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It's the Little Things that Count

MANKIND'S SUPERIOR STATUS in the evolution of species came about through the development of his mind, little by little, so that he learned the quality of things and mastered the techniques of improving them. Everything human beings invented and achieved started small.

Even the greatest successes are won by fine margins. The fastest swimmer in the world is no more than a few inches ahead of competitors. In the women's giant slalom at Squaw Valley there was a difference of only one-tenth of a second between the first and second competitors.

Leonardo da Vinci wrote in his notebook that when a drop of water falls into the sea the whole surface of the sea is raised imperceptibly; and, again, "the earth is moved from its position by the weight of a little bird alighting upon it."

A "drop in the bucket" is not unimportant. It may be of very great importance in the result it produces. Consider the landslides in Quebec and the sink holes in parts of the United States. Here are no great catastrophes as the cause of terrifying experiences and the loss of acres of farm land: just little streams eating away their banks or a slight fall in the underground water level.

The launch into orbit of Canada's second domestic communications satellite, Anik II, was delayed 24 hours when a small piece of adhesive tape disappeared from its position on an attachment at the launch pad.

The biggest events in life depend upon the smallest, and the significant ideas start in a small way. As a poet wrote: "Think naught a trifle, though it appear small; small sands the mountain, moments make the year, and trifles life."

Every tiny triangle or square of glass in a stained glass window counts. Every piece of stone or marble in a mosaic is indispensable. The late Professor E. J. Urwick, of the University of Toronto, reminded us in his book *The Values of Life* (University of Toronto Press, 1948) to consider the peacock's tail and remember the tiny bit of matter within the egg from which it grew.

When the English monk Roger Bacon wrote: "Take seven parts of saltpeter, five of charcoal, and five of sulphur" he had no foreboding of the influence his recipe would have on the course of civilization. It was the formula for gunpowder.

The most common mechanisms in the world today are automobiles. Think of the millions of air-filled tires on our roads. They had their origin in Belfast, Ireland, when Dr. John Dunlop made wooden wheels for his boy's bicycle and fastened inflated rubber tubes around their edges with linen cloth tacked to the wheels.

For a closer-to-home example of the importance of little things, look at how a little maintenance work attended to when the need is seen saves dollars and time. A screw nail tightened, an axle greased, a water drain cleaned, a faulty switch repaired: all these are little things but they add up to the saving of money, time and irritation.

Little things may be important, not because of what they are in themselves but because they are part of, or lead inevitably to, something that is of great consequence. Blaise Pascal remarked in his *Pensées* that had Cleopatra's nose been shorter the whole aspect of the world would have been different.

Just because a deed or an event is small is not a good reason for ignoring it, and the phrase "it doesn't really matter" should be used sparingly. The Prophets emphasized this in their repeated references to "little by little", and we recall the "little cloud like a man's hand" referred to by Elijah that preceded a drought-breaking rain for which he had prayed.

Smallness is normal

No matter what our purpose may be — to do something, to make something, to improve something, to protect something — it starts as a small idea and a small action. We must do many little things to accomplish just one big thing.

An artist may draw and paint mighty mountains, range upon range, in broad brush strokes, but he shows the perspective subtly, by thin lines and delicate shading.

We need a sense of proportion in determining what is small and what is big. Things that seem important today in the existing circumstances may appear trifling tomorrow under different conditions.

In our meditation on what is important we might think with some humility about a tiny drop of water. In it is a world of inhabitants all busy about their own affairs, and we can imagine them as being as sure as we are about our activities that their doings are the most important in the universe.

We must observe

It is not wise to give too much credit to accident or inspiration for ideas, inventions and successes. An accident does not make an invention, but only offers the observer an opportunity to apply his mind to the situation it reveals.

When his child overturned a spinning wheel, leaving the spindle revolving vertically, James Hargreaves got the idea for the spinning jenny that could twist several threads at once. It was accident that gave George Stephenson the opportunity to put in motion a steam engine that needed repairs: he went on from there to construct a locomotive. Charles Dickens wanted to go on the stage, but he was rejected because he had a husky voice due to a head cold, a happenstance that caused him to turn to writing in which he became a world master.

These were accidents that provided ideas and opportunities of benefit to people who were so sharp-sighted as to see them. Usually, opportunity does not force itself upon our attention bearing gifts. We need to be watchful to catch the slightest intimation of a chance to do something that is worth while.

A Burmese proverb says: "There is not a gem in every rock," but it does not hurt to look. Sherlock Holmes founded his detection upon his carefulness in taking notice of trifles, as he told Watson in *The Boscombe Valley Mystery*.

Among the notable discoveries of recent years are radar and penicillin. Both of these began in the observation by a careful worker of a phenomenon irrelevant to his immediate preoccupation. In both cases the observation aroused the curiosity and imagination of the scientist.

There are other examples. A music teacher, Robert Foulis, walked home through a Saint John, N.B. fog one evening, listening for the piano music that would assure him that his daughter was practising the piece he had assigned to her. Strangely, she seemed to be playing only one note, low in the bass. Then his big idea came: that was the only note that pierced the fog. He built a steam boiler and attached a whistle whose tone matched the fog-penetrating note. He had invented the steam fog-horn.

Dr. Alexander Fleming did not throw away the plate of culture that was spoiled by a blue-green mould. He wrote in his notebook: "I was sufficiently interested in the anti-bacterial substance produced by

the mould to pursue the subject." He named his new drug "Penicillin".

Professor W. C. Röntgen was studying the flow of electricity through rarefied air when out of the corner of his eye he saw that some crystals quite a distance from his table were glowing. He had discovered X-ray.

Scatter seed

Some observations yield ideas which take a long time to prove and develop. In 1899 Nicola Tesla predicted that radio waves could be used to determine the position and course of a moving object such as a vessel at sea. In the 1930's Sir Robert Watson-Watt, in charge of a small research group, noticed that aircraft overhead gave reflected signals from radio waves. Thus was born radar.

An idea is seed. It needs to be planted, cultivated and harvested. Pliny told us: "In my pleadings at the bar I scatter broadcast various arguments like so many kinds of seed, in order to reap whatever may happen to come up."

An idea should not be discarded merely because it is small. Seize the smallest idea and do something about it before it disappears, perhaps for ever. When K. C. Gillette found his straight-blade razor dull one morning, he started speculating about why it should be thought necessary to hone down a big piece of steel when only a thin cutting edge was needed. He developed his idea into the thin-blade safety razor.

Much is said about the virtue of keeping an open mind, and indeed that virtue is worthy of praise. But in addition one's mind should be inquiring, not accepting every new notion but stopping it at the door to check its passport. Is it worth thinking about?

We need the capacity to see values and to analyse them. Regard an idea as something precious and fragile. Make a note of it at once. You might as well not have an idea as have it and not know that you have it. Then toss the idea around in your mind. Credit intuition, if you wish, for the first glance into the unknown, but proceed to cut and try. Bring abstractions to heel by experiment so that you gain knowledge of how they can be given form.

Draw upon knowledge

Sometimes you run across people who make a great mystery of the source of the ideas that led them toward accomplishment. There are scientists who swaddle their infant thoughts about weighty discoveries in learned language. Roger Bacon recorded his formula for gunpowder in a Latin cryptogram. There are writers who give the credit for their pieces to a divine spark. There are business people who ascribe their successful deals to flashes of inspiration. However, the ideas would not have occurred to them if they had not studied to stock their minds with usable knowledge. An idea finds no perch upon which to alight in an empty mind.

When you take up your pen to write a letter or an article or a learned paper, you have already piled up many little things to help you. You have read the available details, studied what has been done of a similar nature, collected facts and checked their accuracy, searched your memory for pertinent examples and experiences, and researched the books and papers dealing with your subject, and you have thrown all these into manageable notes.

Research is not an aimless digging into the unknown at random in the hope that you will come upon something interesting or useful. It is a state of mind, an organized way of finding the components of an idea, deciding whether it is worth working at, projecting what it might develop into, and then tackling the details with patience and persistence. Bacon's contribution to science was great because it was a revolt against second-hand information. His manner was to dig for facts.

Keep it simple

Sir Ernest Rutherford (whose tomb is in Westminster Abbey) proved by experiment in the laboratory and on the campus of McGill University that the penetrating radiation in the atmosphere did not come from the earth's surface: he had revealed cosmic rays. He made the first successful experiments with nuclear fission. In 1908 he was nominated for both the physics and chemistry Nobel Prizes. In this idea-getting and experimentation Rutherford worked with apparatus so simple that it was commented upon. In reporting the award to him of the chemistry prize the author of *Nobel the Man and His Prizes* wrote: "His arrangements were very simple." George Gamow said in *One Two Three Infinity*: "The apparatus used by Rutherford in his first experiments in nuclear transformations is the acme of simplicity."

A little idea, unimportant in itself, like that of rubbing amber so that it picks up straws, grows and expands until it changes the face of the earth and the habits of its people. Thales of Miletus, one of the Seven Sages of Greece, discovered the amber phenomenon, and study of it through many varieties of experiment led to television 2,523 years later.

The big obstacle between having an idea and doing something about it is mental inertia. Great thoughts are reared out of little thoughts not by people who are indolent, dull and indifferent, but by people who are busy and inquisitive and in earnest.

David Fife had the idea of developing wheat that would ripen in the short western growing season. He obtained a small bag of wheat from Europe and planted it in his farm outside Peterborough, Ontario. Only three grains sprouted, and a cow ate one. The remaining two ripened ten days earlier than any other wheat he had ever sown. By the third year he had a bushel, which he shipped West. It ripened early, and Fife's big idea and his patient work opened up the West to agriculture.

Inventing things

Few people begin their careers as inventors. A person does not just walk out of school clutching a diploma and start turning out new antibiotics, pollution-free automobile engines, or spacecraft. Every one of these was first a small idea seized upon in the mind of someone who had acquired the discernment to see it, the knowledge to understand it and the gumption to develop it.

Ideas may lie around for a long time waiting for "some snapper-up of unconsidered trifles" to see the possibilities in them. Even the most intelligent people are likely to overlook little events that have the germ of greatness in them.

When Adam Smith published his classic *Wealth of Nations* in 1775 he wrote only a short paragraph about the cotton industry, although Sir Richard Arkwright had opened his revolutionary factory six years earlier. John Evelyn entered in his *Diary* on April 12, 1682, that he had dined on a supper all of which had been cooked in Monsieur Papin's Digestors, but it was only in this century that the pressure cooker came into widespread household use.

Invention consists in producing something unique. It may be entirely new, or a better way of doing something, or the correct and logical rearrangement of parts so as to use the full potential of a device.

In the first steam engines a boy was employed to open and shut the communication between the boiler and the cylinder. One of the boys observed that by tying a string from the handle of the valve which controlled this communication to another part of the machine the valve would open and shut without his assistance.

Elias Howe, inventor of the sewing machine, attained success because he put the eye and the point at the same end of the needle and devised the lock-stitch.

Little wastes add up

Elimination of waste is one of the functions of management, whether of a factory or of a kitchen. A leak does not have to be very big in order to cause measurable waste. A one per cent waste in a commodity costing \$100 will require one hundred sales to make it up.

Intelligent people must declare war on waste. To save a little time here, a little effort there, and a little material in the workshop or in the home, will add up to measurable economies.

It takes thought to uncover the petty prodigalities that eat into our incomes. A report of the United States Food Service says that people in that country throw away more than \$20 million yearly in left-over foods.

Time is as important as things. It is made up of seconds, which, although very small indeed, add up to 8,760 hours in a year. After working, sleeping,

eating, and doing the chores we have some 2,400 hours left to use as we wish. Yet, says Robert R. Updegraff in his book *All the Time You Need*: "Nearly all of us waste more valuable time alibiing ourselves with 'not having time' than with any other excuse for our lack of accomplishment and progress."

We need to shake the tiny time-wasters out of our lives. If we waste five minutes every day looking for misplaced articles we will in a year throw away thirty hours.

To make the best use of time so as to have the opportunity to seek, find and develop ideas does not require us to make a rigid schedule. All we need to do is find out where those little periods of time are disappearing, and then fill the space with something significant.

If there is much to be said in favour of being careful to make the most of little things there is also something to be said against spending time and energy on trifles. Those who make it a habit to find and develop ideas are too busy with gratifying work to engage in trifling things. They discriminate between what warrants thinking about and what should be dismissed as inconsequential.

History's small hinges

Small things have swayed the course of history. Edmund Burke said: "A common soldier, a child, a girl at the door of an inn, have changed the face of fortune, and almost of Nature."

Speaking of *Clio*, the Muse of History, John Buchan (later Baron Tweedsmuir, Governor General of Canada) said: "I can picture her most easily with the puzzled and curious face of a child, staring at the kaleidoscope of the centuries and laughing — yes, laughing — at an inconsequence that defies logic, and whimsicalities too fantastic for art."

The things that make big headlines attract attention because they are on the surface of the stream of life. They distract our attention from the smaller movements that work below the surface.

History is full of momentous little things: the accident which preserves in life some figure of destiny; the weather on some critical battlefield; the severe winter of 1788 which produced the famine of 1789, and thereby perhaps the French Revolution; a sudden idea which produces some potent invention.

A commentator on a television programme in 1972 said that if it had not rained on the day of the opening of Parliament in 1936 King Edward VIII might not have abdicated. The King hoped, said the commentator, for a great crowd of supporters lining the route of the royal procession, which would have changed the government's mind, allowing him to marry Mrs. Simpson, but only a few persons braved the storm.

A capsized canoe lost Louis Jolliet the public credit for exploring the Mississippi River. He was within sight of Montreal on his return journey when

his canoe upset at the foot of the Lachine Rapids and his records of the expedition were lost.

Getting on in life

Every person is groping toward an understanding of life and is seeking to make the best of his place in it. This endeavour requires that he pay attention to little things.

Life is a succession of challenges to our sense of values, our judgment of what is important and what is unimportant, and our perception of what is big and what is little. In order to live, man must act; in order to act he must make choices; in order to make choices he must consider values; and values are determined by little things.

How you look at values depends on what sort of person you are. Think of our Canadian way of life. It is made up of a multitude of little things, none of which may be taken away without destroying the unity of the mosaic. Viewed by some persons, these little things divide us by antagonisms; others see them as fragments of a whole that is beautiful. Both fear, hatred and envy on the one hand, and confidence, love and sharing on the other hand, are made up of little things.

Tact, one of the qualities vital to success in business and social life, is made up of little things. It is the product of brains and sensitivity. It is a keen consciousness of the things that are appropriate, tasteful, or aesthetically pleasing.

A little act of courtesy raises you above the crowd, as does a trifle of perceptive kindness. A small compliment or a salt-spoon of praise creates goodwill and adds happiness to the lives of both the giver and the receiver. We recall the Christmas song about the Little Drummer Boy who had no other present to give than a "rub-a-dub-dub" on his drum — but it was received with a smile.

It will have occurred to many persons to wonder how men and women who occupy eminent positions in business, the professions, the arts, politics and society got there. In the vast majority of cases it was by recognizing little opportunities and showing initiative in grasping them and displaying energy in following them through. All that is needed is the desire to create, the ability to manipulate, and persistence.

Really effective people have learned the secret of making the best use of little things: a little time, a little idea, a little opportunity; and of making that little go a long way.

We recall the poem Rupert Brooke wrote, called "The Great Lover". His loves were little, simple, things: white plates and cups, clean-gleaming, ringed with blue lines; a strong crust of friendly bread; the cool kindness of sheets; grainy wood; firm sands; new-peeled sticks, and a score of other simple little things.

"Little things," said Michelangelo, "make perfection, and perfection is no trifle."