

An approximate answer to the right problem is worth a good deal more than an exact answer to an approximate problem.

- John Tukey

The Senate trying to govern cyberspace is analogous to King George believing he could still govern the colonies even though he had never been there.

- John Perry Barlow

The greatest thing of all is to be a master of the metaphor. It is the only thing which cannot be taught by others; and it is also a sign of original genius, because a good metaphor implies the intuitive perception of similarity in dissimilar things.

- Aristotle

On prime time entertainment television, scientists are most at risk. Ten percent of scientists featured in prime-time entertainment programming get killed, and five percent kill someone. No other occupational group is more likely to kill or be killed.

- Gerbner, 1987

Neither in writing nor in reading wilt thou able to lay down rules for others before thou shalt have first learned to obey rules thyself.

- Marcus Aurelius

Philosophy is the talk on a cereal box, religion is the smile on a dog.

- Edie Brickell

Knowledge which is acquired under compulsion obtains no hold on the mind.

- Plato, The Republic Book VII

Without effort on my part the way manifests itself. This is due neither to the instructions of my teacher not to any attainment of my own.

- Sixth Patriarch of Zen

I bequeath myself to the dirt to grow from the grass I love. If you want me again, look for me under your boot-soles.

- Walt Whitman

A state of doubt is unpleasant, but a state of certainty is ridiculous.

- Voltaire

Offer me solutions, offer me alternatives and I decline... It's the end of the world as we know it and I feel fine.

- Michael Stipe

The universe may be not only queerer than we think, but queerer than we can think.

- J.B.S. Haldane

The variables vary too much and the constants aren't as constant as they seem.

- Robert Anton Wilson

Hofstadter's Law: It always takes longer than you expect, even when you take into account Hofstadter's Law.

- Douglas R. Hofstadter [from Goedel, Escher, Bach]

Q: If someone who speaks two languages is 'bilingual', what do you call someone who speaks only one language?

A: An american

Perhaps the most valuable result of all education is the ability to make yourself do the thing you have to do when it ought to be done whether you like it or not.

- Thomas Huxley

If you cannot saw with a file or file with a saw, then you will be no good as an experimentalist.

- Augustin Jean Fresnel, 1788-1827

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A new scientific truth does not triumph by convincing its opponents . . . rather its opponents gradually die out, and the growing generation is familiarised with the ideas from the beginning.

- Max Plank, 1858-1947

Science is built up with facts, as a house is with stones. But a collection of facts is no more a science than a heap of stones is a house. [from La Science et l'Hypothese]

- Jules Henri Poincare, 1854-1912

Why,' said the Dodo, 'the best way to explain it is to do it.'

Alice in Wonderland

Those who will not reason perish in the act: Those who will not act perish for that reason.

- W.H. Auden, 1907-1973

Facts are ventriloquist's dummies. Sitting on a wise man's knee they may be made to utter words of wisdom; elsewhere they say nothing, or talk nonsense.

- Aldous Huxley, 1894-1963

I know not what I may appear to the world, but to myself I have been only like a boy playing on the seashore, diverting myself in now and then finding a smoother pebble or a prettier shell than ordinary, whilst the great ocean of truth lay all undiscovered before me.

- Sir Isaac Newton, 1642-1727

The rare scholars who are nomads-by-choice are essential to the intellectual welfare of the

settled disciplines.

- Benois Mandelbrot, 1924-

Basic research is what I am doing when I don't know what I'm doing.

- Werner von Braun

Prediction is very difficult... especially about the future.

- Niels Bohr (1885-1962)

Everything we call real is made of things that cannot be regarded as real.

- Niels Bohr (1885-1962)

There is a theory which states that if ever anyone discovers exactly what the Universe is for and why it is here, it will instantly disappear and be replaced by something even more bizarre and inexplicable. There is another which states that this has already happened.

- Douglas Adams, The Restaurant at the End of the Universe

If I take care of myself from this point on, by exercising and eating right, I'll eventually get very sick and die.

- Rodney Dangerfield

Maintaining a positive attitude may not solve all your problems, but it will annoy enough people to make it worthwhile.

- Anonymous

Science is simply common sense at its best - that is, rigidly accurate in observation, and merciless to fallacy in logic.

- Thomas H. Huxley, 1825-1895

A man with a new idea is a crank until he succeeds.

- Mark Twain, 1835-1910

The opposite of a correct statement is a false statement. But the opposite of a profound truth may well be another profound truth.

- Niels Bohr, 1885-1962

Nature uses only the longest threads to weave her patterns, so each small piece of her fabric reveals the organization of the entire tapestry.

- Richard Feynman, 1918-1988

But I don't have to know an answer. I don't feel frightened by not knowing things, by being lost in the mysterious universe without having any purpose, which is the way it really is, as far as I can tell, possibly. It doesn't frighten me.

- Richard Feynman, 1918-1988

Education is a priority over any sport because without a mind you can't contribute to society.

- Tiger Woods

It is possible to do something, and to do something meticulously and completely with out creating a goal... all nature works this way.

- John Daido Loori

All models are wrong, but some are useful.

- G. Box

Two products are known to have been developed in Berkely: LSD and UNIX... This is not a coincidence.

For every decade-old complaint about having to talk to a phone machine, there's a person merrily typing his word-processing questions to a paper clip with eyes.

- Greg Knauss <http://www.eod.com>

It's always better to beg forgiveness than to ask permission.

- Anon.

Distention: Not inattention, but the refusal to involve oneself in issues that have no relevance over one's life. A necessary survival skill in a chaos-driven world.

<http://www.wired.com/wired/5.06/500-yeardelta/>

Talent imitates, genius steals.

- T. S. Eliot

No creature, large or small, ever fails to cover the ground upon which it stands.

- John Daido Loori

Common sense is nothing more than a deposit of prejudices laid down by the mind before you reach eighteen.

- Albert Einstein, 1879-1955

Science, at bottom, is really anti-intellectual. It always distrusts pure reason and demands the production of the objective fact.

- H.L. Mencken, 1880-1956

Scientists are treacherous allies on committees, for they are apt to change their minds in response to arguments.

- Cecil Marice Bowra, 1898-1971

Anyone who slaps a 'this page is best viewed with Browser X' label on a Web page appears to be yearning for the bad old days, before the Web, when you had very little chance of reading a document written on another computer, another word processor, or another network.

- WWW creator Tim Berners-Lee

There are 300 MB disks down in the \$10,000 to \$15,000 range now.
- Bill Gates, 1982

To study, to finish, to publish.
- Benjamin Franklin, 1706-1790

Work, finish, publish.
- Michael Faraday, 1791-1867

Practice yourself, for heaven's sake, in little things; and thence proceed to greater.
- Epictetus, 50-120 [from Bartlett's Book of Business Quotations, Little Brown & Co.,1994]

I live by Louis Pasteur's advice that 'Chance favors the prepared mind,' and my own, 'The two most common elements in the known universe are hydrogen and stupidity.'
- Harlan Ellison [from Friendly Advice, J. Winokur, ed. (Dutton, 1990)]

The Creator, if He exists, has a special preference for beetles. [Observing that there are 400,000 species, in J. Br.Interplanetary Soc.]
- J.B.S. Haldane, 1892-1964 [from The Concise Oxford Dictionary of Quotations, 3rd Ed. (Oxford University Press, 1993)]

Everyone should be a non-conformist.

Use it up, wear it out make it do, do without.

Argue for your limitations and, sure enough, they're yours.
- Richard Bach

Sometimes we are inclined to class those who are once-and-a-half witted with the half-witted, because we appreciate only a third part of their wit.
- Henry David Thoreau (1817-62)

Whenever 'A' attempts by law to impose his MORAL standards upon 'B', 'A' is most likely a scoundrel
- H.L. Mencken

Most men would sooner die than think. And they usually do.
- Bertrand Russell

Only a very dull man spells a word the same way twice.
- A.Einstein

A preposition is a bad thing
to end a sentence with.

Intuition (n): an uncanny sixth sense which tells people that

they are right, whether they are or not.

By God, what we really need is an AI to browse for us. It'd spend six hours a day randomly cruising sites, collecting an enormous cache of data, and then delete it all and go home.

- Greg Knauss

The attitude of an engineer must be different than that of a mathematician. The engineer is concerned with truth, not mere consistency.

- Biot

I know of no safe depository of the ultimate power of the society but the people themselves; and if we think them not enlightened enough to exercise their control with a wholesome discretion, the remedy is not to take it from them, but to inform their discretion.

- Thomas Jefferson

Risk Paralysis ... a multidisciplinary approach embracing Risk Testament, Risk Mangement, and Risk Combobulation.

- Clark Carrington

Basic research is like shooting an arrow into the air and, where it lands, painting a target.

- Homer Adkins

Trying to manage scientists
is like trying to herd cats.

No one has jurisdiction over the truth.

- Fox Mulder, The X-Files

Q: How many surrealists does it take to change a lightbulb?

A: Three: one to hold the giraffe, the other to fill the bathtub with the brightly-coloured machine tools.

It is rare to find learned men who are clean, do not stink and have a sense of humour.

- Charles-Louis de Scondat Montesquieu, 1689-1755 [To Sophie of Hannover about G.W. Leibnitz]

Most institutions demand unqualified faith; but the institution of science makes skepticism a virtue.

- Robert King Merton

No style of thinking will survive which cannot produce a usable product when survival is at stake.

- Thomas Favill Gladwin, 1917- [on the navigation of the Puluwat Islanders]

The suppression of inconclusive or negative results, either by editors of journals or the trial researchers themselves, is one of the major obstacles to assessing accurately a medical

intervention's effectiveness

- Georgina Ferry

This idea that clinicians necessarily know more than patients is crazy, particularly with the Web.

- Muir Gray, Secretary of the Cochrane Collaboration and Director of R&D for the Anglia and Oxford Region of the National Health Service, quoted from <http://biomednet.com/hmsbeagle/1997/14/people/profile.htm>

A first-rate laboratory is one in which mediocre scientists can produce outstanding work.

- Patrick Maynard Stuart Blackett, 1897-1974

Monk: Please teach me, Master. Joshu: Have you had breakfast? Monk: Yes. Joshu: Then wash your dishes!

Upon hearing this, the monk was immediately enlightened.

TV Guide is more profitable than the three major networks it guides viewers to...

- Kevin Kelly, Executive Editor, Wired

Encyclopedia Britannica began as a compendium of articles by amateurs - not too dissimilar from FAQs.

- Kevin Kelly, Executive Editor, Wired

Imagination is more important than knowledge.

- Albert Einstein, 1879-1955

Although we often hear that data speak for themselves, their voices can be soft and sly.

- Frederick Mosteller, Stephen E. Fienberg, and Robert E.K. Rourke [from *Beginning Statistics with Data Analysis*]

God does not demand that I be successful, God demands that I be faithful.

- Mother Teresa

It is the mark of a truly educated person to be moved by statistics.

- George Bernard Shaw

Planning: Noah, making a list of the animals on the ark.

Administration: Noah, making sure that the elephants don't see what the rabbits are doing.

It is the business of the future to be dangerous... The major advances in civilization are processes that all but wreck the societies in which they occur.

- Alfred North Whitehead, 1861-1947, from *Adventures in Ideas*, 1939

If A is a success in life, then A equals x plus y plus z. Work is x; y is play; and z is keeping your mouth shut.

- Albert Einstein, 1879-1955

I have not failed. I've just found 10,000 ways that won't work.

- Thomas Edison, 1847-1931

I don't mind your thinking slowly: I mind your publishing faster than you think.

- Wolfgang Pauli 1900-1958

The definition of the problem, rather than its solution, will be the scarce resource in the future.

- Esther Dyson

When I arise in the morning, I am torn by the twin desires to reform the world and to enjoy the world. This makes it difficult to plan my day.

- T.S. Eliot

The real University... has no specific location. It owns no property, pays no salaries, and receives no material dues... The real University is a state of mind. It is that great heritage of rational thought that has been brought down to us through the centuries.

- Robert Pirsig

Humans fear reason, but they ought to fear stupidity-- for reason can be hard, but stupidity can be fatal.

- Goethe

Earlier generations of machines decreased the complexity of tasks. In contrast, information technologies can increase the intellectual content of work at all levels. Work comes to depend on an ability to understand, respond to, manage, and create value from information.

- Shoshana Zuboff

Too soon we breast the tape and too late we realize the fun lay in the running. We deny that the end justifies the means without ever stopping to consider that for practical purposes the End and the Means are one and the same thing. If there is to be any satisfaction in life it must come in transit, for who can tell when he will be struck down in mid-method?

- Walt Kelly

Inspection with the aim of finding the bad ones and throwing them out is too late, ineffective, and costly. Quality comes not from inspection but from improvement of the process.

- W. Edwards Deming

If every man and woman were to take the meaning of their life and pursue it passionately, they would alter the social landscape overnight. In fact, that's how lasting revolutions are made-- not by the raised arm of the masses, not by the military seizure of power, not by the political coup d'etat, but by individuals asserting who they are one at a time.

- Richard Bode

Humans are not the end result of predictable evolutionary progress, but rather a fortuitous

cosmic afterthought, a tiny little twig on the enormously arborescent bush of life, which if replanted from seed, would almost surely not grow this twig again.

- Stephen Jay Gould

The art of medicine consists of amusing the patient while nature cures the disease.

- Voltaire

Whatever you do will be insignificant, but it is very important that you do it.

- Mahatma Gandhi

Genius is the summed production of the many with the names of the few attached for easy recall.

- Edward O. Wilson

Nature hath no goal though she hath law.

- John Donne, 1572-1631

As far as the laws of mathematics refer to reality, they are not certain; as far as they are certain, they do not refer to reality.

- Albert Einstein, 1879-1955

I know of no more encouraging fact than the unquestionable ability of man to elevate his life by conscious endeavor.

- Henry David Thoreau, 1817-1862

But just as elevators have changed the shape of buildings and cars have changed the shape of cities, bits will change the shape of organizations, be they companies, nations, or social structures.

- Nicholas Negroponte

To doubt everything or to believe everything are two equally convenient solutions; both dispense with the necessity of reflection.

- Jules Henri Poincaré, 1854-1912

The experience of the human race indicates strongly that the only person in abundant supply is the universal incompetent.

- Peter Drucker, *The Effective Executive*, 1967

Nature is what she is - amoral and persistent.

- Stephen Jay Gould, 1941-

We have no right to assume that any physical laws exist, or if they have existed up to now, that they will continue to exist in a similar manner in the future.

- Max Planck, 1858-1947

Good players skate to the puck. Great players skate to where the puck is going to be.

- Wayne Gretzky

Our searches for numerical order lead as often to terminal nuttiness as to profound insight.

- S.J. Gould, Questioning the Millennium

Money is of a prolific generating nature. Money can beget money, and it's offspring can beget more.

- Benjamin Franklin

That which cost little is less valued.

- Cervantes

Pale ink is better than the most retentive memory.

- Harvey B. Mackay

Programming today is a race between software engineers and striving to build bigger and better idiot-proof programs and the Universe trying to produce bigger and better idiots. So far the Universe is winning.

- Rich Cook

Find out what you don't do well and don't do it.

- Alf

People who cannot find time for recreation are obliged sooner or later to find time for illness.

- John Wanamaker

Even Johannes Kepler, Isaac Newton, Charles Darwin, Gregory Mendel, and Albert Einstein made serious mistakes. But the scientific enterprise arranges things so that teamwork prevails: What one of us, even the most brilliant among us, misses, another of us, even someone much less celebrated and capable, may detect and rectify.

- Carl Sagan

Argumentation cannot suffice for the discovery of new work, since the subtlety of Nature is greater many times than the subtlety of argument.

- Francis Bacon

Keeping an open mind is a virtue, but not so open that your brains fall out.

- James Oberg

Clarence Darrow once witnessed the trial of a man accused of biting off another man's ear. The lawyer asked the sole uninvolved witness, "did you see my client bite the man's ear off?", to which the witness replied, "No, sir." The lawyer continued "You mean to tell me that you didn't actually even see the man's ear getting bitten off?" "Yes, sir." "Then how can you be so all-fire sure he did bite it off?" The witness calmly answered, "Well, sir, I saw him spit it out."

Bend and you will be whole, Curl and you will be straight, But resist change... and you will perish
- Lao Tzu

The important thing is not to stop questioning. Curiosity has its own reason for existing.
- Albert Einstein

It is a capital mistake to theorize before one has data. Insensibly one begins to twist facts to suit theories, instead of theories to suit facts.
- Sherlock Holmes

When you think of things, you find sometimes that a thing which seemed very thingish inside you is quite different when it gets out into the open and has other people looking at it.
- Winnie the Pooh

In completing one discovery we never fail to get an imperfect knowledge of others of which we could have no idea before, so that we cannot solve one doubt without creating several new ones.
- Joseph Priestly (1786)

Not long ago, I met a physicist who told me that he had never had a manuscript rejected by a journal editor. He was proud of this, but I found his statement troubling and was not sure why. Perhaps it was envy, because I have had my share rejections? The more I thought about it, the clearer the answer became: He had not been reaching far enough.
- Robert J. Weber

Should the scientist be monological or multilogical? Should the scientist be reductionist or holist? Should the scientist be inductivist or deductivist: lateralist or verticalist? In a word: Yes.
- Joseph J. Carr

Scientists are people of very dissimilar temperaments doing different things in very different ways. Among scientists are collectors, classifiers and compulsive tidiers-up; many are detectives by temperament and many are explorers; some are artists and others artisans. There are poet-scientists and philosopher-scientists and even a few mystics.
- Peter B. Medawar

Men occasionally stumble into knowledge: but most of them pick themselves up and hurry off as if nothing had happened.
- Winston Churchill

You can gain strength, courage and confidence by every experience in which you really stop to look fear in the face. You must do the thing which you think you cannot do.
- Eleanor Roosevelt

Only a mediocre person is always at his best.

- Somerset Maugham

Statistics are no substitute for judgment.

- Henry Clay

Philosopher (n): a blind person in a dark room looking for a black hat that is not there.

... and it well that men of science should not always expound their work to the few behind a veil of technical language, but should from time to time explain to a larger public the reasoning which lies behind their mathematical notation. To a man unversed in popular exposition it needs a great effort to shell away the apparatus of investigation and technical mode of speech from the thing behind it..."

- George Howard Darwin, 1898

What is written without effort is in general read without pleasure.

- Samuel Johnson

For every complex problem there is a simple solution, and it's wrong!

- H.L. Mencken

Politics ought to be the part-time profession of every citizen who would protect the rights and privileges of free people and who would preserve what is good and fruitful in our national heritage.

- Dwight D. Eisenhower (1890-1969)

The future will be better tomorrow.

- Dan Quayle

This is my simple religion. There is no need for temples; no need for complicated philosophy. Our own brain, our own heart is our temple; the philosophy is kindness.

- Dalai Lama

Supposing is good, but finding out is better.

- Mark Twain

Being first is not quite the guarantee it once was: look at WordStar, CP/M, and VisiCalc.

- John Browning and Spencer Reiss, Wired 6.04.95

To keep up, you need the right answers; to get ahead, you need the right questions.

- John Browning and Spencer Reiss, Wired 6.04.97

Today is your day! Your mountain is waiting. So... get on your way.

- Dr. Seuss

One of man's greatest failings is that he looks almost always for an excuse, in the misfortune that befalls him through his own fault, before looking for a remedy--which means he often

finds the remedy too late.

- Cardinal de Retz

You cannot run away from a weakness; you must sometime fight it out or perish. And if that be so, why not now, and where you stand?

- Robert Louis Stevenson

You can only predict things after they have happened.

- Eugene Ionesco

I am always doing that which I can not do, in order that I may learn how to do it.

- Pablo Picasso, Artist

Dare to be naive.

- Buckminster Fuller

I love the man that can smile in trouble, that can gather strength from distress, and grow brave by reflection. 'Tis the business of little minds to shrink, but he whose heart is firm, and whose conscience approves his conduct, will pursue his principles unto death.

- Thomas Paine

Any intelligent fool can make things bigger, more complex, and more violent. It takes a touch of genius - and a lot of courage - to move in the opposite direction.

- Albert Einstein

No two countries that both have a McDonald's have even fought a war against each other.

- Tom Friedman, 1996, New York Times

I know a lot of people without brains who do an awful lot of talking.

- The Scarecrow, Wizard of Oz

The trouble with our times is that the future is not what it used to be.

- Paul Valery

Quod enim mavult homo verum esse, id potius credit. (For what a man would like to be true, that he more readily believes).

- Francis Bacon, Novum Organum (1620) Book 1, aphorism 49.

The human eye is far, far better at judging the overall match (or lack thereof) between a fitted distribution and the data under analysis than any statistical test ever devised.

- David E. Burmaster

Optimism is a strategy for making a better future. Because unless you believe that the future can be better, it's unlikely that you will step up and take responsibility for making it so.

- Noam Chomsky

Increasingly, our leaders must deal with dangers that threaten the entire world, where an understanding of those dangers and the possible solutions depends on a good grasp of science. The ozone layer, the greenhouse effect, acid rain, questions of diet and heredity - all require scientific literacy. Can Americans choose the proper leaders and support the proper programs if they (themselves) are scientifically illiterate?

- Isaac Asimov

Everyone is entitled to their own opinion...but no one is entitled to their own facts.

- James Schlesinger

Americans will always do the right thing...after they have exhausted all the other possibilities.

- Winston Churchill

Try not to become a man of success but rather try to become a man of value.

- Albert Einstein

If physicists wrote food labels:

CAUTION: The Mass of This Product Contains the Energy Equivalent of 85 Million Tons of TNT per Net Ounce of Weight.

If physicists wrote food labels:

HANDLE WITH EXTREME CARE: This Product Contains Minute Electrically Charged Particles Moving at Velocities in Excess of Five Hundred Million Miles Per Hour.

If physicists wrote food labels:

THIS IS A 100 MATTER PRODUCT: In the Unlikely Event That This Merchandise Should Contact Antimatter in Any Form, a Catastrophic Explosion Will Result.

If physicists wrote food labels:

PUBLIC NOTICE AS REQUIRED BY LAW: Any Use of This Product, in Any Manner Whatsoever, Will Increase the Amount of Disorder in the Universe. Although No Liability Is Implied Herein, the Consumer Is Warned That This Process Will Ultimately Lead to the Heat Death of the Universe.

If physicists wrote food labels:

ATTENTION: Despite Any Other Listing of Product Contents Found Hereon, the Consumer is Advised That, in Actuality, This Product Consists Of 99.9999999999 Empty Space.

If a little knowledge is dangerous, where is the man who has so much as to be out of danger?

- Thomas Huxley

Science does not enter a chaotic society to put order into it anymore, to simplify its composition, and to put an end to controversies. It does enter it, but to add new uncertain ingredients... to all the other ingredients that make up the collective experiments. When scientists add their findings to the mix, they do not put an end to politics; they add new ingredients to the collective process.

- Bruno Latour, Science 280:208-209.

Every damn thing is your own fault, if you are any good.

- Ernest Hemmingway

The mind is not a vessel to be filled but a fire to be kindled.

- Plutarch

Mediocrity knows nothing higher than itself, but talent instantly recognizes genius.

- Sir Arthur Conan Doyle

Writing is easy. All you do is stare at a blank sheet of paper until drops of blood form on your forehead.

- Gene Fowler

This morning I took out a comma and this afternoon I put it back again.

- Oscar Wilde

Thought flies and words go on foot.

- Julien Green

There are two things civilized Man should never see being made: Sausages and Laws.

- Otto Von Bismark

Many studies of research scientists have shown that achievement (at least below the genius level of an Einstein, Bohr, or a Planck) depends less on ability in doing research than on the courage to go after opportunity.

- Peter Drucker, 1909

There is something fascinating about science. One gets such wholesale returns of conjecture out of such a trifling investment of fact.

- Mark Twain, 1835-1910

Penetrating so many secrets, we cease to believe in the unknowable. But there it sits nevertheless, calmly licking its chops.

- H.L. Mencken, 1880-1956

Orgel's Second Rule: Evolution is cleverer than you are.

- Francis Crick, 1916-

You do not really understand something unless you can explain it to your grandmother.

- Albert Einstein, 1879-1955

God is a great humorist. He just has a slow audience to work with.

- Garrison Keillor

It is essential for men of science to take an interest in the administration of their own affairs or else the professional civil servant will step in - and then the Lord help you.

- Lord Ernest Rutherford, 1871-1937

Organic life, we are told, has developed gradually from the protozoon to the philosopher, and this development, we are assured, is indubitably an advance. Unfortunately it is the philosopher, not the protozoon, who gives us this assurance.

- Bertrand Russell, 1872-1970

Apply yourself to the basics, and the rest will follow.

- Fortune Cookie

Dyslexics probably won't be your typical bean-counters, because they can't count beans very well... but they can be visionaries.

- Sally Shaywitz, 3/30/98 The Scientist, Pg 31.

Fairness does not consist so much of everybody's doing the same thing, but of everybody's being willing to do something that others don't want to do.

- Judith Martin (Miss Manners)

Blessed is the man who, having nothing to say, abstains from giving in words evidence of that fact.

- George Elliot

God is a comedian playing to an audience of people afraid to laugh.

- Voltaire

If money is your hope for independence, you will never have it. The only real security that a man can have in this world is a reserve of knowledge, experience and ability.

- Henry Ford

Choose always the way that seems the best, however rough it may be; custom will soon render it easy and agreeable.

- Pythagoras, 582-500 B.C.

Scientists have odious manners, except when you prop up their theory; then you can borrow money of them.

- Mark Twain, 1835-1910

To say that a man is made up of certain chemical elements is a satisfactory description only for those who intend to use him as a fertilizer.

- Hermann Joseph Mueller, 1890-1967

What a waste it is to lose one's mind. Or not to have a mind is being very wasteful. How true it is.

- Dan Quayle

I was recently on a tour of Latin America, and the only regret I have was that I didn't study Latin harder in school, so I could converse with those people.

- Dan Quayle

I believe we are on an irreversible trend toward more freedom and democracy - but that could change.

- Dan Quayle

You learn more from getting used to things than from studying.

- Japanese saying

In nature things move violently to their place, and calmly in their place.

- Francis Bacon, 1561-1626

Many do not allow their principles to take root, but pull them up every now and then, as children do the flowers they have planted, to see if they are growing.

- Henry Wadsworth Longfellow, 1807-1882

He that will not apply new remedies must expect new evils.

- Francis Bacon, 1561-1626

It is no proof of a man's understanding to be able to confirm what he pleases; but to be able to discern that what is true is true, and that what is false is false; this is the mark and character of intelligence.

- Emanuel Swedenborg, 1688-1772

Knock hard, life is deaf.

- Mimi Parent

Illegitimi non carborundum

The punishment which the wise suffer, who refuse to take part in government, is to live under the government of worse men.

- Plato

Consistency is highly over valued. Don't be afraid to change your mind for fear of being branded an inconsistent hypocrite.

- Splatterspleen, quoted in Zines, RE SEARCH

An ageing man living alone in South Armagh, whose only son was in Long Kesh Prison, didn't have anyone to dig his garden for his potatoes. So he wrote to his son about it and received the reply, 'For Christ's sake, don't dig the garden up, that's where I buried the guns.' At 4 a.m. the next morning a dozen British soldiers turned up and dug the garden, but didn't find any guns. Confused, the man wrote to his son telling him what had happened, asking him what to do now? The reply: 'Now just put the potatoes in.'

- Anon, Leeds Other Paper, December 1980

Cautious, careful people, always casting about to preserve their reputation and social standing, can never bring about a reform.

- Susan B Anthony

Beware prejudices. They are like rats, and men's minds are like traps; prejudices get in easily, but it is doubtful if they ever get out.

- Lord Jeffrey

They figured out a way to control that hamburger disease. You dip the hamburger into the scalding hot coffee before eating.

- David Letterman

Nought may endure but Mutability.

- Percy Bysshe Shelley, 1792-1822

Only the wisest and stupidest of men never change.

- Confucius, 551-479 B.C.

Keep away from people who try to belittle your ambitions. Small people always do that, but the really great make you feel that you, too, can become great.

- Mark Twain, 1835-1910

The value of a principle is the number of things it will explain; and there is no good theory of a disease which does not at once suggest a cure.

- Ralph Waldo Emerson, 1803-1882

If at first you don't succeed, destroy all evidence that you tried.

- anon

I'm afraid of losing my obscurity. Genuineness only thrives in the dark. Like celery.

- Aldous Huxley, 1894-1963

It's the job that's never started that takes the longest to finish.

- J.R.R. Tolkien

Education's purpose is to replace an empty mind with an open one.

- Malcom S. Forbes in Forbes

For every expert, there is an equal and opposite expert.

- Arthur C. Clarke

It is only at long intervals that the researcher enjoys the feeling of solid accomplishment which the administrator can enjoy merely by emptying his in-box.

- Spencer Klaw, 1920- [from Science 163, no. 60]

Everything should be made as simple as possible, but not simpler
- Albert Einstein, Reader's Digest, October 1977

Don't judge each day by the harvest you reap, but by the seeds you plant.
- Robert Louis Stevenson

Watch your thoughts, they become words; watch your words, they become actions; watch your actions, they become your habits; watch your habits, they become character; watch your character, for it becomes your destiny.
- Frank Outlaw

As a man thinketh so is he, and as a man chooseth so is he.
- Emerson

It is easier to be wise on behalf of others than to be so for ourselves.
- La Rochefoucauld

There is nothing more difficult to take in hand, more perilous to conduct, or more uncertain in its success, than to take the lead in the introduction of a new order of things.
- Niccolò Machiavelli, The Prince, 1532

If you could kick the person responsible for most of your troubles, you would not be able to sit down for six months.
- Unknown

I would rather be vaguely right than precisely wrong.
- Keynes

A small daily task, if it be really daily, will beat the labors of a spasmodic Hercules.
- A. Trollope

I cannot resist making the observation that some people use statistics as a drunk uses a lamppost - more to lean on than for illumination.
- Alfred E. Perlman

Writing a novel is like driving a car at night. You can see only as far as your headlights, but you can make the whole trip that way.
- E. L. Doctorow

There is no one giant step that does it. It's a lot of little steps.
- Peter A. Cohen, Investment banker (b. 1954)

Nothing great has ever been accomplished without enthusiasm.
- Ralph Waldo Emerson, American writer (b. 1803)

...the growth of bacterial cultures, despite the immense complexity of the phenomena to which it testifies, generally obeys relatively simple laws...The accuracy, the ease, the reproducibility of bacterial growth constant determinations is remarkable and probably unparalleled, so far as biological quantitative characteristics are concerned.

- Monod 1949

There are moments when everything goes well; don't be frightened, it won't last.

- Jules Renard, 1864-1910

Learning without thought is labor lost; thought without learning is perilous.

- Confucius, 551-479 B.C.

If I have ever made any valuable discoveries, it has been owing more to patient attention, than to any other talent.

- Isaac Newton, 1642-1727

He that despiseth small things, shall fall by little and little.

- Ecclesiasticus

Every cold empirick, when his heart is expanded by a successful experiment, swells into a theorist.

- Samuel Johnson, 1709-1784

We haven't the money, so we've got to think.

- Ernest Rutherford, 1871-1937

God not only plays dice. He also sometimes throws the dice where they cannot be seen.

- Stephen Hawking, 1942-

An expert is someone who knows some of the worst mistakes that can be made in his subject, and how to avoid them.

- Werner Heisenberg, 1909-1976

Failure is not always a mistake, it may simply be the best one can do under the circumstances. The real mistake is to stop trying.

- B F. Skinner, American psychologist (b. 1904)

He that blows the coals in quarrels he has nothing to do with, has no right to complain if the sparks fly in his face.

- Benjamin Franklin, Scientist and Left-hander

Calvin: I'm at peace with the world. I'm completely serene. Hobbes: Why is that?

Calvin: I've discovered my purpose in life. I know why I was put here and why everything

exists. Hobbes: Oh really? Calvin: Yes, I am here so everybody can do what I want. Hobbes:

It's nice to have that cleared up. Calvin: Once everyone accepts it, they'll be serene too.

To believe a thing is impossible is to make it so.
- French proverb

The time for action is now. It's never too late to do something.
- Carl Sandburg, American author (b. 1878)

The governments are extremely fond of amassing great quantities of statistics. These are raised to the Nth degree, the cube roots are extracted, and the results are arranged into elaborate and impressive displays. What must be kept ever in mind, however, is that in every case, the figures are first put down by a village watchman, and he puts down anything he damn well pleases.

- Attributed to Sir Josiah Story (1880-1941) H.M. Collector of Inland Revenue

The best way to get something done is to begin.
- Anonymous

Work banishes those three great evils: boredom, vice and poverty.
- Voltaire

The secret of getting ahead is getting started.
- Fortune Cookie

Give me fruitful error any time, full of seeds, bursting with its own corrections. You can keep your sterile truth for yourself.
- Vilfredo Pareto, 1848-1923

Theories and schools, like microbes and globules, devour each other and by their struggle ensure the continuing of life.
- Marcel Proust, 1871-1922

Nothing exists except atoms and empty space; everything else is opinion.
- Democritus, ca. 460-370 B.C.

While Occam's razor is a useful tool in the physical sciences, it can be a very dangerous implement in biology. It is thus very rash to use simplicity and elegance as a guide in biological research.
- Francis Crick, 1916-

If you are out to describe the truth, leave elegance to the tailor. [On being reproached that his formula of gravitation was more cumbersome than Newton's]
- Albert Einstein, 1879-1955

Expect nothing. Live frugally on surprise.
- Alice Walker, 1944-

Everything that can be invented has been invented.

- Charles Duell, Commissioner of the US Patent Office, 1899

One thing I have learned in a long life: that all our science, measured against reality, is primitive and childlike - and yet it is the most precious thing we have.

- Albert Einstein, 1879-1955

Whatsoever thy hand findeth to do, do it with thy might.

- Ecclesiastics 9:10

We become what we repeatedly do. Excellence then, is not an act but a habit!

- Aristotle

We have met the enemy, and he is us.

- Pogo

Your work is to discover your work, and then with all your heart to give yourself to it.

- Buddha

One of the great problems of the world today is undoubtedly this problem of not being able to talk to scientists, because we don't understand science; they can't talk to us because they don't understand anything else, poor dears.

- Michael Flanders, 1922-1975

Before I came here I was confused about this subject. Having listened to your lecture I am still confused. But on a higher level.

- Enrico Fermi, 1901-1954

Studying infinity requires infinite time. Therefore working or not working makes no difference.

- Boris & Arkadi Strugatski, 1865-1939

Never underestimate the joy people derive from hearing something they already know.

- Enrico Fermi, 1901-1954

Discovery consists of seeing what everybody has seen, thinking what nobody has thought.

- Albert Szent-Györgyi, 1893-1986

Science tells us what we have reason to believe. Not what we have a duty to believe. Not what experts, in their pontificating wisdom, instruct us to believe... No, science tells us what there is good reason to believe.

- Richard Dawkins, 1941-

We make out of the quarrel with others, rhetoric, but out of the quarrel with ourselves, poetry.

- William Butler Yeats, 1865-1939

Never say, "I tried it once and it did not work."

- Ernest Rutherford, 1871-1937

Time is what prevents everything from happening at once.

- John Archibald Wheeler, 1911-

Both science and art have to do with ordered complexity.

- Lancelot Law Whyte, 1896-1972

[I want] a one-armed scientist ... [Who would not qualify his advice with 'on the other hand...']

- Senator Edmund Sixtus Muskie, 1914-1996, (Science, October 22, 1976)

Happiness hates the timid! So does science!

- Eugene O'Neill, 1888-1953

The most exciting phrase to hear in science, the one that heralds new discoveries, is not "Eureka!" (I found it!), but "That's funny ..."

- Isaac Asimov, 1920-1992

Your theory is crazy, but it's not crazy enough to be true. [to a young physicist]

- Niels Bohr, 1885-1962

It is one of the blessings of old friends that you can afford to be stupid with them.

- Ralph Waldo Emerson

True happiness consists not in the multitude of friends, but in their worth and choice.

- Samuel Johnson

BS - When you think you know everything, MS - When you realize you don't know anything,

PhD - When you realize that no one else knows anything either.

Good ideas are not adopted automatically. They must be driven into practice with courageous patience.

- Admiral Hyman Rickover

Education is what survives when what has been learnt has been forgotten.

- B.F. Skinner, 1904-1990

After a year's research, one realizes that it could have been done in a week.

- Sir William Henry Bragg, 1862-1942

Twenty years hence ... biometric methods will not have to justify themselves to a non-mathematical biological world ; mathematical knowledge will soon be as much a part of the biologist's equipment as today of the physicist's. Its function will not be to replace observation by symbols but to interpret observation in certain fields of biological enquiry...

- Karl Pearson, 1902 in The Fundamental Conceptions of Biology, Biometrika, v. 1

Scratch the surface of knowledge and mystery bubbles up like a spring. And occasionally, at certain disquieting moments in history (Aristarchus, Galileo, Plank, Einstein), a tempest of mystery comes rolling in from the sea and overwhelms our efforts.

- Chet Raymo, 1997, A Naturalist's Search for God

If you judge people, you have no time to love them.

- Mother Teresa

One of the hardest things in the world is to convey a meaning accurately from one mind to another.

- Lewis Carroll, 1832-1898

Freedom is what you do with what's been done to you.

- Jean-Paul Sartre, 1905-1980

We shall have to learn to refrain from doing things merely because we know how to do them.

- Sir Theodore Fox, 1899- (editor of The Lancet) [from The Lancet, 1965]

The difficulty lies, not in the new ideas, but in escaping the old ones, which ramify, for those brought up as most of us have been, into every corner of our minds.

- John Maynard Keynes, 1883-1946

The best way to have a good idea is to have lots of ideas.

-Linus Pauling

What is the major problem? It is fundamentally the confusion between effectiveness and efficiency that stands between doing the right things and doing things right. There is surely nothing quite so useless as doing with great efficiency what should not be done at all.

- Peter F. Drucker

Si Hoc Legere Scis Nimium Eruditionis Habes

(If you can read this you're overeducated)

The whole problem with the world is that fools and fanatics are always so certain of themselves, but wiser people so full of doubts.

- Bertrand Russell

All of us - myself included - hold beliefs that are false. I'm sure I do. The problem is I don't know which ones.

- James Alcock

There is nothing either good or bad, but thinking makes it so.

- Hamlet (II. ii. 247-8) William Shakespeare

The purpose of models is not to fit the data but to sharpen the questions.

- Samuel Karlin, 1923-

If you can look into the seeds of time, And say which grain will grow and which will not,
Speak then to me . . .

- William Shakespeare, 1564-1616 [from Macbeth, (I, iii)]

It is our duty as men and women to proceed as though the limits of our abilities do not exist.

- Pierre Teilhard de Chardin

"When I use a word," Humpty Dumpty said, in rather a scornful tone, "it means just what I
choose it to mean--neither more nor less."

- Lewis Carroll, Through the Looking Glass

The only things worth learning are the things you learn after you know it all.

- Harry Truman

The first method for estimating the intelligence of a ruler is to look at the men he has around
him.

- Niccolo Machiavelli

I think it would be an excellent idea.

- Mohandas Karamchand Gandhi, 1869-1948 [Asked, on his arrival in Europe, what he
thought of Western civilization]

Look for knowledge not in books but in things themselves.

- William Gilbert, 1540-1603

You will find that fatigue has a larger share in the promotion and transmission of disease than
any other single condition you can name.

- Sir James Paget, 1814-1899

The great end of life is not Knowledge but Action.

- Thomas Henry Huxley, 1825-1895

To punish me for my contempt for authority, Fate made me an authority myself.

- Albert Einstein, 1879-1955

Wear your learning, like your watch, in a private pocket; and do not pull it out and strike it,
merely to show that you have one.

- Lord Chesterfield, 1694-1773

What we have to learn to do, we learn by doing.

- Aristotle, 384-322 B.C.

Two years' hard work in the laboratory can save a couple of minutes' quiet reading in the
library.

- Anonymous

Knowledge is one. Its division into subjects is a concession to human weakness.

- Sir Halford John Mackinder, 1861-1947

All composite things decay. Strive diligently.

- Buddha, ca. 563-483 B.C. [His last words]

Tact is the ability to tell someone to go to hell, and have them look forward to the trip.

- Anon

It's not enough to be busy. The question is: What are we busy about?

- Henry David Thoreau

Nothing in the world can take the place of persistence. TALENT will not; nothing is more common than unsuccessful men with talent. GENIUS will not; unrewarded genius is almost a proverb. EDUCATION will not; the world is full of educated failure. Keep Believing. Keep Trying. PERSISTENCE and DETERMINATION alone are omnipotent.

- Calvin Coolidge

A day without fusion is like a day without sunshine.

- Anonymous

Chaos is a friend of mine.

- Bob Dylan, 1941-

All rising to a great place is by a winding stair.

- Francis Bacon

When one door of happiness closes, another opens; but often we look so long at the closed door that we do not see the one which has been opened for us.

- Helen Keller

If you want to succeed in this world you don't have to be much cleverer than other people, you just have to be one day earlier.

- Leo Szilard, 1898-1964

I am grateful for what I am and have. My thanksgiving is perpetual. It is surprising how contented one can be with nothing definite - only a sense of existence.

- Henry David Thoreau, 1817-1862

The body is most fully developed [at] from thirty to thirty-five years of age, the mind at about forty-nine.

- Aristotle, 384-322 B.C.

The ill and unfit choice of words wonderfully obstructs the understanding.

- Sir Francis Bacon, 1561-1626

What really makes science grow is new ideas, including false ideas.

- Karl R. Popper, 1902-1994

We see what we want to see, and observation conforms to hypothesis.

- Bergen Evans, 1904-1978

If I had only one day left to live, I would live it in my statistics class - it would seem so much longer.

- Unknown

... it is the first duty of a hypothesis to be intelligible.

- Thomas H. Huxley, 1825-1895

Kindness is everything. You are braver than you think.

- Unknown

Food safety recalls are always either too early or too late. If you're right, it's always too late.

If you're wrong, it's always too early.

- Dr. Paul Mead

... since one never knows what will be the line of advance, it is always most rash to condemn what is not quite in the fashion of the moment.

- Bertrand Russell, 1872-1970

Work like you don't need the money. Love like you've never been hurt.

Dance like nobody's watching. Just live.

To laugh often and much, to win the respect of intelligent people, and the affection of children... to leave the world a better place... to know that even one life had breathed easier because you had lived. That is to have succeeded.

- Ralph Waldo Emerson

Life can only be understood backwards; but it must be lived forwards.

-Soren Kierkegaard, "Life"

Scientific leaders call for educating the public to achieve 'scientific literacy,' but little attention is given to the need for scientists to achieve 'public literacy.'

- Charles Weiner

I never trust a man who only knows one way to spell a word.

- Andrew Jackson

We make a living by what we get, but we make a life by what we give.

- Winston Churchill

It is not enough that you should understand about applied science in order that your work may increase man's blessings. Concern for the man himself and his fate must always form the chief interest of all technical endeavors; concern for the great unsolved problems of the organization of labor and the distribution of goods in order that the creations of our mind shall be a blessing and not a curse to mankind. Never forget this in the midst of your diagrams and equations.

- Albert Einstein

Character cannot be developed in ease and quiet.

- Helen Keller

This message has cheerfully
sent without further proofreading...

Maturity of mind is the capacity to endure uncertainty.

- John Finley

Einstein: God does not play dice with the Universe. Plank: Stop telling God what to do.

- As told by Stan Kaplan

Give me a fruitful error any time, full of seeds, bursting with its own corrections. You can keep your sterile truth for yourself.

- Vilfredo Pareto 1848-1923

Never attribute to malice that which can be adequately explained by stupidity.

- Hanlon's Razor

Engineers think that equations approximate the real world. Scientists think that the real world approximates equations. Mathematicians are unable to make the connection...

Great ideas, it has been said, come into the world as gently as doves. Perhaps, then, if we listen attentively we shall hear amid the uproar of empires and nations a faint flutter of wings, the gentle stirring of life and hope.

- Albert Camus

Consistency is contrary to nature, contrary to life. The only completely consistent people are dead.

- Aldous Huxley, 1894-1963

I am always doing that which I can not do, in order that I may learn how to do it.

- Pablo Picasso, 1881-1973

Do not try to satisfy your vanity by teaching a great many things. Awaken people's curiosity. It is enough to open minds; do not overload them. Put there just a spark. If there is some good inflammable stuff, it will catch fire.

- Anatole France

We shall not cease from exploration, And the end of all our exploring, Will be to arrive where we started, And know the place for the first time.

- T.S. Eliot

A human being is part of a whole, called by us the "Universe," a part limited in time and space. He experiences himself, his thoughts and feelings, as something separated from the rest -a kind of optical delusion of his consciousness. This delusion is a kind of prison for us, restricting us to our personal desires and to affection for a few persons nearest us. Our task must be to free ourselves from this prison by widening our circles of compassion to embrace all living creatures and the whole of nature in its beauty.

- Albert Einstein (1879-1955)

All great truths begin as blasphemies.

- George Bernard Shaw

It wasn't until late in life that I discovered how easy it is to say "I don't know."

- W. Somerset Maugham, 1874-1965

Not doubt, certainty is what drives one insane.

- Nietzsche

A man's maturity consists in having found again the seriousness one had as a child at play.

- Nietzsche

Climate is what we expect. Weather is what we get.

- Robert A. Heinlein

The invariable mark of wisdom is to see the miraculous in the common.

- Ralph Waldo Emerson

I never did a day's work in my life. It was all fun.

- Thomas A. Edison

Let us a little permit Nature to take her own way; she better understands her own affairs than we.

- Michel Eyquem de Montaigne, 1533-1592

Something we see quite clearly, and which nonetheless is very difficult to express, is always worth the trouble of trying to put into words.

- Paul Valéry, 1871-1945

The researches of many commentators have already thrown much darkness on this subject, and it is probable that, if they continue, we shall soon know nothing at all about it.

- Mark Twain, 1835-1910

A want of the habit of observing and an inveterate habit of taking averages are each of them often equally misleading.

- Florence Nightingale, 1820-1910

A mind all logic is like a knife all blade, It makes the hand bleed that uses it!

- Rabindranath Tagore, 1861-1941

Failure is less attributable to either insufficiency of means or impatience of labours than to a confused understanding of the thing actually to be done.

- John Ruskin, 1819-1900

Outside of a dog, a book is a man's best friend. Inside of a dog, it's too dark to read.

- Groucho Marx

So many things are possible just as long as you don't know they're impossible.

Norton Juster, 1929-? [The Phantom Tollbooth]

If you limit your actions in life to things that nobody can possibly find fault with, you will not do much.

- Lewis Carroll, 1832-1898

Pick the assumptions to pieces till the stuff they are made of is exposed to plain view - this is the cardinal rule for understanding the basis of our beliefs.

- Eric T. Bell, 1883-1960 [The Search for Truth]

We hew and saw and plane facts to make them dovetail with our prejudices, so that they become mere ornaments with which to parade our objectivity.

- Paul Eldridge, 1888-1982 [Maxims for a Modern Man]

In questions of science the authority of a thousand is not worth the humble reasoning of a single individual.

- Galileo Galilei, 1564-1842

And when you cannot prove that people are wrong, but only that they are absurd, the best course is to let them alone.

- Thomas H. Huxley, 1825-1895

I like people who refuse to speak until they are ready to speak.

- Lillian Hellman, 1905-1984

When a thing was new people said, "It is not true." Later, when its truth became obvious, people said, "Anyway, it is not important," and when its importance could not be denied, people said, "Anyway, it is not new."

- William James, 1842-1910

You don't know, my dear boy, with what little reason the world is governed.

- Axel Gustafsson, Count Oxenstierna, 1583-1654 [Letter to his son, 1648]

Enlightenment means taking full responsibility for your life.

- William Blake

One of the greatest victories you can gain over someone is to beat him at politeness.

- Josh Billings

There is this difference between happiness and wisdom, that he that thinks himself the happiest man really is so; but he that thinks himself the wisest is generally the greatest fool.

- Charles Caleb Colton (1780-1832)

Work is much more fun than fun.

- Noel Coward, 1963

Facts do not cease to exist because they are ignored.

- Aldous Huxley, 1894-1963

Never say, "I tried it once and it did not work."

- Lord Ernest Rutherford, 1877-1957

You can no more win a war than you can win an earthquake.

- Jeannette Rankin, 1880-1973

I never think of the future - it will come soon enough.

- Albert Einstein, 1879-1955

I'll play with it first and tell you what it is later.

- Miles Davis, 1926-1991

It's hard to work in groups when you're omnipotent.

- Anonymous

The measure of success is not whether you have a tough problem to deal with, but whether it is the same problem you had last year.

- John Foster Dulles, Former Secretary of State

Sit down before fact as a little child, follow humbly wherever and whatever abysses nature leads, or you shall learn nothing.

- Thomas H. Huxley, 1825-1895

If stupidity got us into this mess, then why can't it get us out?

- Will Rogers, 1879-1935

Writing only leads to more writing.

- Colette, 1873-1954

Imagine if every Thursday your shoes exploded if you tied them the usual way. This happens to us all the time with computers, and nobody thinks of complaining.

- Jeff Raskin, 1944-

If you put the federal government in charge of the Sahara Desert, in five years there'd be a shortage of sand.

- Milton Friedman

Teachers should unmask themselves, admit into consciousness the idea that one does not need to know everything there is to know and one does not have to pretend to know everything there is to know.

- Esther P. Rothman

The universe is full of magical things patiently waiting for our wits to grow sharper.

- Bertrand Russell, 1872-1970

We can never achieve absolute truth, but we can live hopefully by a system of calculated probabilities. The law of probability gives to natural and human sciences - to human experience as a whole - the unity of life we seek.

- Agnes Meyer, 1887-1970 [Education for a New Morality]

Research, though toilsome, is easy; imagination, though delightful, is difficult.

- A.C. Bradley, 1851-1935 [Oxford Lectures on Poetry]

How inappropriate to call this planet Earth when clearly it is Ocean.

- Arthur Charles Clarke, 1917- [Nature, 1990]

Most problems have either many answers or no answer. Only a few problems have a single answer.

- Edmund C. Berkeley, 1909-1988 [Right Answers: A Short Guide for Obtaining Them, 1969]

Common sense is not really so common.

- Antoine Arnauld, 1612-1694 [The Art of Thinking: Port-Royal Logic]

It is necessary to be slightly underemployed if you want to do something significant.

- James Dewey Watson, 1928-

Hearing both sides brings enlightenment. Believing only one side brings obscurity.

- Wei Cheng, T'ang Dynasty

"Let us work without theorizing," said Martin; 'tis the only way to make life endurable."

- Voltaire, 1694-1778 [Candide, 1758]

Advice is what we ask for when we already know the answer but wish we didn't.

- Erica Jong

The road to success is dotted with many tempting parking spaces.

- Unknown

Only one who bursts with enthusiasm do I instruct; Only one who bubbles with excitement do I enlighten. If I hold up one corner and you do not come back to me with the other three, I do not continue the lesson.

- Confucius, 551-479 B.C.

Don't worry about people stealing an idea. If it's original, you will have to ram it down their throats.

- Howard Aiken, 1900-1973

The lure of the distant and the difficult is deceptive. The great opportunity is where you are.

- John Burroughs, 1837-1921

Hell! There ain't no rules around here! We are tryin' to accomplish somep'n!

- Thomas Edison, 1847-1931

Superman don't need no seat belt. - Muhammad Ali, 1942-

[Comment to flight attendant, who replied, "Superman don't need no airplane, either."]

All professionals, whether physicists, economists or musicians, live by and for peer judgment, even when they are being paid by people who cannot tell the difference.

- Eric John Ernest Hobsbawm, 1917-

People value that part of knowledge which is known. They do not know how to avail themselves of the Unknown in order to reach knowledge. Is this not misguided?

- Chuang-tzu

He hoped and prayed that there wasn't an afterlife. Then he realized there was a contradiction involved here and merely hoped that there wasn't an afterlife.

- Douglas Adams

A common mistake people make when trying to design something completely foolproof is to underestimate the ingenuity of complete fools.

- Douglas Adams

Human beings, who are almost unique in having the ability to learn from the experience of others, are also remarkable for their apparent disinclination to do so.

- Douglas Adams

I don't believe it. Prove it to me and I still won't believe it.

- Douglas Adams

Time is an illusion. Lunchtime doubly so.
- Douglas Adams

You live and learn. At any rate, you live.
- Douglas Adams

I love deadlines. I like the whooshing sound they make as they fly by.
- Douglas Adams

Man [has] always assumed that he was more intelligent than dolphins because he had achieved so much the wheel, New York, wars and so on while all the dolphins had ever done was muck about in the water having a good time. But conversely, the dolphins had always believed that they were far more intelligent than man for precisely the same reason.
- Douglas Adams

The major difference between a thing that might go wrong and a thing that cannot possibly go wrong is that when a thing that cannot possibly go wrong goes wrong it usually turns out to be impossible to get at and repair.
- Douglas Adams

When you measure what you are speaking about and express it in numbers, you know something about it, but when you cannot express it in numbers your knowledge about it is of a meager and unsatisfactory kind.
- William Thomson (Lord Kelvin)

There's no sense in being precise when you don't even know what you're talking about.
- John von Neumann, 1903-1957

I learned . . . that inspiration does not come like a bolt, nor is it kinetic, energetic, striving, but it comes to us slowly and quietly and all the time, though we must regularly and every day give it a little chance to start flowing, prime it with a little solitude and idleness.
- Brenda Ueland, 1891-1985

A theory has only the alternative of being right or wrong. A model has a third possibility: it may be right, but irrelevant.
- Manfred Eigen, 1927-

Do not permit the events of your daily lives to bind you, but never withdraw yourselves from them. Only by acting thus can you earn the title of a Liberated One.
- Zen Master Huang Po

A great part of courage is the courage of having done the thing before.
- Ralph Waldo Emerson, 1803-1882

The understanding of atomic physics is child's play compared with the understanding of

child's play.
- David Kresch

If you think education is expensive, try ignorance.
- Derek Bok, 1930-

Doubt is not a pleasant condition, but certainty is absurd.
- Voltaire (François Marie Arouet), 1694-1778

It is inevitable that when one has a great need of something one finds it. What you need you attract like a lover.
- Gertrude Stein, 1874-1946

Faced with the choice between changing one's mind and proving there is no need to do so, almost everyone gets busy on the proof.
- John Kenneth Galbraith, 1908-

False facts are highly injurious to the progress of science, for they often endure long; but false views, if supported by some evidence, do little harm, for everyone takes a salutary pleasure in proving their falseness.
- Charles Darwin, 1808-1882

Every society honors its live conformists and its dead troublemakers.
- Mignon McLaughlin

People who write obscurely are either unskilled in writing or up to mischief.
- Peter Brian Medewar, 1915-1987 [Pluto's Republic, 1982]

Thank goodness I was never sent to school: it would have rubbed off some of the originality.
- Beatrix Potter, 1866-1943

An experiment is a device to make Nature speak intelligibly. After that one has only to listen.
- Finn Wold, 1928-1997

Chance is perhaps the pseudonym of God when he did not wish to sign.
- Anatole France

There isn't a scientific community. It is a culture. It is a very undisciplined organization.
- Isador Isaac Rabi, 1898-1987

The covers of this book are too far apart.
- Ambrose Bierce, 1842-1914

It's a little like the tale of the roadside merchant who was asked to explain how he could sell rabbit sandwiches so cheap. "Well," he explained, "I have to put in some horse meat too. But I mix them 50-50. One horse, one rabbit."

- Darrell Huff [How to Lie with Statistics]

Why do people keep insisting that I join the 21st Century? I *LIVE* in the 21st Century! I just don't want to be bothered by the sh*theads on the internet!

- Harlan Ellison

Those who are good at archery learnt from the bow and not from Yi the Archer. Those who know how to manage boats learnt from boats and not from Wo (the legendary boatman). Those who can think learnt for themselves and not from the Sages.

- Kuan Yin Tze, 8th century

Life is a tragedy for those who feel, and a comedy for those who think.

- La Bruyere

Knowledge is learning something every day.

Wisdom is letting go of something every day.

More wisdom is latent in things-as-they-are than in all the words men use.

- Antoine De Saint-Exupery

The highest reward for a person's toil is not what they get for it, but what they become by it.

- John Ruskin, 1819-1900

This report, by its very length, defends itself against the risk of being read.

- Winston Churchill, 1874-1965

It has taken biologists some 230 years to identify and describe three quarters of a million insects; if there are indeed at least thirty million, as Erwin [Terry Erwin, the Smithsonian Institute] estimates, then, working as they have in the past, insect taxonomists have ten thousand years of employment ahead of them.

- Richard Leakey, 1944- [The Sixth Extinction, 1995]

The best scientists are poets; the real engineer is an artist.

- Sue Birchmore

There was once a young man who, in his youth, professed his desire to become one of the world's great writers. When asked to define "great" he said, "I want to write stuff that the whole world will read, stuff that people will react to on a truly emotional level, stuff that will make them scream, cry, howl in pain and anger!"

He now works for Microsoft, writing error messages.

Whether it is to be Utopia or Oblivion will be a touch-and-go relay race right up to the final moment.

- Buckminster Fuller 1980

We hope to explain the entire universe in a single, simple formula that you can wear on your

T-shirt.

- Leon Lederman, 1922- Physically Speaking

Statistics are no substitute for common sense.

- Richard N. Bialac, Statistically Speaking

The only way of learning the method of science is the long and bitter way of personal experience.

- John Desmond Bernal, 1901-1971

No object is mysterious. The mystery is in your eye.

- Elizabeth Bowen, 1899-1973

Life is painful, suffering is optional

- Sylvia Boorstein

Theorem 1: 50 of the problems in the world result from people using the same words with different meanings. Theorem 2: The other 50 comes from people using different words with the same meaning.

- Stan Kaplan, Risk Analysis, 17(4):408.

Of course I'm not busy, I did it right the first time.

- Anon

Money won't buy happiness, but it will pay the salaries of a large research staff to study the problem.

- Bill Vaughan

Religion is always right. Religion solves every problem and thereby abolishes problems from the universe... Science is the very opposite. Science is always wrong. It never solves a problem without raising ten more problems

- George Bernard Shaw, in an after dinner toast to Albert Einstein, Oct 27, 1930

Giving money and power to politicians is like giving whiskey and car keys to teen age boys.

- P. J. O'Rourke

Everything is but what we think it.

- Marcus Aurelius

You're bound to become a buddha if you practice. If water drips long enough even rocks wear through. It's not true thick skulls can't be pierced; people just imagine their minds are hard.

- Shih-wu (1272-1352)

To the extent that the scientist's capacity for pursuing the truth depends upon costly apparatus, institutional collaboration and heavy capital investment by government or industry

he is no longer his own master.

- Lewis Mumford, *Myth of the Machine, the Pentagon of Power*, 1964

A goodly number of scientists are not only narrow-minded and dull but also just stupid.

- James Watson

He had the invaluable faculty of being able to take the most difficult problem, separate it into its components, whereupon everything looked brilliantly simple...

- Stanislaw Ulam, on John von Neumann, *Bull. Am. Math Soc.* 1958

Those who seek the easy way do not seek the true way.

- Dogen

Q: How can you tell if someone is a technical pioneer?

A: By the arrows in his or her back.

Academics get paid for being clever, not for being right.

- Donald Norman

"This morning, for breakfast, he requested something called wheat germ, organic honey, and Tiger's Milk". "Oh yes, those are the charmed substances that some years ago were felt to contain life-preserving properties". "You mean, there was no deep fried fat? No steak, or cream pies, or hot fudge?" "Those were thought to be unhealthy, precisely the opposite of what we now know to be true". "Incredible!"

Two physicians in the year 2173, discussing a patient who had just been awakened after being cryogenically preserved 200 years earlier in Woody Allen's movie, "Sleeper".

Fundamental progress has to do with the reinterpretation of basic ideas.

- Alfred North Whitehead, 1861-1947

If one is master of one thing and understands one thing well, one has at the same time insight into and understanding of many things.

- Vincent van Gogh, 1853-1890

O sweet spontaneous earth how often has the naughty thumb of science prodded thy beauty thou answerest them only with spring.

- Edward Estlin Cummings (e e cummings), 1894-1962 [*Tulips and Chimneys*, 1924]

There was a time when statistics as a tool in experimentation was almost completely ignored by the experimenter; in fact, it was regarded as "introducing unnecessary confusion into otherwise plain issues."

- Palmer O. Johnson [*The Scientific Monthly*, 1951]

Man: Hello, my boy. And what is your dog's name? Boy: I don't know. We call him Rover.

- Stafford Beer, 1926- [*New Scientist*, 1974]

The University brings out all abilities, including stupidity.
- Anton Chekhov, 1860-1904

Whereas science elicits changes in order to know, technology knows in order to elicit changes.
- M. Bunge, Practically Speaking

Maybe nature is fundamentally ugly, chaotic and complicated. But if it's like that, then I want out.
- Steven Weinberg, winner of the Nobel prize in physics

So, naturalists observe, a flea Hath smaller fleas that on him prey; And these have smaller fleas to bite 'em, And so proceed ad infinitum.
-Jonathan Swift

Mass extinctions may not threaten distant futures, but they are decidedly unpleasant for species caught up in the throes of their power.
-Stephen Jay Gould

A man has no reason to be ashamed of having an ape for his grandfather. If there were an ancestor whom I should feel shame in recalling it would rather be a man... who, not content with success in own sphere of activity, plunges into scientific questions with which he has no real acquaintance...
-Thomas Henry Huxley

Darwinian man though well behaved, At best is only a monkey shaved.
W.S Gilbert, Princess Ida

Unfortunately for our peace of mind, most of the products of the human body are slimy saliva, mucus, excrement, pus, semen, blood, lymph and even honest sweat gets sticky by evaporation.
- Terence McLaughlin, English writer and scientist, Dirt: A Social History as Seen through the Uses and Abuses of Dirt, 1971

There is only one thing certain and that is that nothing is certain
- G.K. Chesterton

Oh how so little information controls so much behavior.
- Richard Langton Gregory, 1923-

I have yet to see any problem, however complicated, which, when you looked at it in the right way, did not become still more complicated.
- Poul Anderson, 1926- [New Scientist, 25 September 1969]

Half of the secret of resistance to disease is cleanliness; the other half is dirtiness.
- Anonymous

The difference between what the most and the least learned people know is inexpressibly trivial in relation to that which is unknown.

- Albert Einstein, 1879-1955

Science is the topography of ignorance.

- Oliver Wendell Holmes, 1809-1894

There is no higher or lower knowledge, but one only, flowing out of experimentation.

- Leonardo da Vinci, 1452-1519

The avoidance of taxes is the only intellectual pursuit that still carries any reward.

- John Maynard Keynes, 1883-1946

Who controls the past controls the future. Who controls the present controls the past.

- George Orwell, 1903-1950 [Nineteen Eighty-four, 1949 - Motto of the Ministry of Truth]

640K ought to be enough for anybody.

- Bill Gates, 1981

Computers in the future may weigh no more than 1.5 tons.

- Popular Mechanics, forecasting the relentless march of science, 1949

I think there is a world market for maybe five computers.

- Thomas Watson, chairman of IBM, 1943

I have traveled the length and breadth of this country and talked with the best people, and I can assure you that data processing is a fad that won't last out the year.

- The editor in charge of business books for Prentice Hall, 1957

But what ... is it good for?

- Engineer at the Advanced Computing Systems Division of IBM, 1968, commenting on the microchip.

There is no reason anyone would want a computer in their home.

- Ken Olson, president, chairman and founder of Digital Equipment Corp., 1977

This 'telephone' has too many shortcomings to be seriously considered as a means of communication. The device is inherently of no value to us.

- Western Union internal memo, 1876.

The wireless music box has no imaginable commercial value. Who would pay for a message sent to nobody in particular?

- David Sarnoff's associates in response to his urgings for investment in the radio in the 1920s.

The concept is interesting and well-formed, but in order to earn better than a 'C,' the idea must be feasible.

- A Yale University management professor in response to Fred Smith's paper proposing reliable overnight delivery service. (Smith went on to found Federal Express Corp.)

Who the hell wants to hear actors talk?

- H.M. Warner, Warner Brothers, 1927

A cookie store is a bad idea. Besides, the market research reports say America likes crispy cookies, not soft and chewy cookies like you make.

- Response to Debbi Fields' idea of starting Mrs. Fields' Cookies.

Heavier-than-air flying machines are impossible.

- Lord Kelvin, president, Royal Society, 1895.

If I had thought about it, I wouldn't have done the experiment. The literature was full of examples that said you can't do this.

- Spencer Silver on the work that led to the unique adhesives for 3-M Post-It Notepads.

So we went to Atari and said, 'Hey, we've got this amazing thing, even built with some of your parts, and what do you think about funding us? Or we'll give it to you. We just want to do it. Pay our salary, we'll come work for you.' And they said, 'No.' So then we went to Hewlett-Packard, and they said, 'Hey, we don't need you. You haven't got through college yet.'

- Apple Computer Inc. founder Steve Jobs on attempts to get Atari and HP interested in his and Steve Wozniak's personal computer.

Professor Goddard does not know the relation between action and reaction and the need to have something better than a vacuum against which to react. He seems to lack the basic knowledge ladled out daily in high schools.

- 1921 New York Times editorial about Robert Goddard's revolutionary rocket work.

Drill for oil? You mean drill into the ground to try and find oil? You're crazy.

- Drillers who Edwin L. Drake tried to enlist to his project to drill for oil in 1859.

Stocks have reached what looks like a permanently high plateau.

- Irving Fisher, Professor of Economics, Yale University, 1929.

Louis Pasteur's theory of germs is ridiculous fiction.

- Pierre Pacht, Professor of Physiology at Toulouse, 1872

Life is no "brief candle" to me. It is a sort of splendid torch which I've got to hold up for the moment and I want to make it burn as brightly as possible before handing it on to future generations.

- George Bernard Shaw

Insanity is doing the same thing over and over again, but expecting different results.
- Rita Mae Brown

Life is the art of drawing sufficient conclusions from insufficient evidence.
- Samuel Butler

We have a habit in writing articles published in scientific journals to make the work as finished as possible, to cover up all the tracks, to not worry about the blind alleys or describe how you had the wrong idea first, and so on. So there isn't any place to publish, in a dignified manner, what you actually did in order to get to do the work.
- Richard Phillips Feynman, 1918-1988 [Nobel lecture, 1966]

I knew nothing of science, but I knew something of scientists, and had had much practice as a Minister in handling things I did not understand.
- Winston Spencer Churchill, 1874-1965

First I fix the price. Then I fix the title. Then I write the book.
- Ruby Mildred Ayres, 1883-1953

Knowledge will not always take the place of simple observation.
- Arnold Lobel, 1980 (The Elephant and His Son, Fables)

Dogs are barking, Sancho. It's a sign that we are getting ahead!
- Don Quixote

A story is told about a Zen master and a Mystic guru, who were walking together along a riverbank and decided to visit a nearby island. "Let's walk to the island," said the guru. "Why not take the ferry?" suggested the Zen master. "Because," said the guru, "I've spent twenty years learning to walk on water." "Why take twenty years learning to walk on water," asked the master, "when you can take a ferry for a penny?"

Do not believe anything on the mere authority of teachers or priests. Accept as true and as the guide to your life only that which accords with your own reason and experience, after thorough investigation. Accept only that which contributes to the well-being of yourself and others.
- Buddha

You never change things by fighting the existing reality. To change something, build a new model that makes the existing model obsolete.
-R. Buckminster Fuller

The way I usual way I describe the difference between FDA and USDA regulations is as follows: FDA has thousands of pages of tightly written regulations that are rarely enforced; USDA has much fewer pages of ambiguous regulations, every word of which is strictly enforced, although a different way by each inspector.
- Robert A. LaBudde

Most of the papers which are submitted to the Physical Review are rejected, not because it is impossible to understand them, but because it is possible. Those which are impossible to understand are usually published.

- Freeman Dyson, 1923-

Science itself, therefore, must be regarded as a minimal problem consisting of the completest possible presentment of facts with the least possible expenditure of thought.

- Ernst Mach, 1838-1916

I learned many years ago never to waste time trying to convince my colleagues.

- Albert Einstein, 1879-1955

Once a sage was asked why scholars always flock to the doors of the rich, whilst the rich are not inclined to call at the doors of scholars. "The scholars," he answered, "are well aware of the use of money, but the rich are ignorant of the nobility of science."

- Al-Biruni, 973-1048

Do not search for the truth; Only cease to cherish opinions.

- Seng-Tsan

If it should turn out that the whole of physical reality can be described by a finite set of equations, I would be disappointed. I would feel that the Creator had been uncharacteristically lacking in imagination.

- Freeman Dyson, physicist, *Infinite in All Directions*, 1988

There's a fundamental presumption in physics that the way you understand the world is that you keep isolating its ingredients until you understand the stuff that you think is truly fundamental. Then you presume the other things you don't understand are details.

- Mitchell J. Feigenbaum, physicist, in conversation with James Gleick, *Chaos*, 1987

If people say they understand quantum mechanics they're lying.

- Richard Feynman, in Denis Brian, *Genius Talk: Conversations with Nobel Scientists and Other Luminaires*, 1995

Ten million trillion neutrinos will speed harmlessly through your brain and body in the time it takes to read this sentence. By the time you have read this sentence, they will be farther away than the moon.

- Timothy Ferris, science writer and professor emeritus, *Coming of Age in the Milky Way*, 1988

Although the universe is under no obligation to make sense, students in pursuit of the PhD are.

- Robert P. Kirshner, "Exploding Stars and the Expanding Universe," *The Quarterly Journal of the Royal Astronomical Society*, September 1991

Two possibilities exist; either we are alone in the universe or we are not. Both are equally terrifying.

- Arthur C. Clarke, cited in Michio Kaku, *Visions: How Science Will Revolutionize the 21st Century*, 1997

If there are two or more ways to do something and one of those ways can result in catastrophe, then someone will do it.

- Captain Edward A. Murphy, Jr., who was in charge of applying 16 sensors to test the effect of acceleration on the human body and, after installing all 16 incorrectly on a test pilot, made the statement that became known as Murphy's Law, 1949

As you well know, Mr. President, "railroad" carriages are pulled at the enormous speed of 15 mph, by "engines."...The Almighty never intended that people should travel at such breakneck speed.

- Martin Van Buren, governor of New York to President Andrew Jackson, 1829

The seed of mystery lies in muddy water. How can I perceive this mystery? Water becomes clear through stillness. How can I become still? By flowing with the stream.

- Lao-tze

It is better to conquer yourself than to win a thousand battles. Then the victory is yours.

- The Dhammapada

Simplicity, simplicity, simplicity. I say, let your affairs be as two or three, and not a hundred or a thousand; instead of a million count half a dozen, and keep your accounts on your thumbnail.

- Henry David Thoreau, 1817-1862 [*Walden*, 1854]

It is amazing what you can accomplish if you do not care who gets the credit.

- Harry S. Truman, 1884-1972

I'd rather have a second-best decision diligently pursued than a first-best decision lackadaisically pursued.

- Tom Landry

I think it will be found that he who speaks with most authority on a given subject is not ignorant of what has been said by his predecessors. He will take his place in a regular order, and substantially add his own knowledge to the knowledge of previous generations.

- Henry David Thoreau

A man receives only what he is ready to receive, whether physically or intellectually or morally, as animals conceive at certain seasons their kind only. We hear and apprehend only what we already half know.

- Henry David Thoreau

Whenever you can, count.

- Francis Galton, 1822-1911

Where shall we begin? There is no beginning. Start where you arrive. Stop before what entices you. And work! You will enter little by little into the entirety. Method will be born in proportion to your interest.

- Auguste Rodin, 1840-1917

If you don't know where you are going... You might end up someplace else...

Yogi Berra, 1925 -

One day Alice came to a fork in the road and saw a Cheshire cat in a tree. "Which road do I take?", she asked. "Where do you want to go?", was his response. "I don't know", Alice answered. "Then", said the cat, "it doesn't matter".

- Lewis Carroll

"One can't believe impossible things," said Alice. "I daresay you haven't had much practice," said the queen. "When I was your age, I always did it for half-an-hour a day. Why, sometimes I've believed as many as six impossible things before breakfast."

-Lewis Carroll, "Through the Looking Glass"

Sages lean on a pillar that is never shaken, travel a road that is never blocked, are endowed from a resource that is never exhausted, and learn from a teacher that never dies. They are successful in whatever they undertake, and arrive wherever they go. Whatever they do, they embrace destiny and go along without confusion.

- Wen-tzu

In order to draw a limit to thinking, we should have to think both sides of this limit.

- Ludwig Wittgenstein, 1889-1951

[Asked about a book in which 100 Nazi professors charged him with scientific error.] Were I wrong, one professor would have been quite enough.

- Albert Einstein, 1879-1955

Success is the ability to go from failure to failure without losing your enthusiasm.

- Winston Churchill, 1874-1965

It is what we know already that often prevents us from learning.

- Claude Bernard, 1813-1878

You observe a lot by watching

- Yogi Berra

Do not craze yourself with thinking, but go about your business anywhere. Life is not intellectual and critical, but sturdy.

- Ralph Waldo Emerson

The art of being wise is the art of knowing what to overlook
- William James

If you have an apple and I have an apple and we exchange apples then you and I will still each have one apple. But if you have an idea and I have an idea and we exchange these ideas, then each of us will have two ideas.
- George Bernard Shaw

... who vanished into nowhere Zen New Jersey leaving a trail of ambiguous picture postcards of Atlantic City Hall...
- Allen Ginsberg (1926-1997), Howl

When nature has work to be done, She creates a genius to do it.
- Ralph Waldo Emerson

You know the world is going crazy when the best rapper is a white guy, the best golfer is a black guy, the tallest guy in the NBA is Chinese, the Swiss hold the America's Cup, France is accusing the U.S. of arrogance, Germany doesn't want to go to war, and the three most powerful men in America are named 'Bush', 'Dick', and 'Colon'".
- Chris Rock

It takes you years to learn how to play like yourself.
- Miles Davis

I'm not an outlier; I just haven't found my distribution yet.
- Ronan Conroy

Good mathematicians see analogies between theorems; great mathematicians see analogies between analogies.
- S. Banach

Much of the technical literature is difficult to read, even for scientists and engineers. Even the best books tend to dwell on the mathematical models and don't give the slightest hint what to do if one is lucky enough to have some data.
- Foster Morrison, The Art of Modeling Dynamic Systems: Forecasting for Chaos, Randomness, & Determinism

Getting information from the internet is like getting a glass of water from the Niagara.
- Arthur C. Clarke

Anyone who is capable of getting themselves made President should on no account be allowed to do the job.
- Douglas Adams

If the automobile had followed the same development cycle as the computer, a Rolls-Royce would today cost \$100, get a million miles per gallon, and explode once a year, killing

everyone inside.

- Robert X. Cringely, Computerworld

Theories have four stages of acceptance: i) this is worthless nonsense; ii) this is an interesting, but perverse, point of view; iii) this is true, but quite unimportant; iv) I always said so.

- J.B.S. Haldane, 1963

There are two possible outcomes: If the result confirms the hypothesis, then you've made a measurement. If the result is contrary to the hypothesis, then you've made a discovery.

- Enrico Fermi

Never attribute to conspiracy that which is adequately explained by stupidity.

- paraphrase of "Hanlon's Razor" (R. Heinlein)

A witty saying proves nothing.

- Voltaire

To be sure of hitting the target, shoot first and call whatever you hit the target.

— Ashleigh Brilliant

The kind of man who wants the government to adopt and enforce his ideas is always the kind of man whose ideas are idiotic.

- H.L. Mencken

Socrates was once asked, 'What is the right activity for an old man?' and Socrates said, "Politics." Then he was asked 'What is the right activity for a young man?' Socrates said, "Science."

- As told by Linus Pauling

A valley of humility between two mountains of conceit...

- Benjamin Franklin describing New Jersey

I have deeply regretted that I did not proceed far enough at least to understand something of the great leading principles of mathematics; for men thus endowed seem to have an extra sense.

- Charles Darwin

A line may take us hours maybe; Yet if it does not seem a moment's thought, Our stitching and unstitching has been naught.

- Yeats

I am always ready to learn, but I do not always like being taught.

— Sir Winston Churchill

The only thing that interferes with my learning is my education.

— Albert Einstein

I have never let my schooling interfere with my education.

— Mark Twain

Education is an admirable thing, but it is well to remember from time to time that nothing worth knowing can be taught.

— Oscar Wilde

It must be remembered that the purpose of education is not to fill the minds of students with facts... it is to teach them to think, if that is possible, and always to think for themselves.

- Robert Hutchins

A teacher who is attempting to teach without inspiring the pupil with a desire to learn is hammering on a cold iron.

- Horace Mann

I think that this is the most extraordinary collection of talent, of human knowledge, that has ever been gathered together at the White House, with the possible exception of when Thomas Jefferson dined here alone.

- President John F. Kennedy at a dinner honoring American Nobel Prize winners, April 29, 1962

I can't understand why people are frightened of new ideas. I'm frightened of the old ones.

- John Cage

I think the concept of species is a fallacy in the microbial world.

- Norm Pace, ASM News, 2000, 66(3):145.

There is no such thing as "the Queen's English". The property has gone into the hands of a joint stock company and we own the bulk of the shares!

- Mark Twain, *Following the Equator*, 1897

Few people think more than two or three times a year. I've made an international reputation for myself by thinking once or twice a week.

- George Bernard Shaw as quoted in *The Art of Creative Thinking* by Robert Olson (1986)

You cannot teach anyone anything. You can only help them find it within themselves.

- Galileo Galilei

Think like a man of action, act like man of thought

- Henri Bergson (1859-1941), Nobel Prize in Literature 1927

When you find yourself in a hole, stop digging.

- Will Rogers

Don't just do something, sit there!

- Sylvia Boorstein

Simple, clear purpose and principles give rise to complex intelligent behavior. Complex rules and regulations give rise to simple stupid behavior.

- Dee Hock (Founder and CEO Emeritus, VISA International)

Luck affects everything. Let your hook always be cast; in the stream where you least expect it there will be a fish.

- Ovid

How do I know what I think until I see what I say?

- E. M. Forster

The secret of getting ahead is getting started. The secret of getting started is breaking your complex overwhelming tasks into small manageable tasks, and then starting on the first one.

- Mark Twain

I am an old man and have known a great many troubles, but most of them never happened.

- Mark Twain

Nothing is more tiresome than a superannuated pedagogue

- Henry Adams

The greatest enemy of the individual is the individual himself.

- Saul Alinsky

And whatsoever ye do, do it heartily

- Colossians 3:23

Things may come to those who wait...but only the things left by those who hustle.

- Abraham Lincoln

In order that people may be happy in their work, these three things are needed: They must be fit for it. They must not do too much of it. And they must have a sense of success in it.

- John Ruskin

The really efficient laborer will be found not to crowd his day with work but will saunter to his task surrounded by a wide halo of ease and leisure.

- Henry David Thoreau

Success is not the key to happiness. Happiness is the key to success. If you love what you are doing, you will be successful.

- Albert Schweitzer

I have learned this at least by my experiment: that if one advances confidently in the direction

of his dreams, and endeavors to live the life which he has imagined, he will meet with a success unexpected in common hours.

- Henry David Thoreau

There is no security on this earth, there is only opportunity.

- General Douglas MacArthur (1880 - 1964)

Success is important only to the extent that it puts one in a position to do more things one likes to do.

- Sarah Caldwell

Anyone can do any amount of work provided it isn't the work he is supposed to be doing at the moment.

- Robert Benchley (1889 - 1945)

Drawing on my fine command of the English language, I said nothing.

- Robert Benchley

There are two kinds of people in the world, those who believe there are two kinds of people in the world and those who don't.

- Robert Benchley

The successful people are the ones who can think up things for the rest of the world to keep busy at.

- Don Marquis

Be content with what you have, rejoice in the way things are. When you realize there is nothing lacking, the whole world belongs to you.

- Tao Te Ching

The time you enjoy wasting is not wasted time.

- Bertrand Russell

Be happy while you are living, for you are a long time dead.

- Scottish Proverb

Mythology distracts us everywhere. For the great enemy of the truth is very often not the lie: deliberate, contrived and dishonest. But the myth: persistent, persuasive, unrealistic.

- John F. Kennedy

If you want a friend in Washington, get a dog.

- Harry S. Truman

Life is too ephemeral to spend time looking up big words

- Anon

Oh, I can't stop drinking the coffee. I stop drinking coffee, I stop doing the standing and walking and the words putting-into-sentence doing.

- Lorelai Gilmore, Gilmore Girls, Season 4, Episode 20, Aired on 2004.05.04

The danger is not that a particular class is unfit to govern. Every class is unfit to govern.

- Lord Acton

We confess our little faults to persuade people that we have no large ones.

- Francois de La Rochefoucauld

Men never do evil so completely and cheerfully as when they do it from a religious conviction.

- Blaise Pascal

We've heard that a million monkeys at a million keyboards could produce the complete works of Shakespeare; now, thanks to the Internet, we know that is not true.

- Robert Wilensky

I am extraordinarily patient, provided I get my own way in the end.

- Margaret Thatcher

To consult the statistician after an experiment is finished is often merely to ask him to conduct a post mortem examination. He can perhaps say what the experiment died of.

- R.A. Fisher

Let us prepare to grapple with the ineffable itself, and see if we may not eff it after all.

- Douglas Adams

Genius, that power which dazzles mortal eyes,
Is oft but perseverance in disguise."

- Henry Willard Austin

Electricity is actually made up of extremely tiny particles called electrons, that you cannot see with the naked eye unless you have been drinking.

- Dave Barry

The future is here. It's just not widely distributed yet.

- William Gibson

I prefer the company of peasants because they have not been educated sufficiently to reason incorrectly.

- Michel de Montaigne

The least of learning is done in the classrooms.

- Thomas Merton

The most important scientific revolutions all include, as their only common feature, the dethronement of human arrogance from one pedestal after another of previous convictions about our centrality in the cosmos.

- Stephen Jay Gould

You have to know how to accept rejection and reject acceptance.

- Ray Bradbury

You do not merely want to be considered just the best of the best of the best, you want to be considered the only ones that do what you do.

- J. Garcia

The ink of the scholar is more sacred than the blood of the martyr.

- Muhammad

For busy, battered bureaucrat though I be, I am a staunch believer in the leisure of the theory class.

- Adlai Stevenson

As requested, I did a "risk management" assessment. I concluded that there was no risk of any management.

- Alice, Dilbert Cartoon, Scott Adams

Management is doing things right; leadership is doing the right things.

- Peter Drucker

I have never made but one prayer to God, a very short one: 'O Lord, make my enemies ridiculous.' And God granted it.

- Voltaire

What the world needs is more geniuses with humility, there are so few of us left.

- Oscar Levant

The whole secret of life is to be interested in one thing profoundly and in a thousand things well

- Horace Walpole

The reserve of modern assertions is sometimes pushed to extremes, in which the fear of being contradicted leads the writer to strip himself of almost all sense and meaning.

- Sir Winston Churchill

Reminds me of my safari in Africa. Somebody forgot the corkscrew and for several days we had to live on nothing but food and water.

- WC Fields

An estimated 1,500 Americans died on the road in the attempt to avoid the fate of the

passengers who were killed in the four fatal flights [of 9/11/01].
- G. Gigerenzer, Risk Anal. 2006 Apr;26(2):347-51.

On the whole human beings want to be good, but not too good, and not quite all the time.
- George Orwell

It is a profitable thing, if one is wise, to seem foolish.
- Aeschylus

There are two tragedies in life. One is not to get your heart's desire. The other is to get it.
- George Bernard Shaw

Progress isn't made by early risers. It's made by lazy men trying to find easier ways to do something.
- Robert Heinlein

Happiness is nothing more than good health and a bad memory.
- Albert Schweitzer

There are two cardinal sins from which all others spring: Impatience and Laziness.
- Franz Kafka

This isn't right. This isn't even wrong.
- Wolfgang Pauli

With four parameters I can fit an elephant and with five I can make him wiggle his trunk.
- John von Neumann

All you need in this life is ignorance and confidence; then success is sure.
- Mark Twain

Good people do not need laws to tell them to act responsibly, while bad people will find a way around the laws.
- Plato

Companies go to great lengths to set up lists of authorized approvals, meaning who can approve what size of purchase. But you will find that people who are not authorized to spend \$100 on their own are authorized to send e-mails to people and waste hundreds of thousands of dollars' worth of company time.
- William J. Holstein, NY Times, June 4, 2006

He who would travel happily must travel light.
- Antoine de Saint Exupéry

The country is run by extremists, because moderates have sh*t to do
- Jon Stewart

The internet is not something you just dump something on. It's not a truck. It's a series of tubes.

- Senator Ted Stevens

Be who you are and say what you feel, because those who mind don't matter and those who matter don't mind.

- Dr. Seuss

There are two kinds of people, those who do the work and those who take the credit. Try to be in the first group, there's less competition.

- Indira Gandhi

The pessimist complains about the wind; the optimist expects it to change; the realist adjusts the sails.

- William Arthur Ward

A bore is a man who deprives you of solitude without providing you with company.

- Gian Vincenzo Gravina (1664 - 1718)

The trouble with having an open mind, of course, is that people will insist on coming along and trying to put things in it.

- Terry Pratchett

A lot of people have nothing very well organized, and a lot of people have nothing, very well organized.

- David Allen

"... it takes all the running you can do, to keep in the same place. If you want to get somewhere else, you must run at least twice as fast as that!

- The Red Queen, Through the Looking Glass by Lewis Carroll

You need to think about your stuff more than you think, but not as much as you're afraid you might.

— David Allen

We should be taught not to wait for inspiration to start a thing. Action always generates inspiration. Inspiration seldom generates action.

- Frank Tibolt

It was one of those perfect English autumnal days which occur more frequently in memory than in life.

- PD James

Yak shaving: Any seemingly pointless activity which is actually necessary to solve a problem which solves a problem which, several levels of recursion later, solves the real problem

you're working on.

- MIT AI Lab, after 2000: orig. probably from a Ren & Stimpy episode

It's not what we don't know that hurts us. It's what we know that isn't so.

- Mark Twain

What lies in our power to do, lies in our power not to do

- Aristotle

I would not give a fig for simplicity on this side of complexity, but I would give my life for simplicity on the other side of complexity.

- Oliver Wendell Holmes

The best argument against democracy is a five-minute conversation with the average voter.

- Sir Winston Churchill (1874-1965)

Chess is as elaborate a waste of human intelligence as you can find outside an advertising agency.

- Raymond Chandler

Mung: To make repeated changes which individually may be reversible, yet which ultimately result in an unintentional irreversible destruction of large portions of the original item.

- Coined in 1958 at the Tech Model Railroad Club, at the Massachusetts Institute of Technology.

If people never did silly things, nothing intelligent would ever get done.

- Ludwig Wittgenstein

Where facts are few, experts are many.

- Donald R. Gannon

Not all those who wander are lost.

- J.R.R. Tolkien

The best lack all conviction, while the worst

Are full of passionate intensity.

- William Butler Yeats

A facility for quotation covers the absence of original thought.

- Dorothy L. Sayers

I'll be more enthusiastic about encouraging thinking outside the box when there's evidence of any thinking going on inside it.

- Terry Pratchett

When all is said and done, more is said than done.

- Lou Holtz

They always say that time changes things, but you actually have to change them yourself.

- Andy Warhol

I recommend you to take care of the minutes, for the hours will take care of themselves.

- Lord Philip Dormer Stanhope, 4th Earl of Chesterfield (1694-1773)

So I'll put on my bob marley tape

And practice what I preach

Get jah lost in the reggae mon

As I walk along the beach

- Jimmy Buffett

Nobody made a greater mistake than he who did nothing because he could do only a little.

- Edmund Burke

How wonderful it is that nobody need wait a single moment before starting to improve the world.

- Anne Frank

Haikus are easy

But sometimes they don't make sense

Refrigerator

Platitude: an idea (a) that is admitted to be true by everyone, and (b) that is not true.

- HL Mencken

Each human life hypothetically saved by implementing these [radiation] regulations costs about \$2.5 billion. Such costs are absurd and immoral, especially when compared to the costs of saving lives by immunization against measles, diphtheria and pertussis, which in developing countries range between \$50 and \$99 per one human life saved.

- Zbigniew Jaworowski (Physics Today, 52(9), September 1999, pp. 24-29)

I once wanted to become an atheist, but I gave up - they have no holidays.

- Henny Youngman

It is only possible to live happily ever after on a day-to-day basis.

- Margaret Bonnano

Being rich is having money; being wealthy is having time.

- Margaret Bonnano

Finish each day and be done with it. You have done what you could. Some blunders and absurdities no doubt crept in; forget them as soon as you can. Tomorrow is a new day; begin it well and serenely and with too high a spirit to be encumbered with your old nonsense.

- Ralph Waldo Emerson

Besides the noble art of getting things done, there is a nobler art of leaving things undone...
The wisdom of life consists in the elimination of nonessentials.

- Lin Yutang

Fortunate indeed, is the man who takes exactly the right measure of himself, and holds a just balance between what he can acquire and what he can use.

- Peter Latham

Millions long for immortality who don't know what to do with themselves on a rainy Sunday afternoon.

- Susan Ertz

Quiet minds cannot be perplexed or frightened, but go on in fortune or misfortune at their own private pace, like a clock in a thunderstorm.

- Robert Stevenson

The formulation of a problem is often more essential than its solution, which may be merely a matter of mathematical or experimental skill. To raise new questions, new possibilities, to regard old problems from a new angle, require creative imagination and marks real advance in science.

- Albert Einstein

Thought is useful when it motivates action and a hindrance when it substitutes for action.

- Bill Raeder

Making the simple complicated is commonplace; making the complicated simple, awesomely simple, that's creativity.

- Charles Mingus

The work will teach you how to do it.

- Estonian proverb

To get something done, a committee should consist of no more than three men, two of whom are absent.

- Robert Copeland

When trouble arises and things look bad, there is always one individual who perceives a solution and is willing to take command. Very often, that individual is crazy.

- Dave Barry

An idealist believes the short run doesn't count. A cynic believes the long run doesn't matter. A realist believes that what is done or left undone in the short run determines the long run.

- Sydney J. Harris

It is easy to dodge our responsibilities, but we cannot dodge the consequences of dodging our responsibilities.

- E.C. McKenzie

To the mind that is still, the whole universe surrenders.

- Lao Tzu

Nothing can be more useful to a man than the determination not to be hurried.

- Henry David Thoreau

The great French Marshall Lyautey once asked his gardener to plant a tree. The gardener objected that the tree was slow growing and would not reach maturity for 100 years. The Marshall replied, 'In that case, there is no time to lose; plant it this afternoon!'

- John F. Kennedy

[Political] prose consists less and less of words chosen for the sake of their meaning, and more and more of phrases tacked together like the sections of a prefabricated hen-house.

-George Orwell

The only real voyage of discovery consists not in seeing new landscapes, but in having new eyes, in seeing the universe with the eyes of another, of hundreds of others, in seeing the hundreds of universes that each of them sees.

- Proust

Reality is that which, when you stop believing in it, doesn't go away.

- Philip K. Dick

The only means of strengthening one's intellect is to make up one's mind about nothing--to let the mind be a thoroughfare for all thoughts.

- John Keats

One of the advantages of being disorderly is that one is constantly making exciting discoveries.

- AA Milne

The older I grow, the less important the comma becomes. Let the reader catch his own breath.

- Elizabeth Clarkson Zwart

Thinking and doing, doing and thinking, these are the sum of all wisdom. Both must move ever onward in life, to and fro, like breathing in and breathing out. Whoever makes it a rule to test action by thought, thought by action, cannot falter, and if he does, will soon find his way back to the right road.

- Johann Wolfgang von Goethe

By working faithfully eight hours a day you may eventually get to be boss and work twelve hours a day.

-Robert Frost, American Poet

First things first, but not necessarily in that order.

- Doctor Who

Responsibilities gravitate to the person who can shoulder them; power to the man who knows how.

- Elbert Hubbard

For a successful technology, reality must take precedence over public relations, for Nature cannot be fooled.

- Richard Feynman

Good judgement comes from experience. Experience comes from bad judgement.

- Unknown, attributed to Mullah Nasrudin, the Sufi sage/fool (born c. 1208)

What information consumes is rather obvious: it consumes the attention of its recipients. Hence, a wealth of information creates a poverty of attention and a need to allocate that attention efficiently among the overabundance of information sources that might consume it.

- Herbert Simon

There are many things of which a wise man might wish to be ignorant.

- Ralph Waldo Emerson

It's a dangerous business going out your front door.

- JRR Tolkien

I must create a system, or be enslaved by another man's

– William Blake

There is no pleasure in having nothing to do; the fun is having lots to do and not doing it.

– John W. Raper

I like your Christ, I do not like your Christians. Your Christians are so unlike your Christ.

- Gandhi

I saw a bank that said '24 Hour Banking', but I don't have that much time.

- Steven Wright

Thanks to TV and for the convenience of TV, you can only be one of two kinds of human beings, either a liberal or a conservative.

- Kurt Vonnegut

We think in generalities, but we live in detail.

- Alfred North Whitehead

We are inclined to believe those whom we do not know because they have never deceived us.
- Samuel Johnson

Life is a perpetual instruction in cause and effect.
- Ralph Waldo Emerson

An ounce of action is worth a ton of theory.
- Friedrich Engels

Collecting data is only the first step toward wisdom, but sharing data is the first step toward community.
- Henry Louis Gates Jr

Cleanliness and order are not matters of instinct; they are matters of education, and like most great things, you must cultivate a taste for them.
- Benjamin Disraeli

To find a form that accommodates the mess, that is the task of the artist now.
- Samuel Beckett

Travel is fatal to prejudice, bigotry, and narrow-mindedness, and many of our people need it sorely on these accounts.
- Mark Twain

If you want to build a ship, don't tell the men to gather the wood, parcel out the tasks and give orders; instead, teach them to yearn for the vast and limitless sea.
- Antoine St. Exupery

Politics is not the art of the possible. It consists in choosing between the disastrous and the unpalatable.
- John Kenneth Galbraith

I believe that all government is evil, and that trying to improve it is largely a waste of time.
- H. L. Mencken

2 is not equal to 3, not even for large values of 2.
- Grabel's Law

If you think a weakness can be turned into a strength, I hate to tell you this, but that's another weakness.
- Jack Handey

I may not have gone where I intended to go, but I think I have ended up where I intended to be.
- Douglas Adams

