“Battery Hens, or Free Range Chickens?”

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Lakeside Hotel, Windermere
19th May 2006
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
“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
The Central Paradox

"Most of us are earning more money and living better than we (or our parents) did a quarter of a century ago around the time when some of those technologies on which the new economy is based - the micro chip, the personal computer, the internet - first emerged. You'd think, therefore, that it would be easier, not harder, to attend to the part of our lives that exists outside paid work. Yet by most measures we're working longer and more frantically than before, and the time and energy for our non-working lives are evaporating."

*The Future of Success*; Robert Reich, 1991
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?
All Change?

In 2003 oil geologist Kenneth Deffreyes predicted that he was “99% confident” that global oil production would peak in 2004. In August 2004 Texan oil baron T. Boone Pickens announced: “Never again will we pump more than 82 million barrels [a day]”.

George Monbiot, 24th August 2004-08-31

“China’s farmers cannot feed hungry cities,” with grain production falling in every year since 1998 as more agricultural land is used by industry in support of a 9% annual growth in the economy. In the first six months of this year food imports surged 62%, leading to a 30% increase in the future price of grain.

Jonathan Watts in Beijing, 26th August 2004
“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
“Spoon-fed” Pupils can’t cope at University

School pupils are being ‘spoon-fed’ to pass exams instead of developing knowledge, and understanding, a report from the Oxford University Educational Studies Department announced on 8th February 2006. It claims that essentials have been removed from many subjects, and the government changes in ‘A level’ have resulted in ‘bite-size’ chunks of knowledge, with students who ‘want to learn and forget’, rather than ‘learn and know’. Students now arrive at university, often with top grades, but lacking independent thought, have a fear of numbers and prefer the internet to books. Advance study in school, the report states, needs to stress the ability to read critically; to communicate ideas in writing using appropriate and grammatically correct language, and to argue a case. “What tutors are looking for is really quite simply students who are committed to studying a subject, engage critically with ideas, prepare to take some intellectual risks, are able to use a range of skills to develop arguments”.

The Daily Telegraph
“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
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
Before the lights begin to dim

or

Where have all the story-tellers gone?
Unlocking Futures
“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
“The ideas that talents are lent for the service of others and not given, and that knowledge brings humility and a sense of involvement in mankind, are just as necessary correctives to the arrogance of a meritocrat in a highly technical world as they were in Oldham’s day, and without them the School’s record of academic success would be indeed alarming.”

P.G. Mason
High Master
Manchester Grammar School, 1965
“Once children are helped to perceive themselves as authors or inventors, once they are helped to discover the pleasures of inquiry, their motivation and interest explode… to disappoint the children deprives them of possibilities that no exhortation can arouse in later years.”

Loris Malaguzzi
Founder of the Reggio Emilia Preschools
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 awake 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
“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
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.
“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
Our bodies and minds are not of recent origin. They are the direct consequence of millions of years of surviving in Africa and adapting to the dramatic changes this continent has seen in the course of the last five million years. Africa has shaped not only our physical bodies, but the societies within which we live. The way we interact today at a social and cultural level is in many ways the result of organisational skills developed by our hominid ancestors in Africa over millions of years.

_Cradle of Humankind_
Brett Hilton-Barber and Lee R. Berger, South Africa, 2002
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 nine 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."

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
Research from the Kellogg Foundation, conducted in the State of Michigan, into the predictors of success at the age of 18

"[This] compared the relative influence that family, community and other factors have on student performance. Amazingly it concluded that factors outside the school are four times more important in determining a student's success on standardized tests than are factors within the school.

""The most significant predictor was the quantity and quality of dialogue in the child's home before the age of five."

Quoted at The White House Conference on Early Childhood Development and Learning, April 1997
"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."

Infants weaned on T.V. cannot “concentrate”

Commenting on the research by Dr. Dimitri Christakis of the Children’s Hospital in Seattle on the impact of T.V. on young children, the Guardian stated; “Children under two should not watch television because it increases the risk of them developing attention deficit disorders.” Quoting the Journal of Paediatrics, “Watching too much television increased the child’s likelihood of being unable to pay attention in school. For every hour of T.V. watched daily by children at ages 1 to 3 the risk of attention problems at age 7 increases by nearly 10% (current estimates in the US suggest that between 4 and 12% of youngsters suffer from ADHD. At present three-year-olds in the US watch an average of 3.6 hours of TV a day.)

Seattle Times 5th April 2004
The Guardian 6th April 2004
Graph 2: Intellectual Weaning Based on Normal Human Development

- Autonomy
- Primary education
- Secondary education
- Tertiary education
- Adolescence
- Predispositions
- Dependency

Development in utero
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
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.
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.”
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,” is 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.
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.
Upside Down and Inside Out
A possible description of the assumption we have inherited about systems of learning, namely, that older students should be taken more seriously than younger students and that the only learning that really matters is that which is formal. This presentation will call for these assumptions to be reversed in the light of modern understanding about how humans learn.
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
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
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
School,
Government,
and, to a lesser extent, Home
We have not inherited this world from our parents. We have been loaned it by our children.

Native American Tradition