Indian will always have roots in a culture that goes back to a time when our land was new and mysterious.

Dishes were traded to seamen and subsequently found their way into the world's museums. With the upswing of Indian art, argillite is again being carved, this time into candlesticks, bookends and small totems.

Chief Henry Speck, of Alert Bay, is bringing the sea and land creatures of Kwakwalt, mythology to life in his tempera paintings. Chief Speck, like most Indians, considers it a duty to pass any form of artistic creativity along to the younger generation, and he leaves his painting materials where they're easily found by his 10- and 15-year-old sons, who already show signs of becoming painters.

Basketry, perhaps because it was useful as well as aesthetic, has never slipped into obscurity. Mrs. Rosie Ross, a Lilooet tribe member who lives on a reserve 100 miles north of Vancouver, is a cheerful round grandmother of 61 whose facile fingers turn cedar roots and straw into handsome, useful baskets.

After digging the cedar roots and splitting them into slin strips, Mrs. Ross cuts piles of wild straw and then uundra the horde of wild cherry bark. She keeps the bark buried in a bucket, where rust and wet earth darken the bark to a warm mahogany color. Thin cedar wood splints are whittled for the 'bones' of the baskets and deer skin things are used for hinges and handles.

To build up the bottom and sides of her basket, Mrs. Ross swiftly coils the long root strips around the splints, building up the bottom and sides of her basket. She decorates the baskets by weaving in creamy stalks of wild straw and red cherry bark. A sense of timelessness surrounds the basket-making. Rosie Ross's ancestors used the same materials, found in the same places, for baskets made in the same way. Each movement of the hands, each twist of root or bark has been handed down through the generations. It's still being handed on. 'I start making baskets when I marry at 18,' Rosie says. 'I make maybe a thousand baskets. We make a lot to sell but also to use, for berry picking, for carrying babies. I teach my girls, and now my little granddaughter is learning too.

Certainly everything isn't all sunny in a.c.'s Indian art world. During the last few years, with the increasing popularity of Indian crafts, enterprising fakers have appeared, much the way in which they have appeared in the field of early Canadian pine antiques. Several white men have produced pottery, fabrics and jewelry with Indian designs; one man is mass-producing reproductions of argillite totems; another is lithographing the Speck family's paintings. Not all storekeepers take the trouble to point out which of their items are genuinely Indian-made. Some form of trademark similar to the labels which identify Eskimo art would clearly benefit both the Indian artists and the buying public.

In the meantime, on a.c.'s west coast, Indians continue to carve, paint and make jewelry. Some of them are traditional artists, others show the yeasty ferment of other young creative Canadians. Their output is often good and always exciting. It is part of our cultural past. It remains to be seen whether Indian art will also be part of our future.

One day in 1662 a schooner with a cargo of Canadian kerosene arrived in Liverpool harbor. The port authorities went below for a routine inspection. Moments later they tumbled back on deck, gagging, choking and holding their noses. A wave of sulphurous odors from the kerosene barrels had caught them smartly between the eyes. When they could breathe again they thundered, 'You can't store that in our warehouse. Get it out!' So the schooner (presumably manned by a crew with no sense of smell) returned the cargo to its oil company owners in Canada.

Actually, if the Canadian oilmen had read up on history, they might have anticipated the incident. For centuries man has turned up his nose at sulphur in one form or another. It's one of the most valuable elements on earth but somehow it's always in bad odor.

Sulphur dioxide so nauseating that witch doctors believed it would drive away evil spirits. A concentration of 1/10 of 1 percent of hydrogen sulphide—the gas with the rotten eggs odor—will paralyze the olfactory nerves, lungs and heart and can even kill. (However, it is virtually impossible to achieve such a lethal concentration outside a laboratory.)

Briston, as sulphur was once known, had other evil connotations. The Bible says Hell consists of 'lakes burning with brimstone'. Shakespeare and Milton, among others, described the nether world as 'the sulphurous pit' and 'the devil's brimstone bed'. Generations of preachers have frightened sin out of their congregations with 'hell-fire and brimstone' sermons.

Until a generation or two ago sulphur also signified to children the awful springtime ritual of being doused by solicitous mothers with a 'tonic' of sulphur and molasses (also called brimstone and treacle). The molasses was supposed to take the curse off the 'medical' sulphur, but it never did.

During the past hundred years sulphur has been a nuisance to the petroleum industry too. The amount of sulphur in crude oil is often a costly factor in the design of a refinery. Expensive alloys must be used for processing equipment (to guard against corrosion) and treating systems are needed to remove smelly sulphur compounds. Natural gas too must have essentially all the sulphur compounds removed.
In spite of all, sulphur doesn’t deserve the abuse that it gets. It doesn’t have the bad reputation it’s mixed with oxygen or hydrogen. It is a necessary part (1/4 of 1 percent) of our daily diet. It’s an essential ingredient of such worthless items as eggs, mustard, garlic, cabbage, horseshead, wool, and hair. It has medicinal and industrial uses too. It makes rubber behave like rubber, instead of like chewing gum. It helps prevent this paper you are holding from burning, even if you eat it and the clothes you wear.

In its pure state sulphur is a bright yellow, odorless, tasteless, non-metallic solid that solidifies into stone-like lumps. It is highly combustible and burns with a spattering blue flame, emitting the distinctive odor of sulphur dioxide.

Until about a century ago most English-speaking people called it brimstone, an anglicized version of the medieval term ‘brennerstone’ which meant ‘burning stone’. The popular name was due to its ability to turn sooty mystified people that used this term in preference to the academic ‘sulphur’.

The Phlogiston Theory was Wrong

Medieval alchemists, also impressed with the combustible character of sulphur, claimed it proved that fire itself was a material substance. Their hypothesis, the Phlo- giston Theory, wasn’t refuted until 1777 when Antoine Lavoisier, the father of modern chemistry, proved that sulphur’s combustibility was not more than the uniting of other elements with oxygen. Lavoisier also later claimed sulphur was an element, a view that extravagantly language. In 1802, he confirmed it by refining the discovery during the French Revolution in 1790) but in 1805 Joseph Gay-Luslac and Louis Thénard did.

Although it was long believed that sulphur was a light, airy gas, it was long before this. Witch doctors, burning it to scare away evil spirits, discovered that its fumes killed insects and vermin and took the colors out of wool, fur and feathers. Thus man early discovered the value of sulphur dioxide in fumigating and preserving meats.

The belief that sulphur fumes destroyed all disease-breeding vermin continued down through the centuries. The memory of sulphur and rubber sinning on the kitchen stove overnight in the morning he discovered that the cooking process is more like a kitchen and meat-cutting with the knife, the kerestone was dis- tilled, then treated with sulphuric acid and an alkaline solution to make an essentially sulphur-free product.

Today sulphuric acid is probably the most important single substance in the chemical industry, because it has an extremely wide range of applications and is one of the cheapest of all industrial chemicals to produce. Some chemical processes use sulphuric acid because they need the sulphur it contains; others because it will take water or even atoms of hydrogen and oxygen which make up water; many simply because it is the cheapest acid.

The Cheap and Abundant

Fortunately for us, sulphur is relatively abundant and inexpensive. It is generally distributed throughout the world and occurs in many different types of deposits, some of which are of little commercial value. In 1850 William Turner, an Eng- lish farmer, discovered that sulphur buried in lime created a spray which killed a powdery mildew disease that was destroying the vineyards of Europe. This lime-sulphur spray is still used as a fungicide to destroy parasites of plants and animals.

C.D. Ekhoff, a Swede, followed up in 1873 with another invention. He cooked wood chips in a solution of sodium sulphate and caustic soda, according to a process similar to the production of paper. Vast supplies of paper and newspaper were produced cheaply for the first time, starting us on the road to greater literacy and mass communication.

By the 19th century sulphur, although not smelling any sweeter, was becoming increasingly useful to man. In 1839 Charles Goodyear, a U.S. scientist, was trying to find a process that would prevent manu- factured rubber from becoming brittle as glass in winter and sticky as fly- paper in summer. By shorting out of cash and becoming discouraged, Goodyear created strange and uselessmixtures of chemicals and molten rubber. He finally got his formula right for a kind of sulphur and rubber sinning on the kitchen stove overnight in the morning he discovered that the cooking process is more like a kitchen and meat-cutting with the knife, the kerestone was dis- tilled, then treated with sulphuric acid and an alkaline solution to make an essentially sulphur-free product.

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In recent years petroleum companies have also been recovering and marketing fairly large quantities of sulphur as a by-product of refining. This year Imperial Oil will complete at its Sarnia refinery a $460,000 plant which will eliminate a source of air pollution and produce commercial quantities of sulphur from hydrogen sulphide. As a result, this by-product of the refining operation is being burned off. In Alberta, Saskatchewan, and British Columbia, since 1947 of vast deposits of 'sour' natural gas (estimated potential 200 to 300 trillion cubic feet), many of which have a high content of hydrogen sulphide, gives Canada a new, tremendous source of sulphur. There appears to be a ready market for it. Around the world. The U.S. deposits alone is expected to reach over 12 million tons in 1975, a 110 percent increase over the 1970 consumption. One of the major increases in the use of sulphur throughout the world is for sulphuric acid in the production of fertilizers. With half the people on earth undernourished, sulphur can play a vital role in helping solve one of the most important problems men face today—the growing of more food for the world's expanding population.

All of which would make it one of the four or five most important elements on earth. Pity everyone thinks it's such a stinker.

Sydney E.Ewens has been appointed comptroller of taxation upon the retirement of Mr. W.H. Halliday. Born in Hamilton, Mr. Ewens received his education in Toronto, and was discharged after World War II from the Canadian army with the rank of captain.

Mr. Ewens joined Imperial in 1948 and has been working in the tax field since that time. He has been assistant tax administrator and was appointed assistant comptroller of taxation in 1959. He is a member of the Institute of Chartered Accountants and the Tax Executive Institute.

Sydney E. Ewens
St. John's
I Love You

by HAROLD HORWOOD

If you set your watch by the noonday gun, if turnshooting is your favourite sport, if you love nothing better than a kettle of tea boiled over a fire built of crun- nickers on the barsrens, if your idea of hospitality is to offer your guests four-ounce draughts of black navy rum straight from the bottle—you’re a St. Johnsmen. Not just a Newfoundlanders, but a free citizen of the proudest and oldest European city in the new world.

Newfoundland today is still a little nation,-contentedly part of a larger one. Though there is no question of a ‘liberation movement’, the sense of nationalism is more universal than anywhere else in Canada, and seems to have grown, rather than diminished, in the 15 years since the province entered the Canadian union. The feeling is strongest in Newfoundland’s capital city, where the typical citizen believes that everyone else ought to be a St. Johnsmen, poor chap, though it isn’t really his fault that he’s not. A miracle happened recently when a ‘new New- foundlander’, Gerry Wiggins, was returned in a by- election to the city council. An immigrant from the mainland, he had been living in St. John’s a mere nine years, but his popularity as a professional TV personality saved him. Nothing less would have induced St. John’s to elect a ‘foreigner’.

As might be expected, the people of this peculiar town have an overpowering sense of history. It is no accident that the editors of both daily newspapers—Michael Harrington of the Evening Telegram and Albert Perlis of the Morning News—are historians. If someone in St. John’s discovered an authentic relic of a 15th century voyage it would be far bigger news than the Stanley Cup playoffs, and might even shunt a national election from page one. Something like this happened two years ago, when a thousand-year-old Norse site was unearthed by archaeologists. Its age confirmed by radiocarbon dating, it made banner headlines in the press.

Visiting journalists, writing their copy as they fly back to the mainland with a hangover from their first brush

GLOSARY FOR FOREIGNERS: The noonday gun is fired from Signal Hill, where most of the battles of St. John’s were fought. Turrs are black and white seabirds the size of ducks. Neafound-
The passion for trade rose to a great peak in the 19th century, when Newfoundland, despite its tiny population, became one of the principal carriers of the world's goods, and ships out of St. John's sailed to all the major ports of the earth. Though every boy worth his salt went to sea, the demand for sailors outstripped the supply, and men of all nations sailed in Newfoundland ships. Though this helped give St. John's its cosmopolitan flavor, even stranger was the influence of hordes of foreign Fishermen.

The 'Spanish sailors with bearded lips' seen by Long fellow in Boston, still appear every spring and summer at St. John's. Portuguese are even more plentiful, and treat the town as their own. They are given a warm welcome by the hospitable and trade-conscious people, and their presence is made an excuse for endless rounds of parties, afloat and ashore. Russians, operating the biggest fishing fleet in Newfoundland waters, are rarely seen on the streets, but carry on a lively barrier in small boats along the docks. Many St. John's children have eaten strange-tasting confections from Latvia, and many longshoremen have smoked black, rank cigarettes grown in the Crimea. One weekend last fall downtown St. John's was crowded with Japanese. A factory ship three blocks long, the red sun of Nippon floating from her mast, was berthed at the new waterfront pier, and most of her crew had shore leave.

St. John's would have had trouble handling such a ship in the days before her waterfront was transformed by the federal government. Following Newfoundland's union with Canada, the cluster of black finger piers along the harbor's edge, some of them dating from Gilbert's time, if not before, and none of them connected directly with road or rail transport, were found so utterly inefficient by 20th century standards that the sea trade out of which St. John's was born was dying.

In the 1950s the harbor traffic was thinner than in more than four centuries. Some industries were preparing to move. Imperial Oil's premises on the south side of St. John's harbor was so plagued by transportation problems that the company made plans to close it. A $16-$18 million harbor development, begun in May 1957 and to be completed this September, kept Imperial and other dockside industries in the city. The company passed over to the government, free of charge, the land needed to extend the dock road to the harbor entrance on the south side. Imperial is also rebuilding its plant, to be completed late this year, at an estimated cost of a million dollars.

Harbor improvements included dredging, filling, and
building installations on a grand scale. Close to a million and a half tons of oil have been added. The old piers are replaced by a concrete wharf 2,300 feet long. Eighty acres of space have been added to docks and freight yards. A small boat basin, a large finger pier at the western end, railway spur lines, public freight sheds and a new road have gone in.

Already maritime traffic is increasing steadily. Freight movements are much faster and cheaper, helping to hold down the cost of living, already higher in Newfoundland than in any other province. The total transformation of the waterfront is also bringing St. John's back into close touch with the sea and preserving the character of an overgrown bazaar in which it has always taken pride.

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Though St. John's has the oldest street in Canada—Water Street, known as the Lower Path in Gilbert's time—it has few buildings much more than a century old. It was totally destroyed three times during the French-English wars, and swept by fire three times afterwards. When it wasn't burning it was being attacked by pirates.

These 'erring captains', as they were politely called in the 17th century, actually ruled Newfoundland for 15 years, levied taxes, recruited 1,500 fishermen into their crews, and made off with a portion of a million dollars in loot. As a defence against their frequent raids, the harbor of St. John's was fortified—not by the English government, but by a local militia, under the leadership of Captain Christopher Martin. They took guns from their ships, built and manned their own forts, and fought off the pirate fleet of Captain Jacob Everson in 1673.

After several such defences, England took over the forts. Some of them, complete with their guns, dominate the harbor entrance to this day. From Martin's first battle down to World War II, when German submarines tried to force The Narrows, St. John's was never successfully attacked by sea. If there was no real defence, bluff sometimes worked. Five thousand private citizens, manning the ruined forts at the harbor mouth, and doing their best to look like soldiers, succeeded in frightening off, in 1793, the fleet of Napoleon Bonaparte, which could easily have captured Newfoundland and gone on to sack Canada.

This long tradition of fighting his own wars without much assistance or encouragement from outside helped breed in the St. Johnian the spirit of independence that makes him feel he has to do it all himself if necessary, and is a cut above anything else on two feet.

For its first 300 years, the city lived by trade in salt fish. Then the great seal hunt began—an annual adventure among the Arctics that took a terrible toll of men as well as seals but produced enormous wealth for those who risked their ships on the frozen seas. At the industry's peak they sent 400 ships manned by 13,000 men into the drift ice, and landed half a million seal pelts every spring. Though this brutal and wasteful trade is now but a shadow of its former self, flipper pie, made from seal meat and vegetables baked under pastry, remains the national dish of St. John's.

Fish, of course, is still a big item on the docks. There are three fishing villages actually within the city and others in St. John's Bay, which has the most reliable sup- ply of inshore fish of any part of the province. But fishermen are a separate group, quite distinct from the regular population of 70,000, which lives by trade, service industries, and by working for the government. Since confederation the two governments, federal and provincial, have become by far the biggest employers in St. John's.

The centre of government has moved, symbolically, far from the old waterfront to the outskirts of the huge subdivision known as Churchill Park, peopled mainly by those who have no connection with the sea. Here an immense pile of glass and biscuit-colored brick called Confederation Building is flanked by the sprawling, soap-box architecture of the new university and the factory-like technical college. The entire complex looks like something straight out of the American Middle West, and is poles removed from the old city of St. John's, whose Victorian buildings march down narrow, crooked hills, to dip their feet into the sea. Hemmed in by the subdivisions of the past 20 years, the old city is essentially as it was shortly after the last great fire in the 19th century. It even looks the same, today, as when the domi- nant feature of its skyline, the huge Basilica of St. John the Baptist, was built on the harbor ridge in 1855.

As for the people—nothing is ever likely to change them. Premier Joey Smallwood, himself a St. Johnian since childhood, has described the city's people as a race or nationality unique in the world. The typical St. Johnman, he says, is 'dressed like an American, speaking a peculiar accent which is a blend of Irish-English-American, intensely individualistic . . . a tireless lover of athletics . . . and, above all, a man who would walk fifty miles, if necessary, to get out in the country, trusting once the 24th of May rolls around . . . More tenacious than the fast-disappearing Cockney Londoner, your St. Johnman never loses his hallmarks, and is easily recog- nized as such, wherever he may roam throughout the world. He has a flavor all his own.'

Warm-hearted and hospitable, but salty, tough and disillusioned, the people of St. John's are blase about politics. They often find themselves in the opposite camp from the rest of the province, and attribute this difference to the universal ignorance of the 'bayman', as the outport resident is called.

They are intensely patriotic, but in a remarkably clan- nish way. They readily open their hearts to strangers of any race or nation. But for them the sun rises in The Narrows and sets in Waterford Valley, three miles to the west. They are St. Johns men first, Newfoundlanders second, Britons third—and, if pressed, a few will admit to being Canadians as well.

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session. All without getting a spot of grease on your cuffs.

Star of the show is a four-wheel inertia roll test machine. Until now this particular model has been used only in major U.S. car manufacturing plants. To test worn tires and brakes, wheel alignment and engine performance, some Canadian garages use a two-wheel test machine. Four wheel rolls give the most accurate readings and are an improvement over two-wheel cradle rolls, which test only half the car at one time and don't take into account the weight of the vehicle, which is a factor in its performance. Use of the four-wheel rolls leaves no room for guesswork.

The four-wheel inertia roll machine takes into account the weight of the car and the four rollers give a precise reading of the car's reactions under road conditions. The car's wheels rest on steel rollers, each a yard in diameter and almost a yard wide. These rollers—plus retaining rollers that keep the car in position—keep out above the flooring in the test area.

To test brakes, for example, the machine works this way: the car is 'running' on the rollers. A technician applies the brakes. The stopping power of the wheels is transmitted through the rollers to meters. If the brakes are delicate, this is recorded by a shaving needle on a meter. The machine is particularly good at detecting the 'pull' of the car in one direction or another, due to a faulty brake. Overall, the machine is expected to give the most accurate brake test in Canada.

Similarly, when a technician transposes on the accelerator, the car's engine performance is tested (the machine simulates road conditions, hills, etc.) and registered on meters.

For $3.95 the customer drives off with a description of what’s wrong and an estimate of what it'll cost to get it right. He can, if he likes, have a private consultation with a technician. If he wishes, he can have the car repaired on the spot.

Similar operations in the U.S. (with less elaborate machines) reveal that when such tests are first made available to the public seven out of 10 customers want their older model cars checked to see if they are worth keeping, or if they come in for an expert opinion of a used car they are planning to buy. But later the trend reverses until many customers are new car owners wanting a quick thorough check-up, often before the warranty runs out—something few garages are equipped to handle.

This new approach was inevitable. Businesses everywhere are taking the customer into their confidence. Airlines tell their passengers how high they are, how fast they're flying and whether there's a head wind or tail wind. Banks no longer hide behind brick walls and barred windows; they expose their inwards with great glass fronts. In the garage business the diagnostic clinic heralds the twilight of yet another secretive society.

“What’s going on down there?” is a question asked by many motorists who don’t know the difference between a missing sparkplug and a missing headlight. The new car clinic not only lets them relax in a well-decorated lounge while they watch mechanics probe their cars’ inwards; they can also eat steak, order steam windows, and have their driveways paved.

SO WHAT ELSE IS NEW?

Imperial’s new centre at Credit Union Drive and Eglington Avenue is more than an electric car clinic. Although the car clinic is the star of the show (after all, it’s unique in Canada) there is a supporting cast of enough additional features to make life easier and more interesting for Toronto motorists. It’s actually that favorite word of the architects, a “com-

plex”. It embodies a gas station pump island, a restaurant, parts and accessory department and other services, some of which are new to Canadian service centres.

The gas station island has remote pumping equipment, which means motorists are supplied from gas pumps some feet away, while cost and gallonage are registered on dials easily in view by the front car window. Motorists pay their bills at a cashier’s window away from the pumps.

The service desk has an Imperial girl who will take payments for credit card accounts, supply information about home furniture equipment (with models of the various furnishings to look at), supply maps and travel information. You’ll be able at the service desk to rent home repair and garden tools (such as sanders, drills and wheelbarrows), order aluminum storm windows, doors, awnings, get electrical appliances and windshields repaired and, hopefully, even arrange to have your asphalt driveway paved or patched. At least, these are some features; the new centre will open with; as time goes on, services will change and develop with motorists’ needs.

The parts and service centre specializes in quick service, with trained and licensed technicians. You’ll be able to buy parts for your car on the spot, and have them installed (while you make hay with a small steak in the new restaurant).

The whole concept of the complex is designed to give motorists fast, safety-conscious, attractively priced service.

With gas cashiers, yet. Even Henry Ford never had it so good.