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# WHAT DOES COMMUNITY NEED TO BE?

**Manitoba**

**February 20th - 22nd, 2008**

Participants at this conference might also be interested in the following two articles published by the 21st Century Learning Initiative:

-  **Adolescence: A Critical evolutionary Adaptation**
-  **When will we ever Learn?**

# Part One

At present there are differences of opinion ... for all peoples do not agree as to the things that the young ought to learn, either with a view to virtue or with a view to the best life, nor is it clear whether their studies should be regulated more with regard to intellect or with regard to character.

Aristotle

“Classes are boring, ‘cos we don’t have to think about what we are doing. We’re just told to copy stuff down off the board or from what the teacher tells us. It makes us lazy... in fact, sorry to say this, but it’s you teachers who make us lazy.”

"To us the sun appears to be the largest and brightest of the stars, but it is actually the smallest and the faintest. There are many billions of galaxies in the observable universe. Our planet Earth is a puny object in a violent, unbelievably vast and expanding universe, yet it has remained hospitable to life at least three and a half billion years. Our very existence is a consequence of stability of the sun, which has been burning long enough to allow life to evolve and flourish on our planet. Recently scientists caught a glimpse of the violence of that great burning star that makes our life possible. They detected a shock wave on the sun. It is that violent and blazing star whose light and heat comes to us from ninety-three million miles away that makes it possible for us to sit comfortably in our homes thinking about it all'.

"That act of thought is almost as great a miracle as the universe. We are a sub-microscopic dot in a tiny corner of a small galaxy in a universe containing billions of galaxies, but in us the universe has become conscious, has started thinking about itself. The sun is not thinking about itself as it burns; the universe is not thinking about, is not conscious of itself as it explodes through space; but we are. Something is going on in us that is as wonderful and extraordinary as the universe itself".

John Amos Comenius, in the book *The Great Didactic* of 1638, wrote:

"Following in the footsteps of nature we find that the process of education will be easy

1. If it begins early, before the mind is corrupted,
2. If the mind be duly prepared to receive it,
3. If it proceed from the general to the particular,
4. And from what is easy to what is more difficult
5. If the pupil is not overburdened by too many subjects
6. And if progress be slow in every case,
7. If the intellect be forced to nothing to which its natural bent does not incline it, in accordance with its age and with the right method,
8. If everything be taught through the medium of the senses,
9. And if the use of everything taught be continually kept in view.
10. If everything be taught according to one and the same method.

These, I say, are the principles to be adopted if education is to be easy and pleasant."

I call, therefore, a complete and generous education that which fits a man to perform justly, skilfully and magnanimously, all the offices both private and public, of peace and war.

John Milton, 1644

## The All-round Person

Parents feel that years spent by their children at school, almost irrespective of the subjects which they study, will contribute powerfully to the making of the man. But intellectual training by itself is no more than part of the necessary preparation for maturity. “In our concentration on academic performance we lose sight of our main business of educating human personality” (TES September 1959)

The present curriculum is at fault because it lacks an such moral purpose. All considerations of the curriculum should consider “how best to use subjects for the purpose of education ... rather than regarding education as the byproduct of the efficient teaching of subjects” (Sir Philip Morris, 1952)

Until education is conceived as a while process in which mind, body and soul are jointly guided towards maturity, a child’s personality will not necessarily be developed. It is difficult to see how moral purpose can be brought into education without the continuous study of religion, philosophy, literature and history. “The years in the sixth form are crucial years in which the foundations of a sound social and moral judgement can be laid” (The Crowther Report, 1959)

From “Educating the Intelligent”  
Hutchinson & Young, 1962 p39-40

## A View from 1962

Why is there a contrast between the splendid exteriors of our new schools, and the inadequacy of so much that goes on inside?

1. How far has a child been enabled to develop his own personality?
2. Is our education an adequate preparation for becoming a good citizen?
3. Is the present system of physical education satisfactory?
4. What contribution can education make to the responsibilities in the home
5. How effectively can the school-leaver communicate?
6. How skillful is a child when he leaves school?
7. How well equipped is a child when he leaves school to become a self-supporting member of the community?

"This township believes in functional literacy, that is, the ability to be comfortable with all the change of a rapidly evolving, highly technological society.

Comfort depends on mastering the skills of learning, and knowing that it is the individual's responsibility to develop this for a further 70 years or more after leaving school. It depends on four skills: the ability to *think*, to *communicate*, to *collaborate*, and to *make decisions*."

Mission Statement,  
Princeton, New Jersey, USA

Half of the 5 year olds starting school lack the speaking and listening skills needed to cope in the classroom .... "A cultural change means that parents no longer believed conversation was essential to their children's development," said Alan Wells, Director of the Basic Skills Agency. Describing family communication as "the daily grunt", Mr. Wells went on to say, "There is an ethos (among parents) which says 'don't worry, schools will do it all for you'".

The Independent  
4th March 2003

**Education is what remains when  
you have forgotten everything you  
ever learnt in school**

“Education is the ability to perceive the hidden connections between phenomena.”

Vaclav Havel, 2000

**To remain a pupil is to serve your  
teacher badly.**

Friedrich Nietzsche  
1844-1900

It appears to me as a school teacher that schools are already a major cause of weak families and weak communities. They separate parents and children from vital interaction with each other and from true curiosity about each other's lives. Schools stifle family originality by appropriating the critical time needed for any sound idea of family to develop - then they blame family for its failure to be a family. Whatever an education is, it should make you a unique individual, not a conformist. It should furnish you with an original spirit with which to tackle the big challenges; it should allow you to find values which will be your road map through life; it should make you spiritually rich, a person who loves what you are doing, wherever you are, whoever you are with. It should teach you what is important, how to live and how to die."

John Taylor Gatto 1992

"Learning ... that reflective activity which enables the learner to draw upon previous experience to understand and evaluate the present, so as to shape future action and formulate new knowledge."

"The test of a successful education is not the amount of knowledge that a pupil takes away from a school, but his appetite to know and his capacity to learn. If the school sends out children with the desire for knowledge and some idea of how to acquire it and use it, it will have done its work." "Too many leave school with the appetite killed and the mind loaded with undigested lumps of information. The good schoolmaster is known by the number of valuable subjects that he declines to teach."

Sir Richard Livingstone, "The Future in Education,"  
C.U.P., 1941

*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  
*Four Quartets, 1944*

## Key Issue 3

### Construction of Knowledge

Four "theories" accepted as fact, which have deeply shaped our social structures.

- Newtonian physics and a reductionist and deterministic world (the clock metaphor);
- Darwinian biology and evolution (survival of the fittest);
- Behaviorist psychology (the brain as a blank slate).
- All lead to the Economic Efficiency model developed by Frederick Winslow Taylor.

"If we see life as a brutal contest among separate entities, we focus on individual contribution, individual change. This world view not only makes us feel afraid and isolated but it also causes us to hope for heroes."

Margaret Wheatley  
*A Simpler Way*, 1996

## Key Issue 3

### The Faustian Bargain

"You do it my way, by my standards, at the speed I mandate, and in so doing achieve a level of output I ordain, and I'll pay you handsomely for it, beyond anything you might have imagined. All you have to do is take orders, and give up your way of doing the job for mine."

Frederick Winslow Taylor  
*The One Best Way*, 1997

## Key Issue 3

### Small is Beautiful: Economics as if People Mattered

"Soul destroying, meaningless, mechanical, monotonous, moronic work is an insult to human nature which must necessarily and inevitably produce either escapism or aggression, and that no amount of "bread and circuses" can compensate for the damage done. These are facts that are neither denied nor acknowledged, but are met with an unbreakable conspiracy of silence - because to deny them would be too obviously absurd, and to acknowledge them would condemn the central preoccupation of modern society as a crime against humanity."

E.F.Schumacher, 1973

### Key Issue 3

"The primary, if not the only, goal of human labor and thought is efficiency; that technical calculation is in all respects superior to human judgement; that in fact human judgement can not be trusted, because it is plagued by laxity, ambiguity, and unnecessary complexity; that subjectivity is an obstacle to clear thinking; that what cannot be measured either does not exist or is of no value; and that the affairs of citizens are best guided and conducted by experts...In the past man has been first. In the future the system must be first."

Frederick Winslow Taylor  
*The Principles of Scientific Management*, 1911

Hitherto we have been considering the uninspired teacher, who works his or her way dully and mechanically through the prescribed curriculum. But teachers may be, and frequently are, charming, intelligent, and persuasive. They may put things well; they may speak in a way that will command attention and awaken emotion and enthusiasm; they may have a power of making difficulties seem easy. The child will listen to such teachers and will greatly appreciate them — particularly if he has an examination to pass in the near future.

But the more accomplished a teacher is in the art of lecturing or coaching, the worse he is as an educator. Working on the old-fashioned system, the clever teacher (deplorable paradox!) does almost more harm than the stupid one. For the clever schoolmaster makes things too easy for his pupils; he relieves them of the necessity of finding out things for themselves. **By dint of brilliant teaching he succeeds in almost eliminating the learning process.** He knows how to fill his pupils with ready-made knowledge, which they

inevitably forget (since it is not their knowledge and cost them nothing to acquire) as soon as the examination for which it was required is safely passed. The stupid teacher, on the other hand, may be so completely intolerable that the child will perhaps be driven, despairingly and in mere self-defence, to educate himself; in which case the incompetent shepherd will have done, all unwittingly, a great service to his charge, by forcing him into a rebellious intellectual independence.

Aldous Huxley, *The Dangers of Good Teaching* 1927

## **Some learning experiences ... for all**

- the dawn of the day
- the ebb and flow of the tide
- the opening of a flower
- strength and fragility
- conformity and protest
- permanence and transience

## **Curriculum for the Future; the ability to see the hidden connections between phenomena**

So as to act as “stewards of our humanity” a curriculum is needed which

- Values synthesis as much as analysis; that honours intellect, emotion and individual experience, and spiritual values.
- Honours a process of learning that “goes with the grain of the brain” (Subsidiarity) and balances Thinking with Doing.
- Enables young people “to understand what makes people tick.” “We are indeed a wondrously ingenious species, but our complex ”drives” and the confusion about our moral values also makes us potentially extraordinarily dangerous.

All the world's a stage,  
And all the men and women merely players:  
They have their exits and their entrances;  
And one man in his time plays many parts,  
His acts being seven ages. At first the infant,  
Mewling and puking in the nurse's arms.  
And then the whining schoolboy, with his  
satchel,  
And shining morning face, creeping like a snail  
Unwillingly to school. And then the lover,  
Sighing like furnace, with a woeful ballad  
Made to his mistress' eyebrow. Then a soldier,  
Full of strange oaths, and bearded like the pard,  
Jealous in honour, sudden and quick in quarrel,  
Seeking the bubble reputation  
Even in the cannon's mouth.

*As You Like It*  
William Shakespeare

And then the justice,  
In fair round belly with good capon lin'd,  
With eyes severe, and beard of formal cut,  
Full of wise saws and modern instances;  
And so he plays his part. The sixth age shifts  
Into the lean and slipper'd pantaloon,  
With spectacles on nose and pouch on side,  
His youthful hose well sav'd a world too wide  
For his shrunk shank; and his big manly voice,  
Turning again towards childish treble, pipes  
And whistles in his sound. Last scene of all,  
That ends this strange eventful history,  
Is second childishness, and mere oblivion,  
Sans teeth, sans eyes, sans taste, sans everything.

*As You Like It*  
William Shakespeare

## Leadership

"If you look to lead, invest at least 40% of your time managing yourself - your ethics, character, principles, purpose, motivation, and conduct. Invest at least 30% managing those with authority over you and 15% managing your peers. Use the remainder to induce those you 'work for' to understand and practice the theory. I use the term 'work for' advisedly, for if you don't understand that you should be working for your mislabeled 'subordinates,' you haven't understood anything. Lead yourself, lead your superiors, lead your peers, and free people to do the same. All else is trivia,"

Dee Hock, Fast Company, 1996

As I sit there the wind goes by  
Not moving anything.  
The clouds slowly move across the sky  
With a feeling of departure.  
I'm lost, I'm lost in this dark deep place.  
I'm screaming from inside for it to go away.  
It's too late.  
I stand with a sharp object in my hand.  
I feel I've been crying for years.  
My face reflects this, swollen and red.  
As I stand there motionless, I think: why stay?  
I've hurt so many – even my own flesh and blood.  
The sky keeps moving.  
I stay locked within the dark circle, and life moves by.  
I look at the object that lies in my hand.  
I slowly move it to my heart and press hard.  
I feel a sharp stinging pain but I continue.  
I continue to feel the sharp object penetrate my skin.  
The suddenly I stop. I think: I can't, I can't do this.  
I drop to my knees, open my mouth to scream  
But nothing comes out.  
I stay there, tears rolling down my cheeks, and a clean  
knife lies by my side.  
I feel ashamed, yet disappointed.  
I wonder: why does life have to be so hard?  
Why do people have to feel so much pain?  
It's so unfair, it's so draining and confusing.  
I'm tired of fighting; I'm tired of fighting with myself  
I just want it to stop.

*Lost* by Anne-Marie, aged 18  
Killarney, May 2004

Ask not what your country  
can do for you – ask what  
you can do for your  
country.

J. F. Kennedy, 20<sup>th</sup> January 1961

Knowing what we now know,  
we no longer have the moral  
authority to carry on doing  
what we have been doing.

# Part Two

If I can  
ask my own questions,  
try out my ideas,  
experience what's around me,  
share what I find;

If I have  
plenty of time for  
my special pace,  
a nourishing space,  
things to transform;

If you'll be  
my patient friend,  
trusted guide,  
fellow investigator,  
partner in learning;

Then I will  
explore the world,  
discover my voice,  
and tell you what I know  
in a hundred languages.

Pamela Hook

The human race is the planet's preeminent learning species - it is our brains that give us our superiority, not our muscles.

Why, therefore, do we have a "crisis" in education?

What has gone wrong?

In our search for new ideas, what lessons from our past might we have forgotten?



A bone pressure plaque from Blanchard, France, dating from about 30,000 years ago. The sequential phases of the moon have been engraved from observation over two and a quarter months. Nothing comparable for the next ten thousand years has been as yet uncovered. It is the first conceptual performance of Homo Sapiens. After: Evolution of the Brain, Creation of the Self, Sir John Eccles.

**“Learning is a consequence of thinking”**

What was your most powerful learning  
experience?

How did this shape the way you think  
about your own learning?

Learning and schooling are not  
synonymous.

**Traditionally, Education has often been likened to a three-legged stool, which will always adjust to the most uneven surface (unlike a four-legged chair)**

**The Home (Emotions)  
The Community (Inspiration)  
The School (Intellectual)**

**Progressively, however, modern society had attempted to define Education as Schooling and has defined schools as having a similar three parts - Academic, Socialisation and Control**

“You can’t expect children to grow up to be intelligent, in a world that is not intelligible to them”.

The 21st Century Learning Initiative

In *The Future of Work*, (1984) Charles Handy noted that, in the first part of the 20th century, industrial workers laboured for about 100,000 hours in a lifetime (47 hours a week, for 47 weeks in a year, for 47 years). This, he noted, had already dropped to about 75,000 hours in the early 1980s, and he predicted that it would likely fall to a 50,000 hour lifetime of labour by the early 1990s, with most people working a 32 hour week for 45 weeks in a year for 35 years.

What has gone wrong with his predictions?

We cannot think of Schooling in Isolation from many other changes in our social structures.

- The Market Economy, and globalisation
- Demographics, and the beginning of the - pension crisis
- The Spiritual issue – “What is life all about?”
- The Communication Revolution
- The Sexual Revolution, and its impact on the family
- The creation of a Sustainable World/Economy
- The Nature of Work, and Human Dignity
- The Patterns of normal Human Development

... only having considered the above can we really begin to work on what may be the future contributions of schools.

"To us the sun appears to be the largest and brightest of the stars, but it is actually the smallest and the faintest. There are many billions of galaxies in the observable universe. Our planet Earth is a puny object in a violent, unbelievably vast and expanding universe, yet it has remained hospitable to life at least three and a half billion years. Our very existence is a consequence of stability of the sun, which has been burning long enough to allow life to evolve and flourish on our planet. Recently scientists caught a glimpse of the violence of that great burning star that makes our life possible. They detected a shock wave on the sun. It is that violent and blazing star whose light and heat comes to us from ninety-three million miles away that makes it possible for us to sit comfortably in our homes thinking about it all'.

“If civilisation is to survive, it must live on the interest, not the capital, of nature. Ecological markers suggest that in the early 1960’s, humans were using 70% of nature’s yearly output; by the early 1980’s we’d reached 100%; and in 1999 we were at 125%.

Ronald Wright  
*A Short History of Progress 2004*

## **Crisis of Meaning**

"The biggest crisis we are facing is a Crisis of Meaning. The tremendous social changes of the last 100 years have stripped modern society of that which gives us meaning be it in our roots to our ancestors, religions, spirituality, our relationship to nature..... Within this Crisis of Meaning our young people are facing a MORAL crisis - a crisis of values. Without these anchors young people no longer understand the value of perseverance, learning for learning's sake etc.. Instead our daily lives are filled with a pursuit of money and temporary ecstasy. Both of these goals are unfulfillable and result in a misguided frenzy in the pursuit of the next thrill, or in depression."

E-mail from Dr Rolando Jubis  
Psychologist and Counselor  
Jakarta International School, 11/11/00

The most crucial location in space and time (apart from the big bang itself) could be here and now. I think the odds are no better than fifty-fifty that our present civilisation on Earth will survive to the end of the present century... What happens here on Earth, in this century, could conceivably make the difference between a near eternity filled with ever more complex and subtle forms of life and one filled with nothing but base matter.

Taken from: *Our Final Century? A scientist's warning: how terror, error and environmental disaster threaten Humankind's future – in this country, on earth, and beyond*; Sir Martin Rees, 2003; Astronomer Royal and Professor of Astrophysics at Cambridge, 2003

"You don't have to go into the dark, but if you want to see the stars in all their glory you have to dare to go deep into the desert, away from the light pollution of civilisation. Only then, when your eyes become acclimatised to real darkness, can you begin to appreciate the sheer brilliance of the stars. Then, and only then, will you see which way to go."

Dubai  
January 2003

## Ethics and Stories

Humans share their imaginations and bond with one another through the stories they tell. A story is to human growth as a fact is to science, mathematics is to physics, or poetry is to the human spirit. Myths are a special kind of story. They capture and express realities that cannot be put directly into words and shared in any other way.

Stories are the platform on which a nation floats.

Whatever the source of ethics, we humans are by our nature ethics-seeking creatures; language, stories, and myths are the tools we use to identify and articulate the ethics we find.

Margaret Somerville

*The Ethical Imagination; Journeys of the Human Spirit, 2006*

# **Before the lights begin to dim**

or

Where have all the  
story-tellers gone?

**“What a piece of work is Man!**

How noble in reason!

How infinite in faculty.

In form, in moving how express and admirable.

In action how like an angel,

In apprehension how like a god;

The beauty of the world, the paragon of  
animals!”

Shakespeare  
*Hamlet*, to Horatio in the graveyard

Tell me, and I forget;  
show me, and I remember;  
let me do and I understand.

Chinese Proverb

## Nature via Nurture

Genes are designed to take their cues from nurture. To appreciate what has happened you will have to abandon cherished notions and open your mind. You will have to enter a world where your genes are no puppet masters pulling the strings of your behaviour, but are puppets at the mercy of your behaviour, a world where instinct is not the opposite of learning, where environmental influences are sometimes less reversible than genetic ones, and where nature is designed for nurture ... the human brain is built for nurture.

Matt Ridley

*Nature via Nurture*, 2003

## Purpose Statement

The 21st Century Learning Initiative's essential purpose is to facilitate the emergence of new approaches to learning that draw upon a range of insights into the human brain, the functioning of human societies, and learning as a self-organizing activity. We believe this will release human potential in ways that nurture and form democratic communities worldwide, and will help reclaim and sustain a world supportive of human endeavour.

**“You can take Man out of the Stone Age, but you can’t take the Stone Age out of Man.”**

Nigel Nicholson, Harvard Business Review  
July / August 1998

e.g. The Stirkfontein Caves, the Kalahari  
Bushmen and the Hadza

## Key Issue I .b

### Language

"Children master most of the complexities of grammar with practically no explicit instruction from their parents, although extensive parent- child verbal interactions obviously provide an important environment for the effective development of a language."

After the American National Institute of Health

"Thus, learning becomes a delicate but powerful dialogue between genetics and the environment: the, experience of our species from aeons past interacts with the experiences we have during our lifetime."

Professor Robert Sylwester,  
*A Celebration of Neurons*, June 1995

"Edelman's model of our brain as a rich, layered, messy, unplanned jungle eco-system is especially intriguing, however, because it suggests that a jungle-like brain might thrive best in a jungle-like classroom that includes many sensory, cultural, and problem " layers that are closely related to the real world environment in which we live - the environment that best stimulates the neural networks that are genetically tuned to it."

*A Celebration of Neurons*  
Robert Sylwester, June 1995

## Key Issue 1

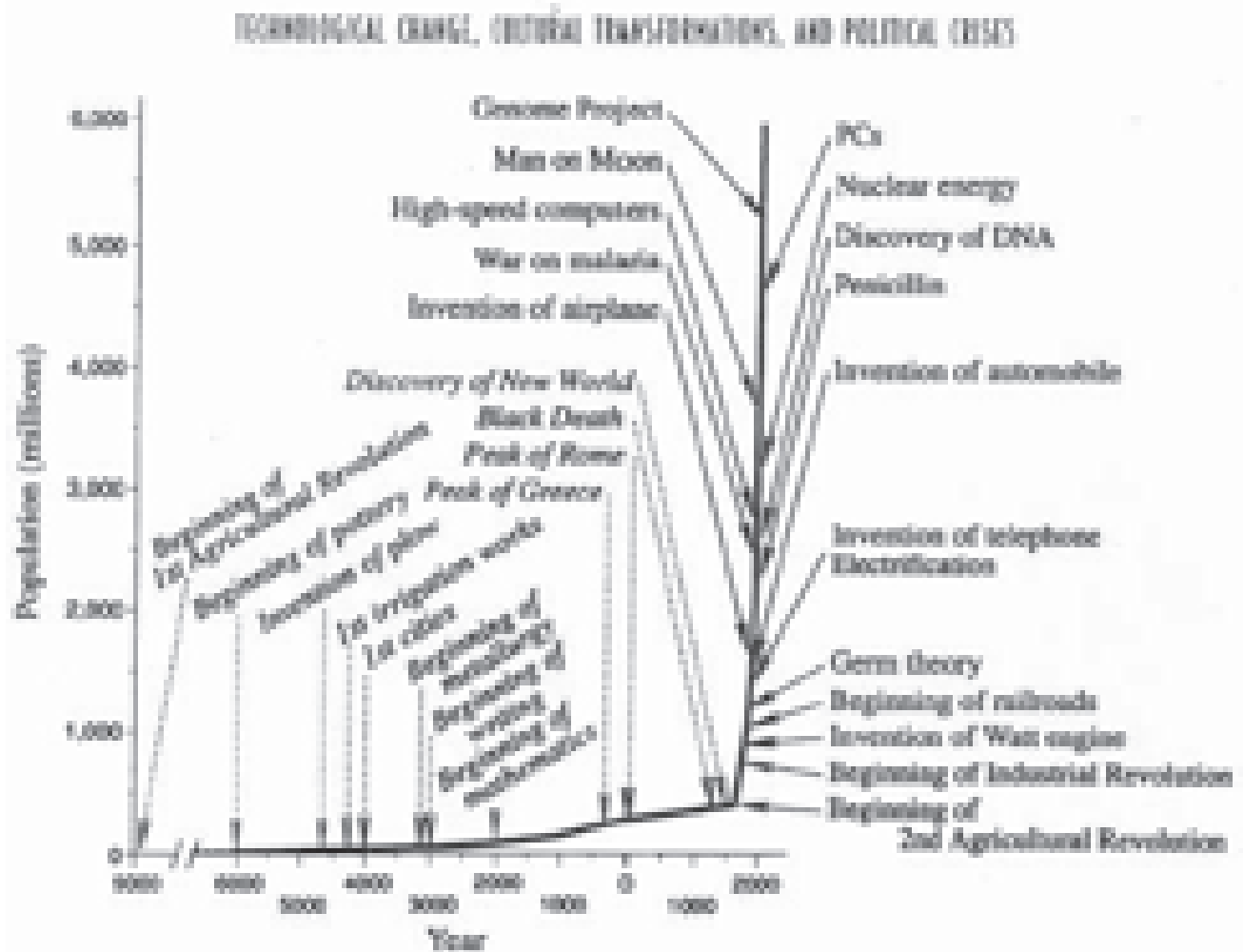
"For the first time in history, there is a growing trend for more and more middle and upper- middle class parents to farm out the care of their babies to others, often in settings not conducive to meeting children's irreducible needs... The impact will likely be slow and insidious. People may gradually become more self-centered and less concerned with others. Thinking may become more polarized ... Impulsive behavior, helplessness, and depression may increase."

Psychiatrist Stanley Greenspan in  
The American Enterprise, May/June 1998

## **Adolescence and Apprenticeship forms of learning**

Thomas Hine writing in 1999 on the rise and fall of the American teenager noted, “the principle reason high schools now enroll nearly all teenagers is that we can’t imagine what else to do with them.” That is a shocking conclusion by a man who spent years studying the issue. Modern society, by being so concerned for the well being of adults tries desperately to ignore the adolescents’ need to explore and do things for themselves, by giving them ever more to do in school. It is as if modern society is trying to outlaw adolescence by over schooling children. That is not education. There is a frightening manmade hole in the desirable experience for adolescence - there are simply not enough opportunities for them to learn from doing things for themselves in a modern society.

## A Short Walk through Economic History



The graph depicts the growth of world population and some major events in the history of technology.

The graph comes from Robert William Fogel. *The Fourth Great Awakening & The Future of Egalitarianism*, 2000.

## Adolescence

From the earliest of times the progression from dependent child to autonomous adult has been an issue of critical importance to all societies.

The adolescent brain, being “crazy by design,” could be a critical evolutionary adaptation that has built up over countless generations, and is essential to our species’ survival. It is adolescence that drives human development by forcing young people in every generation to think beyond their own self-imposed limitations and exceed their parents’ aspirations. These neurological changes in the young brain as it transforms itself means that adolescents have evolved to be apprentice-like learners, not pupils sitting at desks awaiting instruction.

Youngsters who are empowered as adolescents to take charge of their own futures will make better citizens for the future than did so many of their parents and their grandparents who suffered from being overschooled but undereducated in their own generations.

“Our society makes adolescence unduly difficult, then, not because it is too soft on teenagers but because it is too hard on them... Youngsters of today are growing up in a world in which the values of mutuality and reciprocity that were once an important part of middle-class culture have been overwhelmed by a shoulder shrugging individualism that excuses most adults, and indeed society as a whole, from what we used to think of as the adult responsibilities of nurture and support. We now put most of the burden of managing life on children themselves and are quick to discard them altogether if they become too much trouble.”

*The Road to Whatever*  
Elliott Currie, 2004, pages 13 and 255

“The new middle-class world in which many American adolescents grow up is one that combines harshness and heedlessness in equal measure, a world which makes it very hard to grow up. It makes it all too difficult to achieve a strong and abiding sense of worth and all too easy to feel like a failure and a loser. It makes it all too easy to feel like an outsider, all too difficult to feel appreciated or respected for being who you are. It is a world in which it is treacherously easy for adolescents to trip up and break the rules but in which no one can be bothered to help them avoid tripping in the first place. Adolescence is rarely an easy time. But it need not be as hard as it often is in America.”

*The Road to Whatever*  
Elliott Currie, 2004, page 254

As I sit there the wind goes by  
Not moving anything.  
The clouds slowly move across the sky  
With a feeling of departure.  
I'm lost, I'm lost in this dark deep place.  
I'm screaming from inside for it to go away.  
It's too late.  
I stand with a sharp object in my hand.  
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It's so unfair, it's so draining and confusing.  
I'm tired of fighting; I'm tired of fighting with myself  
I just want it to stop.

*Lost* by Anne-Marie, aged 18  
Killarney, May 2004

Dear Teacher,

I am a survivor of a concentration camp. My eyes saw what no man should witness:  
Gas chambers built by learned engineers;  
Children poisoned by educated physicians;  
Infants killed by trained nurses;  
Women and babies shot and burned by high school and college graduates.

So I am suspicious of education.

My request is: help your students become human. Your efforts must never produce learned monsters, skilled psychopaths, educated Eichmanns. Reading, writing, arithmetic are important only if they serve to make our children more human.

Reproduced from TACADE, 1993

"For human beings, nurture is our nature. The capacity for culture is part of our biology, and the drive to learn is our most important and central instinct. The new developmental research suggests that our unique evolutionary trick, our central adaptation, our greatest weapon in the struggle for survival, is precisely our dazzling ability to learn when we are babies and to teach when we are grown-ups."

Alison Gopnik, Andrew Meltzoff and Patricia Kuhl.  
*The Scientist in the Crib: Minds, Brains, and How  
Children Learn* , 1999

## Opening Minds – Unlocking Futures?

“We are not blind! We are men and women with eyes and brains... and we don't have to be driven hither and thither by the blind workings of The Market, or of History, or of Progress, or of any other abstraction.”

Fritz Schumacher  
“*Small is Beautiful; Economics as if  
People mattered*”, 1973

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# **“Learning about Human Learning” —**

## **The emergence of a new Synthesis**

### **Drawn from several disciplines**

- 1) Philosophy, and later pedagogy
- 2) Evolutionary Theory
- 3) Psychology (Behaviourism)
- 4) Cognitive Science (Metacognition)
- 5) Neurobiology
- 6) Evolutionary Psychology
- 7) Values (philosophy, purpose); Nature via Nurture

## Evolutionary Intelligence

"Human beings, together with all their likes and dislikes, their senses and sensibilities, did not fall ready-made from the sky; nor were they born with minds and bodies that bare no imprints of the history of then- species. Many of our abilities and susceptibilities are specific adaptations to ancient environmental problems, rather than separate manifestations of a general intelligence for all Seasons."

John D. Barrow  
The Artful Universe, 1996

## Pregnancy and the Developing Brain

"There is no period of parenthood with a more direct and formative effect on a child's brain, than the last three months of pregnancy leading to the birth of a full term baby. The mother's emotions affect the foetus, and so do her general habits and the parent's physical environment. (Probably) half of birth defects are due to avoidable exposure to medicinal drugs, recreational drugs, alcohol, tobacco smoke, and toxic agents at work and at home."

Marian Diamond  
*The Magic Trees of the Mind*, 1998

"We have unequivocal evidence that breast-fed children are physically stronger than nonbreast-fed children, that they have greater verbal, quantitative and memory abilities as pre-schoolers, and significantly higher I.Q. scores during their school years. This is due not simply to healthy substances in the milk, as many assume, but also to the early mother-child relationship that breast-feeding implies."

Karl Zinsmesiter,  
*The American Enterprise*, May/June 1998

## Mechanisation? Big Brother?

"Almost three hundred American employers, including Aetna, Eastman Kodak, Cigna and Home Depot, now offer "Lactation Support Rooms" where female employees can now take regular breaks to attach electric pumps to their breasts in order to collect milk in bottles for their infants in day care. Some companies, aside from the 'pumping rooms', have "lactation consultants" to help mothers solve breast-feeding problems."

Original quotation in "*There's No Place Like Work*" by Brian Robertson, and re-quoted in "*Nasty, Brutish and Short*", an article by Richard Lowry in *National Review*, May 2001

## **“Why Love Matters: How Affection shapes a baby’s brain”**

“Our earliest experiences are not simply laid down as memories or influences, they are translated into precise physiological patterns of response in the brain that then set the neurological rules for how we deal with our feelings and those of other people for the rest of our lives. It’s not nature or nurture, but both. How we are treated as babies and toddlers determines the way in which what we’re born with turns into what we are.”

Sue Gerhardt 2004

Without some degree of ecstatic wooing by at least one adult who adores her, a child may never know the powerful intoxication of human closeness, never abandon herself to the magnetic pull of human relationships, never see other people as full human beings like herself, capable of feeling what she feels. Whether because her nervous system is unable to sustain the sensations of early love or her care-giver is unable to convey them, such a child is at risk of becoming self-absorbed or an unfeeling, self-centered, aggressive individual who can inflict injury without qualm or remorse.

Stanley Greenspan  
*The Growth of the Mind*, 1997

Empathy ... the ability to know how another person feels.

"People's emotions are rarely put into words; far more often they are expressed through other cues. The key to intuiting another's feelings is in the ability to read non-verbal channels: tone of voice, gesture, facial expression, and the like."

Daniel Goleman  
*Emotional Intelligence*, 1995

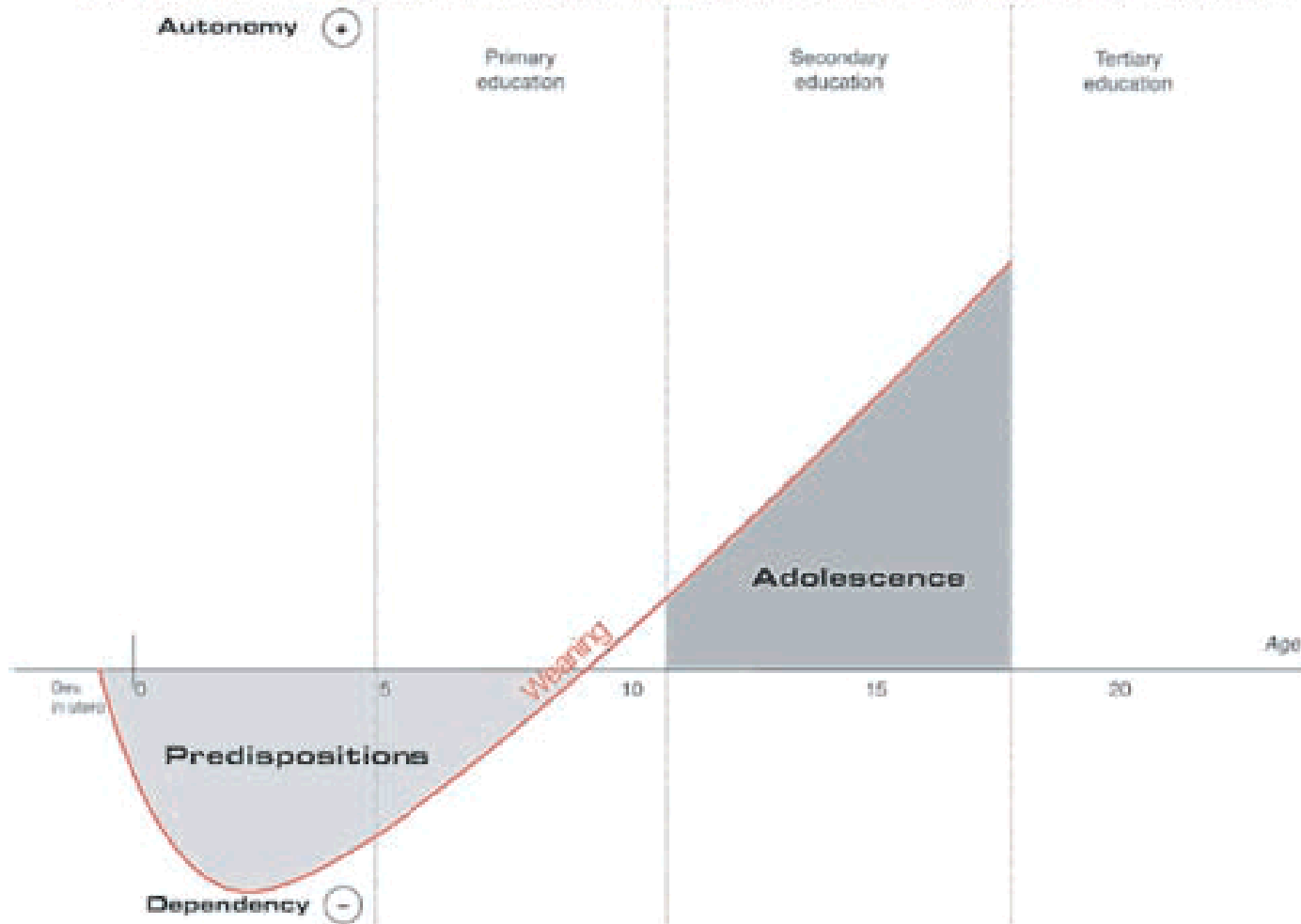
“The new middle-class world in which many American adolescents grow up is one that combines harshness and heedlessness in equal measure, a world which makes it very hard to grow up. It makes it all too difficult to achieve a strong and abiding sense of worth and all too easy to feel like a failure and a loser. It makes it all too easy to feel like an outsider, all too difficult to feel appreciated or respected for being who you are. It is a world in which it is treacherously easy for adolescents to trip up and break the rules but in which no one can be bothered to help them avoid tripping in the first place. Adolescence is rarely an easy time. But it need not be as hard as it often is in America.

*The Road to Whatever*  
Elliott Currie, 2004, page 254

"As we build networks and patterns of synaptic connections when we are very young, so we build the framework which will 'shape' how we learn as we get older; such 'shaping' will significantly determine what we learn – it will be both an opportunity, and a constraint. The broader and more diverse the experience when very young, the greater are the chances that, later in life, the individual will be able to handle open, ambiguous, uncertain and novel situations."

*"The Neural Basis of Cognitive Development: A Constructivist Manifesto,"* by Stephen J. Quartz and Terrence Sejnowski., The Salk Institute, San Diego, California.

GRAPH 2: INTELLECTUAL WEANING BASED ON NORMAL HUMAN DEVELOPMENT



## **Adolescence**

Adolescence is currently seen as a "problem" in Western Society; that excess of hormones leaves the rapidly maturing child unaware of its new physical strength, and confused as to how to direct it. While modern parents and teachers find adolescence disruptive, earlier cultures directed this energy in ways that developed those skills on which the community was dependent for its ongoing survival. In doing so it also ensured that young people learned, and practiced, what was seen as appropriate social behavior.

## Are teenagers Necessary?

Modern society seems to have moved, without skipping a beat, from blaming our parents for the ills of society, to blaming our children.

For most of our history, the labours of young people in their teens was too important to be sacrificed – ‘schooling’ for teenagers remained a minority activity until well into the twentieth century. In fact teenagers can be seen to be an invention of the Machine Age. It was Roosevelt’s solution to the Depression years to take teenagers out of the jobs that could be done by formerly unemployed family men by requiring all early teenagers to attend High School. “But, for very many youngsters, High School, which virtually defines the rise of the teenagers, is hardly an exalted place”.

*“The Rise and Fall of the American Teenager”*

Thomas Hine, page 1-9

## **Crazy by Design**

We have suspected that there is something going on in the brain of the adolescent, apparently involuntarily, that is forcing apart the child/parent relationship. What neurologists are discovering challenges the conventional belief held until only a year or so ago, that brain formation is largely completed by the age of twelve. Adolescence is a period of profound structural change, in fact “the changes taking place in the brain during adolescence are so profound, they may rival early childhood as a critical period of development”, wrote Barbara Strauch in 2003. “The teenage brain, far from being readymade, undergoes a period of surprisingly complex and crucial development.” The adolescent brain, she suggests, “is crazy by design.”

## **The Journey of Man: a genetic odyssey**

“Today we are in many ways the same Palaeolithic species that left Africa only 2,000 generations ago, with the same drive and foibles”. Spencer Wells (2002)

\_There were no modern humans living outside central Africa until at least 60,000 years ago

\_Grandmothers (and the menopause) facilitated the learning skills of young children when parents were working

\_Our distant ancestors reached India 50,000 years ago, Thailand 40,000 years ago, northern Europe 25,000 years ago and Tierra del Fuego 10,000 years ago.

... They were “travelling” at a speed of about 3 or 4 miles in every generation; life was a constant struggle, but there were always ‘pastures new’ beyond the next mountains. (The oldest remains in Jericho are over 8,500 years old). There were possibly 10 million humans when settled agriculture started 10,000 years ago, 400 million two hundred years ago; there are now 6.5 billion

## Adolescence

From the earliest of times the progression from dependent child to autonomous adult has been an issue of critical importance to all societies.

The adolescent brain, being “crazy by design,” could be a critical evolutionary adaptation that has built up over countless generations, and is essential to our species’ survival. It is adolescence that drives human development by forcing young people in every generation to think beyond their own self-imposed limitations and exceed their parents’ aspirations. These neurological changes in the young brain as it transforms itself means that adolescents have evolved to be apprentice-like learners, not pupils sitting at desks awaiting instruction.

Youngsters who are empowered as adolescents to take charge of their own futures will make better citizens for the future than did so many of their parents and their grandparents who suffered from being overschooled but undereducated in their own generations.

# DON'T FENCE ME IN

(Cole Porter)

Oh, give me land, lots of land under starry skies, Don't fence me in  
Let me ride through the wide open country that I love, Don't fence me in  
Let me be by myself in the evenin' breeze  
And listen to the murmur of the cottonwood trees  
Send me off forever but I ask you please, Don't fence me in

Just turn me loose, let me straddle my old saddle  
Underneath the western skies  
On my Cayuse, let me wander over yonder  
Till I see the mountains rise

I want to ride to the ridge where the west commences  
And gaze at the moon till I lose my senses  
And I can't look at hovels and I can't stand fences  
Don't fence me in, no  
Pop, oh don't you fence me in

# Cognitive Apprenticeship

1. Modeling
2. Scaffolding
3. Fading
4. Discussion

... a way of "going beyond what comes naturally". A form of intellectual weaning that balances the rate of physical maturation.

# INTELLECTUAL WEANING

("Do it yourself")

## SUBSIDIARITY:

*It is wrong for a superior body to retain the right to make decisions than an inferior body is already able to make for itself.*

"Much to my surprise I can't really fault your theory. You are probably educationally right; certainly your argument is ethically correct.

But the system you're arguing for would require very good teachers. We're not convinced that there will ever be enough good teachers. So, instead, we're going for a teacher-proof system of organising schools - that way we can get a uniform standard."

Verbatim report of conclusions of  
presentation made to the Policy Unit at  
Downing Street in March 1996

**There aren't any great people out  
there anymore - there's only us.**

"This is what we are about. We plant seeds that one day will grow. We water seeds already planted, knowing that they hold future promise. We lay foundations that will need further development. We provide yeast that produces effects far beyond our capabilities.

"We cannot do everything, and there is a sense of liberation in realising that. This enables us to do something, and enables us to do it very well. It may be incomplete, but it is a beginning, a step along the way, an opportunity for the Lord's grace to enter and do the rest. We may never see the end result, but that is the difference between the master builder, and the worker.

"We are workers, not master builders, ministers, not Messiahs. We are prophets of a future not our own."

The last prayer of Oscar Romero, the Archbishop of San Salvador, just before he was murdered on the steps of his cathedral.

## For further information:

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