



MOTI
(Management of Technology and Innovation)

**Recommended
Reading List**

Recommended Reading List

As part of this module please find a proposed reading list.

An integral part of the Da Vinci learning methodology is the appreciation of other voices which forms part of the reality surrounding us. These are not implied to be the only required readings, or for that matter the most acknowledged readings with regard to the understanding of self, other and social contexts as well as problem solving. It does however provide direction towards a more systemic interpretation of what could become your reality during this learning experience.

The Reading List will constantly be updated and posted on our website www.davinci.co.za. Please feel free to share any literature you might find enriching during your learning experience, you may send your suggestions to Adrian@davinci.ac.za.

Internet Resources

1. <http://www.cognitive-edge.com>
2. <http://www.businessballs.com/kolblearningstyles.htm>
3. <http://anythingwithedgar.blogspot.com/2009/01/who-is-really-learning-teacher-or.html>

Sunday, January 18, 2009

Who is really learning? Teacher or student?

I have just this article trying to define what is learning. The authors', Ackoff and Greenberg, basic proposition is that you learn more when you are teaching. This is against the popular understanding that you can only learn from being taught.

I want to share with you the following series of exchanges between **a professor and a student** cited from the article which drive home the point into my deep skull.

(quote) After lecturing to undergraduates at a major university, I was accosted by a student who had attended the lecture. After some complimentary remarks, he asked, "How long ago did you teach your first class?"

I responded, "In September of 1941."

"Wow!" The student said. "You mean to say you have been teaching for more than 60 years?"

"Yes."

"When did you last teach a course in a subject that existed when you were a student?"

This difficult question required some thought. After a pause, I said, "September of 1951."

"Wow! You mean to say that everything you have taught in more than 50 years was not taught to you; you had to learn on your own?"

"Right."

*"You must be a **pretty good learner**."*

I modestly agreed. (unquote)

In conclusion - Oscar Wilde reminded us that "nothing that is worth learning can be taught". We have got to want to learn it.

Source - [Knowledge @ Wharton](#)

Resources in Print

1. **The Black Swan: The Impact of the Highly Improbable** *by Nassim Nicholas Taleb*

The Black Swan - Synopsis

A black swan is a highly improbable event with three principal characteristics: It is unpredictable; it carries a massive impact; and, after the fact, we concoct an explanation that makes it appear less random, and more predictable, than it was. The astonishing success of Google was a black swan; so was 9/11. For Nassim Nicholas Taleb, black swans underlie almost everything about our world, from the rise of religions to events in our own personal lives.

Why do we not acknowledge the phenomenon of black swans until after they occur? Part of the answer, according to Taleb, is that humans are hardwired to learn specifics when they should be focused on generalities. We concentrate on things we already know and time and time again fail to take into consideration what we don't know. We are, therefore, unable to truly estimate opportunities, too vulnerable to the impulse to simplify, narrate, and categorize, and not open enough to rewarding those who can imagine the "impossible."

For years, Taleb has studied how we fool ourselves into thinking we know more than we actually do. We restrict our thinking to the irrelevant and inconsequential, while large events continue to surprise us and shape our world. Now, in this revelatory book, Taleb explains everything we know about what we don't know. He offers surprisingly simple tricks for dealing with black swans and benefiting from them.

Elegant, startling, and universal in its applications *The Black Swan* will change the way you look at the world. Taleb is a vastly entertaining writer, with wit, irreverence, and unusual stories to tell. He has a polymathic command of subjects ranging from cognitive science to business to probability theory. *The Black Swan* is a landmark book—itsself a black swan.

Read an Excerpt

PROLOGUE

ON THE PLUMAGE OF BIRDS

Before the discovery of Australia, people in the old world were convinced that *all* swans were white, an unassailable belief as it seemed completely confirmed by empirical evidence. The sighting of the first black swan might have been an interesting surprise for a few ornithologists (and others extremely concerned with the coloring of birds), but that is not where the significance of the story lies. It illustrates a severe limitation to our learning from observations or experience and the fragility of our knowledge. One single observation can invalidate a general statement derived from millennia of confirmatory sightings of millions of white swans. All you need is one single (and, I am told, quite ugly) black bird.*

I push one step beyond this philosophical-logical question into an empirical reality, and one that has obsessed me since childhood. What we call here a Black Swan (and capitalize it) is an event with the following three attributes.

First, it is an *outlier*, as it lies outside the realm of regular expectations, because nothing in the past can convincingly point to its possibility. Second, it carries an extreme impact. Third, in spite of its outlier status, human nature makes us concoct explanations for its occurrence *after* the fact, making it explainable and predictable.

I stop and summarize the triplet: rarity, extreme impact, and retrospective (though not prospective) predictability.* A small number of Black Swans explain almost everything in our world, from the success of ideas and religions, to the dynamics of historical events, to elements of our own personal lives. Ever since we left the Pleistocene, some ten millennia ago, the effect of these Black Swans has been increasing. It started accelerating during the industrial revolution, as the world started getting more complicated, while ordinary events, the ones we study and discuss and try to predict from reading the newspapers, have become increasingly inconsequential.

Just imagine how little your understanding of the world on the eve of the events of 1914 would have helped you guess what was to happen next. (Don't cheat by using the explanations drilled into your cranium by your dull high school teacher). How about the rise of Hitler and the subsequent war? How about the precipitous demise of the Soviet bloc? How about the rise of Islamic fundamentalism? How about the spread of the Internet? How about the market crash of 1987 (and the more unexpected recovery)? Fads, epidemics, fashion, ideas, the emergence of art genres and schools. All follow these Black Swan dynamics. Literally, just about everything of significance around you might qualify.

This combination of low predictability and large impact makes the Black Swan a great puzzle; but that is not yet the core concern of this book. Add to this phenomenon the fact that we tend to act as if it does not exist! I don't mean just you, your cousin Joey, and me, but almost all "social scientists" who, for over a century, have operated under the false belief that their tools could measure uncertainty. For the applications of the sciences of uncertainty to real-world problems has had ridiculous effects; I have been privileged to see it in finance and economics. Go ask your portfolio manager for his definition of "risk," and odds are that he will supply you with a *measure* that *excludes* the possibility of the Black Swan—hence one that has no better predictive value for assessing the total risks than astrology (we will see how they dress up the intellectual fraud with mathematics). This problem is endemic in social matters.

The central idea of this book concerns our blindness with respect to randomness, particularly the large deviations: Why do we, scientists or nonscientists, hotshots or regular Joes, tend to see the pennies instead of the dollars? Why do we keep focusing on the minutiae, not the possible significant large events, in spite of the

obvious evidence of their huge influence? And, if you follow my argument, why does reading the newspaper actually *decrease* your knowledge of the world?

It is easy to see that life is the cumulative effect of a handful of significant shocks. It is not so hard to identify the role of Black Swans, from your armchair (or bar stool). Go through the following exercise. Look into your own existence. Count the significant events, the technological changes, and the inventions that have taken place in our environment since you were born and compare them to what was expected before their advent. How many of them came on a schedule? Look into your own personal life, to your choice of profession, say, or meeting your mate, your exile from your country of origin, the betrayals you faced, your sudden enrichment or impoverishment. How often did these things occur according to plan?

- The spread of camera cell phones has afforded me a large collection of pictures of black swans sent by traveling readers. Last Christmas I also got a case of Black Swan Wine (not my favorite), a videotape (I don't watch videos), and two books. I prefer the pictures.
- * The highly expected *not happening* is also a Black Swan. Note that, by symmetry the occurrence of a highly improbable event is the equivalent of the nonoccurrence of a highly probable one.

What You Do Not Know

- Black Swan logic makes *what you don't know* far more relevant than what you do know. Consider that many Black Swans can be caused and exacerbated *by their being unexpected*.
- Think of the terrorist attack of September 11, 2001: had the risk been reasonably *conceivable* on September 10, it would not have happened. If such a possibility were deemed worthy of attention, fighter planes would have circled the sky above the twin towers, airplanes would have had locked bulletproof doors, and the attack would not have taken place, period. Something else might have taken place. What? I don't know. Isn't it strange to see an event happening precisely because it was not supposed to happen? What kind of defense do we have against that? Whatever you come to know (that New York is an easy terrorist target, for instance) may become inconsequential if your enemy knows that you know it. It may be odd to realize that, in such a strategic game, what you know can be truly inconsequential.

This extends to all businesses. Think about the “secret recipe” to making a killing in the restaurant business. If it were known and obvious then someone next door would have already come up with the idea and it would have become generic. The next killing in the restaurant industry needs to be an idea that is not easily conceived of by the current population of restaurateurs. It has to be at some distance from expectations. The more unexpected the success of such a venture, the smaller the number of competitors, and the more successful the entrepreneur who implements the idea. The same applies to the shoe and the book businesses—or any kind of entrepreneurship. The same applies to scientific theories—nobody has interest in listening to trivialities. The payoff of a human venture is, in general, inversely proportional to what it is expected to be.

Consider the Pacific tsunami of December 2004. Had it been expected, it would not have caused the damage it did—the areas affected would have been less populated, an early warning system would have been put in place. What you know cannot really hurt you.

Experts and “Empty Suits”

The inability to predict outliers implies the inability to predict the course of history, given the share of these events in the dynamics of events.

But we act as though we are able to predict historical events, or, even worse, as if we are able to change the course of history. We produce thirty year projections of social security deficits and oil prices without realizing that we cannot even predict these for next summer—our cumulative prediction errors for political and economic events are so monstrous that every time I look at the empirical record I have to pinch myself to verify that I am not dreaming. What is surprising is not the magnitude of our forecast errors, but our absence of awareness of it. This is all the more worrisome when we engage in deadly conflicts: wars are fundamentally unpredictable (and we do not know it). Owing to this misunderstanding of the casual chains between policy and actions, we can easily trigger Black Swans thanks to aggressive ignorance—like a child playing with a chemistry kit.

Our inability to predict in environments subjected to the Black Swan, coupled with a general lack of the awareness of this state of affairs, means

that certain professionals, while believing they are experts, are in fact not. based on their empirical record, they do not know more about their subject matter than the general population, but they are much better at narrating—or, worse, at smoking you with complicated mathematical models. They are also more likely to wear a tie.

Black Swans being unpredictable, we need to adjust to their existence (rather than naively try to predict them). There are so many things we can do if we focus on anti knowledge, or what we do not know. Among many other benefits, you can set yourself up to collect serendipitous Black Swans by maximizing your exposure to them.

Learning to Learn

Another related human impediment comes from excessive focus on what we do know: we tend to learn the precise, not the general.

What did people learn from the 9/11 episode? Did they learn that some events, owing to their dynamics, stand largely outside the realm of the predictable? No. Did they learn the built-in defect of conventional wisdom? No. What did they figure out? They learned precise rules for avoiding Islamic prototerrorists and tall buildings. Many keep reminding me that it is important for us to be practical and take tangible steps rather than to “theorize” about knowledge. The story of the Maginot Line shows how we are conditioned to be specific. The French, after the Great War, built a wall along the previous German invasion route to prevent reinvasion— Hitler just (almost) effortlessly went around it. The French had been excellent students of history; they just learned with too much precision. They were too practical and exceedingly focused for their own safety.

We do not spontaneously learn that *we don't learn that we don't learn*. The problem lies in the structure of our minds: we don't learn rules, just facts, and only facts. Metarules (such as the rule that we have a tendency to not learn rules) we don't seem to be good at getting. We scorn the abstract; we scorn it with passion.

Why? It is necessary here, as it is my agenda in the rest of this book, both to stand conventional wisdom on its head and to show how inapplicable it is to our modern, complex, and increasingly *recursive* environment.*

But there is a deeper question: What are our minds made for? It looks as if we have the wrong user's manual. Our minds do not seem made to think and introspect; if they were, things would be easier for us today, but then we would not be here today and I would not have been here to talk about it—my counterfactual, introspective, and hard-thinking ancestor would have been eaten by a tiger while his nonthinking, but faster-reacting cousin would have run for cover. Consider that thinking is time-consuming and generally a great waste of energy, that our predecessors spent more than a hundred million years as nonthinking mammals and that in the blip in our history during which we have used our brain we have used it on subjects too peripheral to matter. Evidence shows that we do much less thinking than we believe we do—except, of course, when we think about it.

* *Recursive* here means that the world in which we live has an increasing number of feedback loops, causing events to be the cause of more events (say, people buy a book *because* other people bought it), thus generating snowballs and arbitrary and unpredictable planet-wide winner-take-all effects. We live in an environment where information flows too rapidly, accelerating such epidemics. Likewise, events can happen *because* they are not supposed to happen. (Our intuitions are made for an environment with simpler causes and effects and slowly moving information.) This type of randomness did not prevail during the Pleistocene.

A NEW KIND OF INGRATITUDE

It is quite saddening to think of those people who have been mistreated by history. There were the *poètes maudits*, like Edgar Allan Poe or Arthur Rimbaud, scorned by society and later worshipped and force-fed to schoolchildren. (There are even schools named after high school dropouts). Alas, this recognition came a little too late for the poet to get a serotonin kick out of it, or to prop up his romantic life on earth. But there are even more mistreated heroes—the very sad category of those who we do not know were heroes, who saved our lives, who helped us avoid disasters. They left no traces and did not even know that they were making a contribution. We remember the martyrs who died for a cause that we knew about, never those no less effective in their contribution but

whose cause we were never aware—precisely because they were successful. Our ingratitude towards the *poètes maudits* fades completely in front of this other type of thanklessness. This is a far more vicious kind of ingratitude: the feeling of uselessness on the part of the silent hero. I will illustrate with the following thought experiment.

Assume that a legislator with courage, influence, intellect, vision, and perseverance manages to enact a law that goes into universal effect and employment on September 10, 2001; it imposes the continuously locked bulletproof doors in every cockpit (at high costs to the struggling airlines)—just in case terrorists decide to use planes to attack the World Trade Center in New York City. I know this is lunacy, but it is just a thought experiment (I am aware that there may be no such thing as a legislator with intellect, courage, vision, and perseverance; this is the point of the thought experiment). The legislation is not a popular measure among the airline personnel, as it complicates their lives. But it would certainly have prevented 9/11.

The person who imposed locks on cockpit doors gets no statues in public squares, not so much as a quick mention of his contribution in his obituary. “Joe Smith, who helped avoid the disaster of 9/11, died of complications of liver disease.” Seeing how superfluous his measure was, and how it squandered resources, the public, with great help from airline pilots, might well boot him out of office. *Vox clamantis in deserto*. He will retire depressed, with a great sense of failure. He will die with the impression of having done nothing useful. I wish I could go attend his funeral, but, reader, I can’t find him. And yet, recognition can be quite a pump. Believe me, even those who genuinely claim that they do not believe in recognition, and that they separate labor from the fruits of labor, actually get a serotonin kick from it. See how the silent hero is rewarded: even his own hormonal system will conspire to offer no reward.

Now consider again the events of 9/11. In their aftermath, who got the recognition? Those you saw in the media, on television performing heroic acts, and those whom you saw trying to give you the impression that they were performing heroic acts. The latter category includes someone like the New York Stock Exchange Chairman Richard Grasso, who “saved the stock exchange” and received a huge bonus for his contribution (the equivalent

of several *thousand* average salaries). All he had to do was be there to ring the opening bell on television—the television that, we will see, is the carrier of unfairness and a major cause of Black Swan blindness.

Who gets rewarded, the central banker who avoids a recession or the one who comes to “correct” his predecessors’ faults and happens to be there during some economic recovery? Who is more valuable, the politician who avoids a war or the one who starts a new one (and is lucky enough to win)?

It is the same logic reversal we saw earlier with the value of what we don’t know; everybody knows that you need more prevention than treatment, but few reward acts of prevention. We glorify those who left their names in history books at the expense of those contributors about whom our books are silent. We humans are not just a superficial race (this may be curable to some extent); we are a very unfair one.

LIFE IS VERY UNUSUAL

This is a book about uncertainty; to this author, the rare event *equals* uncertainty. This may seem like a strong statement—that we need to principally study the rare and extreme events in order to figure out common ones—but I will make myself clear as follows. There are two possible ways to approach phenomena. The first is to rule out the extraordinary and focus on the “normal.” The examiner leaves aside “outliers” and studies ordinary cases. The second approach is to consider that in order to understand a phenomenon, one needs to first consider the extremes—particularly if, like the Black Swan, they carry an extraordinary cumulative effect.

I don’t particularly care about the usual. If you want to get an idea of a friend’s temperament, ethics, and personal elegance, you need to look at him under the tests of severe circumstances, not under the regular rosy glow of daily life. Can you assess the danger a criminal poses by examining only what he does on an *ordinary* day? Can we understand health without considering wild diseases and epidemics? Indeed the normal is often irrelevant.

Almost everything in social life is produced by rare but consequential shocks and jumps; all the while almost everything studied about social life

focuses on the “normal,” particularly with “bell curve” methods of inference that tell you close to nothing. Why? Because the bell curve ignores large deviations, cannot handle them, yet makes us confident that we have tamed uncertainty. Its nickname in this book is GIF, Great Intellectual Fraud.

PLATO AND THE NERD

At the start of the Jewish revolt in the first century of our era, much of the Jews’ anger was caused by the Romans’ insistence on putting a statue of Caligula in their temple in Jerusalem in exchange for placing a statue of the Jewish god Yahweh in Roman temples. The Romans did not realize that what the Jews (and the subsequent Levantine monotheists) meant by *god* was abstract, all embracing, and had nothing to do with the anthropomorphic, too human representation that Romans had in mind when they said *deus*. Critically, the Jewish god did not lend himself to symbolic representation. Likewise, what many people commoditize and label as “unknown,” “improbable,” or “uncertain” is not the same thing to me; it is not a concrete and precise category of knowledge, a *nerdified* field, but its opposite; it is the lack (and limitations) of knowledge. It is the exact contrary of knowledge; one should learn to avoid using terms made for knowledge to describe its opposite.

What I call *Platonicity*, after the ideas (and personality) of the philosopher Plato, is our tendency to focus on pure and well-defined “forms,” whether objects, like triangles, or social notions, like utopias (societies built according to some blueprint of what “makes sense”), even nationalities. When these ideas and crisp constructs inhabit our minds, we privilege them over other less elegant objects, those with messier and less tractable structures (an idea that I will elaborate progressively throughout this book).

Platonicity is what makes us think that we understand more than we actually do. But this does not happen everywhere. I am not saying that Platonic forms don’t exist. Models and constructions are not always wrong; they are wrong only in some specific places. The difficulty is that a) you do not know *where* beforehand (only after the fact), and b) the mistakes can lead to severe consequences. These models are like

potentially helpful medicines that carry random but very severe side effects.

The *Platonic fold* is the explosive boundary where the Platonic mindset enters in contact with the messy reality, where the gap between what you know and what you think you know becomes dangerously wide. It is here that the Black Swan is produced.

TOO DULL TO WRITE ABOUT

It was said that the artistic filmmaker Luchino Visconti made sure that when actors pointed at a closed box meant to contain jewels, there were real jewels inside. It could be an effective way to make actors live their part. I think that Visconti's gesture may also come out of a plain sense of aesthetics and a desire for authenticity—somehow it may not feel right to fool the viewer.

This is an essay expressing a primary idea; it is neither the recycling nor repackaging of other people's thoughts. An essay is an impulsive meditation, not science reporting. I apologize if I skip a few obvious topics in this book out of the conviction that what is too dull for me to write about might be too dull for the reader to read. (Also, to avoid dullness may help to filter out the nonessential).

Talk is cheap. Someone who took too many philosophy classes in college (or perhaps not enough) might object that the sighting of a Black Swan does not invalidate the theory that *all swans are white* since such a black bird is not technically a swan since whiteness to him may be the essential property of a swan. Indeed those who read too much Wittgenstein (and writings about comments about Wittgenstein) may be under the impression that language problems are important. They may certainly be important to attain prominence in philosophy departments, but they are something we, practitioners and decision makers in the real world, *leave for the weekend*. As I explain in the chapter called "The Uncertainty of the Phony," for all of their intellectual appeal, these niceties have no serious implications Monday to Friday as opposed to more substantial (but neglected) matters. People in the classroom, not having faced many true situations of decision making under uncertainty, do not realize what is important and what is not—even those who are scholars of uncertainty (or

particularly those who are scholars of uncertainty). What I call the practice of uncertainty can be piracy, commodity speculation, professional gambling, working in some branches of the Mafia, or just plain serial entrepreneurship. Thus I rail against “sterile skepticism,” the kind we can do nothing about, and against the exceedingly theoretical language problems that have made much of modern philosophy largely irrelevant to what is derisively called the “general public.” (In the past, for better or worse, those rare philosophers and thinkers who were not self-standing depended on a patron’s support. Today academics in abstract disciplines depend on one another’s opinion, without external checks, with the severe occasional pathological result of turning their pursuits into insular prowess-showing contests. Whatever the shortcomings of the old system, at least it enforced *some* standard of relevance.)

The philosopher Edna Ullmann-Margalit detected an inconsistency in this book and asked me to justify the use of the precise metaphor of a Black Swan to describe the unknown, the abstract, and imprecise uncertain—white ravens, pink elephants, or evaporating denizens of a remote planet orbiting Tau Ceti. Indeed, she caught me red handed. There is a contradiction; this book is a story, and I prefer to use stories and vignettes to illustrate our gullibility about stories and our preference for the dangerous compression of narratives.

You need a story to displace a story. Metaphors and stories are far more potent (alas) than ideas; they are also easier to remember and more fun to read. If I have to go after what I call the narrative disciplines, my best tool is a narrative.

Ideas come and go, stories stay.

THE BOTTOM LINE

The beast in this book is not just the bell curve and the self-deceiving statistician, nor the Platonified scholar who needs theories to fool himself with. It is the drive to “focus” on what makes sense to us. Living on our planet, today, requires a lot more imagination than we are made to have. We lack imagination and repress it in others.

Note that I am not relying in this book on the beastly method of collecting selective “corroborating evidence.” For reasons I explain in Chapter 5, I

call this overload of examples naïve empiricism—successions of anecdotes selected to fit a story do not constitute evidence. Anyone looking for confirmation will find enough of it to deceive himself—and no doubt his peers.* The Black Swan idea is based on the structure of randomness in empirical reality.

To summarize: in this (personal) essay, I stick my neck out and make a claim, against many of our habits of thought, that our world is dominated by the extreme, the unknown, and the very improbable (improbable according our current knowledge)—and all the while we spend our time engaged in small talk, focusing on the known, and the repeated. This implies the need to use the extreme event as a starting point and not treat it as an exception to be pushed under the rug. I also make the bolder (and more annoying) claim that in spite of our progress and the growth in knowledge, or perhaps *because* of such progress and growth, the future will be increasingly less predictable, while both human nature and social “science” seem to conspire to hide the idea from us.

* It is also naïve empiricism to provide, in support of some argument, series of eloquent confirmatory quotes by dead authorities. By searching, you can always find someone who made a well-sounding statement that confirms your point of view—and, on every topic, it is possible to find another dead thinker who said the exact opposite. Almost all of my non—Yogi Berra quotes are from people I disagree with.

2 The Tipping Point: How Little Things Can Make a Big Difference *by Malcolm Gladwell*

SAMPLE CHAPTER

For a sample chapter of The Tipping Point, follow the link below, if no content is displayed, please refresh your browser.

<http://search2.barnesandnoble.com/BookViewer/?ean=9780316346627>

3 Production and Operations management, Manufacturing and Services

Chase Richard B, Aquilano Nicholas J, Jacobs F Robert
Irwin McGraw-Hill, 1998

- 4 Modernization, Cultural Change and Democracy, The human development sequence**
Inglehart Ronald, Welzel Christian
Cambridge University Press, New York, 2005

- 5 Limits to growth, the 30-year update**
Meadows Donella, Randers Jorgen, Meadows Dennis
Earthscan, London, 2004

- 6 Writers in Leadership**
Van Maurik John
Penquin Books, London, 2001

- 7 The Leadership challenge in Africa**
Van Rensburg Gerhard
Van Schaik Publishers, Pretoria, 2007

- 8 Shifting Gears**
School for New Learning
DePaul University

Shifting Gears

The Psychic Phases of Adulthood

Among all the living things on earth, human beings alone have the ability to *consciously shape* the time that lies between the biological markers of birth and death. We alone have the ability to decide not only *what we* will make of our lives, but to *change our minds* about what we will make of them. This ability is affected, of course, by the circumstances in which we find ourselves. We can't ignore the effect of the outer world on our inner selves – but neither can we afford to let the external world impose on us a life-style of life goals that violate our internal needs.

The maturity myth tells us that we should plan our lives according to externals, that the central task and the central meaning of adulthood is to define ourselves in terms of society, through career, marriage and the accumulation of possessions. Certainly, this is the *one* aspect of adulthood; we all have a need to seek our niche in society, to “join the tribe” as Dr. Daniel Levinson of Yale has put in. one reason for the power of the maturity myth, in fact is that it draws upon our natural drive to come to terms with the external world. But each of us also

has an internal world that is of profound importance to our hopes for self-fulfillment. And that internal world is not a static "given" that will be with us always: it is changing constantly, usually in subtle ways, but sometimes dramatically. In the course of his or her life, each individual passes through a variety of *psychic phases*.

The existence of these psychic phases has been recognized for more than two thousand years in the religious and philosophies of the East; there they are looked upon as expected and normal part of adulthood. But our culture does not prepare us for this normal experience of life. In our society only the psychic need to define ourselves in terms of the external world is fully recognised. The fulfilment of that need alone is supposed to bring us home safe. But in fact there are two other primary psychic needs that are of equal significance in achieving our full potential as individuals.

First, there is the need for *self-exploration*. At varying points in our lives, each of us will experience a need to develop and extend our interior selves. This need was described to us by Richard T., who had spent twenty years working in a high-pressure professional. Recently, he gave up his well-paid position with Chicago firm to become the editor of a small-town weekly newspaper in downstate Illinois. He pointed out that although he'd had a lot of responsibility in his previous career, with more than twenty people working directly under him, he had always somehow felt anonymous. "Anybody with a certain amount of brains and experience could have done it," he said. "I was paid a lot more than the office manger of my department, for instance, but I was just as much a cog in the wheel as he was." His new life, though, give him an entirely different feeling: "This little paper is *me*" he said. "But even more important, now I have time to read, to tune in on myself, and to discover what kind of people my wife and children are. They'd practically become strangers to me in the old job."

On the other hand, we interviewed a woman who had graduate from college with a degree in fine arts but had spent the first twenty years of her adulthood as a wife and mother. When her youngest child became a teenager, she began to freelance as an interior decorator. The first jobs she got were through friends, but within two years, she had a full-fledged business, with an office and several assistants. In her case, the means for exploring and extending herself was to put to use the capacities she had neglected during the first phase of her adulthood, and *to take up* a high pressure career. But her reason for joining the rat race was

the same as Richard's had been for leaving it – to explore her capacities in a new way and to extend her sense of herself as a person. There is no one way to explore oneself, no one means to extension of the self: it all depends on what you were doing previously, on what capacities have already been explored by you, and on which ones have been neglected. Richard, in order to explore himself, shifted into low gear this, woman shifted into high gear. The means by which the shift was accomplished were different, but the goal was the same and was inspired by the same need: to explore another aspect of the self.

Many people, at one point or another in their lives, find that personal fulfillment comes through being involved with something larger than themselves. This is the second of the psychic needs we ignored in our society. A former major army whom we interviewed expressed it this way: "I spent twenty years in the army I fought in France in World War II and I served at command headquarters in Korea. I wasn't romantic about what I was doing, and I don't think I'm any more patriotic than the next guy -it was a job I thought was valuable at the time that I happened to be good at. But I reached a point where I needed to do something different. I guess I felt that I had helped to keep the world from becoming worse than it was, but I wanted to do something actively constructive for a change. I had several opportunities to go into business, but that just wasn't the answer for me." The major retired from the army, returned to college to get a master's degree in history, and has now been teaching for ten years at a southern junior college. "Most of these kids really care." He said. "They want to learn, and that's exciting, it gives me something bigger than just earning a living to focus on. It makes me feel better about myself."

To define ourselves in terms of the society we live in; to explore our particular inner capabilities; to give ourselves to something larger than we are – these three separate psychic needs are always present in each of us simultaneously, but in varying degrees. During different phases of our adult experience, we may find that one or another of the three predominates and becomes the central psychic need. Which of three will during any given phase is determined not by age, but by individual needs, experience, abilities and capacity for growth. For instance, while many of the Peace Corps volunteers have been young people in their early twenties, there have also been many in their thirties and forties, and even some in their sixties; their need to be involved in something larger than themselves - just as with young people -was an expression of the psychic phase they were in, not of age or of conformity to societal rules.

Yet many people, perhaps most, fail to adjust to their changing psychic phases; they allow the pattern of their lives to be determined by age and by societal expectation. Our society, by way of the maturity myth, tells us that we will be regarded as strange or a failure if we don't get and choose a career by our mid-twenties. If you want to be successful and happy, we are instructed, then you'd better strive to become like mommy and daddy as quickly as possible. "Shape up," we say to our children. "If you want to be treated like a grown-up, you'd better behave like one." And the implication is that only one proper psychic phase exists for a grown-up: the phase in which you define yourself in terms of externals. Our culture in fact ignores the existence of the other phases altogether.

But this denial of the other psychic phases can only lead to a psychological crisis in the long run. What if you don't happen to be in the external phase during the first years of adulthood? If you go against your instincts and try to conform to what society says you ought to be feeling at that point, then you are all too likely to find yourself married to someone just for the sake of being married and pursuing a career that brings you little or no fulfillment. From the outside, you will appear to be grown-up, but on the inside, in your private self, you will be suffering from the fact that your psychic phase is out of sync with the life you are leading. Eventual disillusionment with your career or marriage, or with both, can easily follow. What's more, you will have short-circuited your natural psychic development, and made it much more difficult for yourself to continue growing as a person.

The Suspended years

For the majority of the people in our society, of course, the phase of external self-definition does coincide with the first decade or two adulthood. That is, as we have noted before, one reason for the appeal of the maturity myth: the myth seems perfectly in accord with the reality of our psychic phase. In this situation, the denial of the other. Psychic phases may seem unimportant. After all, if Jim's life-style and his internal phase are synchronized with one another, he's going to feel fulfilled. The only problem is that Jim thinks this is the only phase that exists: he is totally unprepared for any changes within himself.

Most of us, at one time or another during the first fifteen or twenty years of

adulthood, find ourselves saying, "I wish I had to..."; we may wish we had time to paint, or time to raise roses, or time to read, or simply time to see the world. Since we make or hear such complaints so frequently, they may seem rather superficial and not really important. But they are a true reflection of our unfulfilled potentials, or our other psychic needs. If Jim concentrates exclusively on the external world, shunting aside those aspects of his personality that don't fit in with his immediate goals, he will be turning the first two decades of his adulthood into *suspended years*.

The aspects of himself that Jim represses or neglects are going to be needed at some point in the future when he finds himself in a new psychic phase. We can illustrate what happens with a simple mechanical example. Suppose that you are going to be living in Europe for two years and don't want to take your car with you or sell it. If you simply let it sit in a garage for all that time, a good deal of rust and decay will set in and by the time you return you will have a major repair job on your hands to get it functioning properly. But if you are smart, you'll arrange with a friend to take it out and drive it a few miles every two or three weeks, to keep it in good running order. The same is true with our unused psychic potentials. It isn't necessary to give them a great deal of attention, but we should be aware that they do have future importance for us and give them occasional exercise.

If you find yourself saying, "I wish I had time to go ..." it doesn't have to be a lot of time, even a little will help. Then, later, when you find yourself entering a new phase of growth, it will be much easier to shift gears: you'll have a better idea of what your potentials are and of their relative importance to you. The less you keep in touch with your inner self, the more difficult it will be to shift into another phase. When we completely neglect those aspects of ourselves that don't relate to our immediate goals, when we leave them in suspension year after year, we are simply creating a possible future psychological crisis for ourselves.

Shifting gears from one psychic phase into another ought not be a frightening prospect but a cause for hope. Not only is it a perfectly normal part of life, but an affirmation of what makes us unique among living creatures: the ability to shape our lives and to change our minds about how we will shape them. It only seems frightening because our culture has not prepared us for it, and because we make matters worse by allowing the early years of adulthood to become suspended years. For the individual who has swallowed the maturity myth whole, and has neglected all aspects of his personality that doesn't conform to the myth, the

transition between one phase and another is bound to be disturbing. To get a divorce, to lose one's job -these are crises we can readily recognize. Of course, we're disturbed! Who wouldn't be? But simply to feel that 'something is "missing: to discover that one isn't home safe after all, to suffer from an acute sense of loss when we have apparently gained all the things promised us by the myth – that is a crisis which leaves most of us floundering and afraid.

And it is at this point that an understanding of the process of shifting gears becomes essential. The need to shift gears may also be brought on, of course, by the outside event. In our crisis culture the ability to shift gears becomes doubly important: two corporations merge, a factory shuts down, a defense contract is canceled, and suddenly our lives are drastically altered. Few of us can imagine beforehand what it would be like to be told that our job of twenty years no longer exists, or that our home is to be torn down to make way for a new one. Yet such things happen every day. And if we understand how the process of shifting gears works, we are at least one step ahead of the game. Whether the need to shift gears is brought on by a natural change in our psychic phase, or is imposed upon us by the randomness of the crisis culture, the *process* is the same

Shifting Gears – The Process

The process of shifting gears can take place on two different levels. In one case, it takes place in response to the kind of crisis that challenges our assumptive state, the internal and external givens of our lives. The transition between one phase of adulthood and another can present such a crisis -so can marriage, the birth of a child, divorce, a change of job, or the death of a loved one. But, in other cases, the shifting of gears doesn't require us to move on to a new assumptive state, but simply to rearrange the components of the existing one. It is the difference between moving from one house to another and simply redecorating the one we have.

When we shift gears without changing our assumptive state, it is often possible to accomplish the change without giving it much conscious attention. An example of such a shift would be forming of a new friendship; we meet someone, we like him, we get to know him. His friendship will undoubtedly cause us to grow and to change in a variety of subtle ways. But the process, in this case, is gradual, a slow unfolding of the new pattern of our lives. On the other hand if we fall in love with someone, and are already married or involved in a long-standing love

relationship, the process of shifting gears may not be at all easy, and is likely to present a crisis that can be resolved only by changing our assumptive state.

In order to make the process absolutely clear, we would like to detail the steps involved in terms of an actual case history. Recently, while attending a workshop at a small family-type resort in the mountains, we met Tom, a congenial and obviously happy man in his late forties. When we first met him, it was in his capacity as bartender at the resort, but it soon became clear that this was just one aspect of his life. He told us how he and his attractive blond wife, who joined in the conversation with us, had happened to get involved with the running of the lodge.

"Five or six years ago," he said, "I was buried in my business in New York City. I'd owned a construction company for fifteen years, and I'd enjoyed it up until about that time. We came up here to visit friends for a weekend. It was a totally different lifestyle – easy space, warm people. And it made me think about my own situation back in the city. There was a click inside and I began asking questions. Business was great, we had a nice apartment in the city, everything you could ask for, it seemed. But for a while I'd had a vague feeling of dissatisfaction, of pressure.

"I took a hard look, and I began to realize that I wasn't working for myself. It was always a hassle with people and time. The demands were enormous, and I wasn't getting much fun out of it anymore. I began asking myself how much life energy I was putting out to make a dollar. How much was it costing out of my gut? And the answer I came up with was that it was costing me a dollar and a quarter worth of energy for each buck I was making. This was a losing situation in terms of living, and right then I decided to do something about it. We've all got to earn money, but if it's costing us more than we're getting back, is it worth it? Joan agreed and we began to search for a house up here in this part of the country."

Tom and Joan found the house they wanted. It cost more than they thought they really should spend, considering the change they were going to make. But Joan said she would go back to work as a hair stylist to help out during the transition. "So we bought the house and moved. I continued with my business in New York, commuting back and forth. But all the while I was looking for a buyer for my business and planning how I could move up here full time and for good. I thought I could work in house construction in our new area, and we'd be OK. So two years

later, I sold the company and moved out of New York for keeps. Joan did support us, but gradually I got enough business to make a go of it alone."

"Then about six months later I met Carl, who owns this lodge. We all became good friends. One day, he asked Joan and me to take over here for a weekend so they could make a trip. We agreed; it was rough but we enjoyed running the show and meeting the people who were staying here. I got pretty good at making drinks, and enjoyed listening to the guests' stories and telling my own. When Carl came back, he asked us to become partners –we would handle the bar and drinks, help in the kitchen, while they took care of the food and general management. Now Carl and I are building houses on some property he has -I handle the construction. We don't make much money, but we travel during the winter, and we all have great times working together – there are children in families, and they all pitch in, Now I feel as though I'm putting out seventy-five cents for each dollar I earn." Tom paused for a moment, then added. "I'm glad I made the move. And glad I woke up soon enough to make it possible. Joan and I are really happy with the results.

Tom's story is a good example of the process of shifting gears. The first step in that process is *awareness*. For Tom, as for most of us, that awareness developed gradually. Many of us may feel the vague kind of discontent that Tom speaks of. But we tend to push those feelings back down, to avoid recognizing their implications for us. When our assumptive state is challenged, the first impulse is to draw our psychic wagons into a circle as quickly as possible, and last thing we expect is to be ambushed, especially by our own growing needs. Many people succeed in repelling the attack, but in the process they kill their potential for growth. In the long run they will either be attacked again or will succumb to the boredom and sense of defeat that come with stagnation.

In Tom's case awareness was triggered by his hip upstate to visit friends, by his feeling that these people had a more fulfilling and wholesome life than he did. They had more time to be with their children, family and friends. The sign that awareness has been achieved is the asking of conscious questions. And the asking of these questions in a full conscious way leads to the second step in the process: *evaluation*. Tom began asking himself how much life energy he was expending to earn a dollar. He considered the small amount of time he was able to spend with his family and the kind of life his children led in the city. He began asking about his relationships with other people, relationships that were often dictated by his business. "The business world really began to get to me, the more

I thought about it", he told us. "I realized that I didn't like what was going on, everybody cutting costs, cutting quality, cheating being greedy – and realised I might end up like that, too. There was no way around it if I was going to complete successfully."

During the evaluative stage of process, there is a tendency for some people to get bogged down assigning blame for the situation they are in. Regret and recriminations, whether against ourselves or others, often swamp us with an overall feeling of "if only I had ...". At this point it is vital to realize that nothing is wasted in your life. The feeling of waste is particularly likely to afflict those who are getting a divorce, or have spent years preparing for a profession that they now feel is unsuited to their needs. But is also affects those who have never really found a direction they liked or felt they wanted to be committed to.

The idea that we have wasted the best years of our lives is usually a false one. During the supposedly wasted years you have been gathering experience and understanding, both of yourself and the world around you. Without that experience and understanding, it is entirely possible that you would not have arrived at the point of self-awareness you have now reached. You can't change the past, anyway, but you can change the future. To spend time and energy laminating the past is to waste the present and the future: Move forward, instead, to the third step, which is *exploration*.

Tom told us that in exploring what he could do to change his life, he considered a number of alternatives. There was the possibility of getting out of the construction business and taking a different kind of job in the city. His father had been a high-school physics teacher, and Tom thought about going back to college and becoming a teacher himself. But he decided that he liked work in itself, he just didn't like the kind of situation he had to business in. He didn't want to change his work, he wanted to change his life-style.

In exploring the alternatives open to you, short-term goals have to be weighed against long-term goals. Tom wanted to get out of the business situation he was in, and out of the city. That was his primary goal, it might seem. But in the long run, what he wanted was a new way of life for himself and his family. As it turned out, the achievement of this long-term goal meant that in the short term he would continue to work in the city in the in the same business.

The steps of evaluation and exploration are both devoted, to a large extent, to defining the individual's sense of fulfillment at that point in his life and what is less essential or nonessential. What seems essential at one point in your life may seem less essential or even nonessential at another point, during a different psychic phase. But how about you decide what is essential?

The simplest way to determine an answer to this question is to make a written list of the activities and concerns that now occupy time in a given week or month, and to list the alternative options that you would like to explore. The time you spend or would like to spend on each of these elements of your life can be written in the margin. Probably, the time totals will add up to more hours than there are in the week or month. Start rearranging the list you have made, putting the things you would like to spend most time on at the top, changing the time notations as you go. It may take several days to juggle the list; you'll find that you keep changing your mind, and it is only when you've stopped changing your mind that the list can be regarded as finished – at least in regard to this point in your life.

Although this method of determining your priorities has been derived from the business management techniques of such consultants as Alan Lakien, we don't advise carrying it to the point of programming yourself like a computer. You aren't trying to become more *efficient* but rather to determine the elements of your life that are most *fulfilling*. Completing the list will make you aware of your preferences and desires. The point in making such a list is to discover which activities and concerns are less essential and can be disposed of drastically cut back.

A modification of this technique can be used, as Tom used it, to discover how much life energy you are into each dollar you earn. Tom found that he was putting out \$1.25 of life energy for each dollar he was earning, and he decided that was too much. He decided he would rather earn less money and have more life energy to put into other areas of his life, into his relationship with his family and into his own self-fulfilment. Having made that decision, he was ready to take another step in the process.

For Tom the next step was *experimentation* with new modes. He and his wife found a house they liked in the country, bought it and moved the family into it. However, Tom kept the apartment in the city and for two years commuted back and forth, while continuing to run his city business. This gave him and his family

a chance to try out the new pattern. Would it really have the results they were hoping for? Would the children like it as much in the country as they thought? Would it be possible to get a new construction business going in the area of their new home? During this period, Tom also had a chance to establish contacts in the new community, including several people who were able to show him the ropes concerning the local construction situation..

Once he satisfied himself that the move could be made with a reasonable chance of success, and had established a foothold in the business community of the new area, Tom was ready to take the step of *making the decision*. He decided to sell his business in New York and to live and work permanently in the country. The next step was to *take action* Tom found a buyer for his New York business, and moved out of the city apartment. This action involved another step: *letting go*. Tom was letting go of the business he had owned for fifteen years; he was letting go of the income from that business. The family as a whole was letting go of the apartment that had been their home for many years, in which the children had lived from infancy; they were letting go, to a large extent, of their city friendships. There would be things and activities and people they would miss, but there was also to be gained in terms of ongoing fulfillment. Tom had now made the final to change. He had in fact completed shifting gears.

The process of shifting gears is a series of steps. Not every individual will take the steps in the same order Tom did, however. His pattern is perhaps the usual one, but that doesn't mean it is the only pattern or the best one for everyone. For example, Ellen a widow in her forties, followed a different that was uniquely suited to her needs. her husband died suddenly of a heart attack, she her life without shape or meaning. She was aware of a terrible vacuum in her life and she realized that now she would have to make a new life for herself. After achieving this awareness, she decided that in to find out where she was going she would have to cut herself off completely from the associations and activities that had formed her married life. She called all her old friends, one by one, and told them that they would not be her for a while -she did not know how long. She loved these people dearly, they had been years, but she felt that in order to create a new life for herself it was necessary to be completely on her own, with only her own fall back took step of letting go before on to evaluation and exploration of her new situation. She didn't contact her old friends for over a year until she had completed the process of shifting gears, by which time she had a job and had made a number of new and had achieved a new sense of self and competency in

her life. Ellen's case is probably an exception -but she was able to go back to her old connections as a renewed and confident self.

Tom and Ellen illustrate the way in which we can use the process of shifting gears in making a decision for some major life change. But there is another way in which we can shift gears. This occurs in the way we can use events in our everyday life and personal relationships for inner growth. Because we meet change in these areas far more often than we make major life decisions like Tom and Ellen's, this is an equally important area for examining how to shift gears. Unfortunately, many of us react to changes in our personal relationships and everyday life with a closed attitude. We resist and stand pat with a closed mind. The result is that some of us stay in first gear forever, and others spend a whole lifetime in neutral, avoiding change and blocking their own potential for growth and full engagement with life. Yet if we are willing to be open and take the effort to shift gears, we have the opportunity every day to see life anew, and to look at it with a new attitude. It is in this encounter and meeting with change every day that we have our richest opportunities for personal growth.

Nowhere is this better exemplified than in our own families in the confrontation the two generations, parent and child. Let us take a particular case of a father and son. The father discovers his son is smoking pot. The father yells, prohibits, stands on his authority, and in the process rejects his son along with the behavior he is incensed about. The son yells back, screaming that his father drinks too much, and that alcohol is more sinister, debilitating and destructive than pot. A battle ensues, the father calling his son an addict. They are locked in combat, whether it is physical or verbal, neither able to see the situation clearly.

What happened is that is that the son's behaviour in smoking pot has zeroed in on something in the father's life he never solved - his own drinking and what impels him to do it. Consequently neither one can face the issue at hand clearly. Both the father and the son have a legitimate fear for safety of the other, yet their have blinded them to any constructive understanding of their behavior.

This confrontation has ended destructive, neither changing, both misunderstood: son retreating in fury and hurt, the father furious and desperately holding his -in part out of conviction, in out of fear of facing the lie never solved. His concern for his son's behavior is real, but he is blocked from dealing with it because of his unwillingness to confront himself. In case, the father has shifted gears, into

reverse, ground and inhibiting growth. Even if the father had no drinking problem, the issue of smoking pot might become an occasion for confrontation. However, this particular father is no different from many parents who fall apart their children start anything new that is strange and seemingly incomprehensible to them: whether it is a question of wearing long hair or clothes, sexual behavior or attitudes, leaving school or making some decisions for themselves. Something in the parents' own past that they never solved blocks them from understanding the dynamic of the problem.

The occasion need not be the contemporary changes in our children's behaviour. It need not be an issue as incendiary as addiction (either to drinking or smoking pot). Any developmental change in the child which occasions different behaviour may touch off a parent's insecurities and feelings of deprivation. Even the normal maturation and development of the sexual identity of the child frequently elicits resentment in the parent and becomes an area of conflict and argument. In this case, the parent, as Dr. E. James Anthony points out, '... may be reacting to a deep dissatisfaction with his own sexual lot in life and envious that his child is getting something while he is being deprived.' Whether it is something as simple as the length of a daughter's skirt or a son's hair or something as complicated as the child's desire for increasing autonomy, each confrontation with our children, who come into and grow up in a different world from the one we knew, forces us to face things we have ducked all our life. Yet each confrontation can become an occasion for growth for both parent and child.

We can use these opportunities in a positive rather than a destructive way for shifting gears into personal growth, facing our problems and improving our closest relationships. Let us use the father and son's case as an illustration. In this kind of personal confrontation, all the steps of shifting gears could be applied. With the father and son, both experienced a painful awareness of their differences, both in their attitudes toward each other's behaviour – the father drinking, the son's smoking pot – and of the behaviour itself. If both are open, they can explore their reasons, as well as their rationalisation for smoking or drinking. They can each *evaluate* what it does for them, why they think they need it, and what makes them do it. They can be open to listening to the evaluation of the other: the father to his son's evaluation of drinking in general, and the father's drinking in particular, the son to his father's evaluation of smoking pot in general, and the father's drinking in particular, the son to his father's evaluation of smoking pot in general and dangers he thinks it brings for his son in particular.

Each one can explore the reasons for his behavior, his beliefs, his values, his weaknesses, fears, desires and motivations. They can explore new ways of looking at the whole thing, new ways of understanding drinking or smoking in general, new ways of understanding themselves and new ways of acting. They could experiment with these, experiment with developing a new attitude and openness to exploring what they are doing and why. And then they can make a *decision* and *take action* – even if that decision and action is nothing more than keeping their lines of communication open so that they can continue to talk, show their concern for each other, and explore their feelings. If they make this effort, both of them will have shifted gears onto a new plane of understanding of their mutual problems. And that is self-growth, that is having a relationship. I may not provide pat answers, or easy solutions – but it will be a big step in their live together and in their relationship. Taking the action of talking openly with each other is a commitment to their relationship, to their carrying concern for each other. It means *letting go* of old attitudes and fears for the father, and the shaping of new attitudes and insights for the son. Even the first step of awareness of their behavior and their need to help each other means letting go of former assumptions and closed attitudes in facing the problem and their inner selves in relation to it. There are no easy solutions to any relationship problem, but the rewards more than compensate for the difficulty and impasses this process may bring. Shifting gears onto a new plane of understanding between them, from which positive actions and feelings can result, is a reaffirmation of self and their relationship.

It is in this way that our personal relationships provide opportunities for personal change, deepening our understanding of ourselves, reinforcing our competence and our belief in our relatedness to life and others.

Shifting Gears – the Application

- Awareness
- Evaluation
- Exploration
- Experimentation
- Decision
- Commitment to Action
- Letting go

These are the steps in the process of shifting gears. But, just as the steps can be

taken in different order by different people, they also have another kind of flexibility built into them. To some people, for instance, story may sound too good to be true, or our suggestion about the father and son may seem too difficult. Does such change seem impossible for most of us to achieve? Too unrealistic? How can you be sure it will work for yourself? The answer, of course, is that you can't be sure it will work for the *first time through*, nor may it work easily or perfectly at any time. The importance of moving step-by-step, of taking your time, is that it gives you a chance to backtrack and take a different approach. The order in which you take the steps does not matter, but taking them one at a time does.

It is possible that, at any point in the process, the new direction you're moving in prove to be unfruitful. A plan may be based on false premises, on presumptions rather than on examined facts, on goals or expectations that are unrealistic, or beyond our capacity, or insufficiently challenging. If so, it's time to start the process over again, to take these limitations into account, and to-evaluate, explore and experiment on a new plan of possible action.

The only step in the process that cannot be taken at a different point by different people is *awareness*: this is of necessity the first step, the basic catalyst that sets the entire process in motion. It is also a difficult step. Most of us know when we are unhappy – but we may not the cause. You know things are not right, you are not finding satisfaction or fulfillment in your life situation: you are bored with your husband seems endlessly the same, you know you have conquered all the challenges your present job has to offer, you have lost interest in your wife, your squabbles with the children continue non-stop from sunup to sundown. Suddenly your favorite food taste like sawdust, you no longer have any enthusiasm for your usual leisure-time activities, you feel about as sexy as yesterday's mashed potatoes. And this feeling of lifelessness may be followed by a sense of anxiety, fear and rage at your inability to do anything about the way you are feeling.

At this point, for most of us, rationalization takes over, and we pull our psychic wagons into a defensive posture. We blame our bosses or our unhappiness and dissatisfaction; we blame society, politics, religion, we blame anything we can find including the pollution in the air. And so, carrying around our own private grudge bags – against everything and everybody – we are so weighed down we can't possibly take a step in any direction. To complicate our situation we tell ourselves that there is nothing we can do about the problem. We find a million

ways to avoid taking the first step toward change. We tell ourselves we can't change things because our wives or our husbands or our children won't like it. We want a better job but explain that we I can't take the time off from work even to look for it, that another boss would probably be just as bad, that we're too old to change. Young people today have their own kinds of rationalisations: how can I contribute anything when the world is rotten, nobody cares, and the establishment is corrupt? Why try when everything is already tainted?

So long as such rationalisation and defences continue to rule us, we cannot achieve the kind of awareness that constitutes the first step in shifting gears. Sometimes, when we find the situation we're in completely intolerable, we do take action – but a kind of action that is based on our rationalizations rather than one kind of self-awareness that leads to shifting gears. A classic example of this kind of self-defeating action is the man who feels unfulfilled by his wife and job and turns to a series of love affairs to renew himself. He may indeed experience a sense of newness for a time, but it is usually based simply on changing the externals rather than on shifting of gears that leads to internal change, and internal growth and development.

It is not until we have reached the level of awareness at which we recognize that internal and maybe external change are necessary to solve our problems that the process of shifting gears successfully, the external changes we make should be integrated with out internal development. Thus, the kind of awareness that leads to shifting gears involves four elements: (1) recognising that we are unhappy with our current situation, (2) taking stock of the external affecting our happiness, (3) facing up to our fear of change, and (4) a willingness to examine our own defenses and rationalizations.

In taking stock of how externals are affecting our situation, we should keep in mind the effects of the crisis culture. In facing up to our fear of change, both the impact of the maturity myth and the existence of the psychic phases of adulthood should be taken into consideration, and can help to put our questions into perspective. In the following chapters, we will be taking a closer look at a number of skills and techniques that can help us become aware of our own defenses and rationalizations, and skills that can help us to continue growing. But first, recognizing that most individuals will shift gears not just once but many times in the course of their adult lives, let us consider what this fact means in terms of planning for the future.

A Life Strategy

You can learn to shift gears at any age, at any age, at any point in our life. Once you understand the process, it can be applied over and over again through your life; the circumstances that make it necessary to shift gears are myriad and will constantly change, but the process itself remains the same. And from an understanding of the process you can develop a *life strategy*.

A life strategy is not a life plan. Life plans have been much discussed in recent years—ten-year plans, five-year plans, even one-year plans. But obviously, if you are talking about a period of only one year, you aren't talking about a *life* plan. Specific goals are vital to the psychological wellbeing of every individual; without them, we flounder about in a kind of limbo. And to achieve our goals, we must plan. The crucial point, however, is that in the course of our adult lives we will have many different goals. Those goals will change, according to the psychic phase we happen to be in, and according to the effect upon our lives of the crisis culture. If we put all our eggs into one basket, planning our entire lives around one specific goal or set of goals, we will eventually find ourselves in trouble. The maturity myth offers what is basically a life plan. Take this one particular route, it tells you, and you will arrive at your ultimate destination (fulfillment) without mishap. But life is not that. In order to grow, in order to adapt to the changing needs of the self, a more flexible approach is You will want to take a certain road for a particular period of time, of course; but you should be prepared to follow the dictates of your natural curiosity, to turn off on a side road that looks interesting, when you have become bored with the highway. Becoming bored with the highway is the equivalent of the first step in the process of shifting gears: awareness that the road you are with more interesting scenery and new horizons. At this point you are likely to need an entirely new map, or plan, to show the way to your new goal.

We need plans to us reach our particular goals. But as our goals change during the course of adulthood, so must our plans; the same plan can be used, adjustments, to reach a different goal, but more often the plan will have to be changed. And that is why a life strategy is important. A life strategy incorporates the change factor, giving us an that can absorb many different goals and the many different plans to reach those goals. A plan has specific and thus is static; a

strategy can encompass several different possible ends and thus is dynamic. The chart below shows some of the differences between a life plan and a life strategy.

STATIC LIFEPLAN

(Maturity Myths)

DYNAMIC LIFE STRATEGY

(Shifting Gears)

Follow	Lead
External	Internal
Stagnation	Growth
Loss of self	Discovery of self
Anxiety	Challenge

A static life plan, such as one dictated by the maturity myth, insists that we *follow* set down by others in accordance with the external demands of society; a dynamic life strategy allows us to *lead* our own lives in accordance with our internal psychic needs. A static life plan creates a situation in which *stagnation* and *loss of self* become inevitable; a life strategy makes it possible for us to achieve an ongoing growth that will bring a continuing *discovery of self*. A static life means change, whether in the external world or inside will be a cause of *anxiety*; a dynamic life strategy make it possible for us accept the *challenge* created by change to further develop ourselves as individuals.

Let's look at the question in another way. Dr Carl Edwards of Harvard University delineated three types of adaptive social interaction - three basic ways in which the individual can deal with other people and the around him. The first type is *co-operational*. It involves being receptive to understanding the needs of others, conflicts being resolved personal sacrifice. The co-operational individual tends to give up his own needs or desires when a conflict arises; he is self-sacrificing. The second type is *instrumental*. The instrumental individual deals with situations by structuring them, relying upon lines of authority, similarity of interest and adherence to tradition. The third type is *analytic*. The analytic individual responds to people and situations by seeking to understand the underlying elements or clues, and by exploring potential courses of action aside from the usual or expected ones.

Obviously, there are times when it is necessary for us to make use of each of these responses. Personal sacrifice is the right course for us to take. At other times, the traditional answer may be the best one. But in developing a life

strategy, the third kind of response takes on a special significance. When you are shifting gears, it is necessary to forget self-sacrifice and conformity for the moment, while trying to discover analytically what new modes of behavior and interaction are likely to be most fulfilling and growth-producing for you. Thus the strength of life strategy lies in the fact that it recognizes the need to shift gears. It cannot be based successfully on self-sacrifice or conformity.

Let's imagine four college friends, Bob and Susan and Joyce and Paul. Bob and Susan gets right after graduation. Bob has accepted the maturity myth as gospel. He believes that he can work his way up in one of the big corporations and be home safe by the time he's forty-five. Basically, he has accepted a conformist approach to life. Susan had at one time thought of becoming a doctor, but she gives the idea up to many Bob; she has adopted basically self-sacrificing view of life, in which she defines her *self* in terms of Bob and their future children. Fifteen years later, Bob is bored with his job, its demands keep him from spending more than a few hours a week with his family, he is up to his neck in mortgages, and he sees no way out of his situation. His life plan, based on the maturity myth, has not brought him home safe, but he hasn't any idea to begin gears. At the same time, Susan, who has been greatly influenced by the women's liberation movement, comes to the conclusion that Bob is a male chauvinist pig and that she's wasted twenty years of her life.

Joyce and Paul also got married right after college. But they approached their future together from a very different point of view. Joyce knew exactly what she wanted in the short run. She wanted to be a lawyer, and if she couldn't be a lawyer *and* married to Paul, then she wasn't going to get married. Paul, on the other hand, wasn't sure at all about what he wanted to do with his life. He was interested in photography, in writing and in acting. Since he had more experience in photography than anything else, and had been taking pictures for both the college newspaper and on a freelance basis for several years, he was able to get a job as a photographer in the city where Joyce was attending law school. While she went to school, he supported her. They didn't have much money, but they managed. After Joyce passed her bar exams, and had been working as a lawyer for a year. Paul quit his job as a photographer and spent a year writing a novel. It was published to moderate success and led to an offer to write a film script. Between the two of them, they now had enough so that Joyce could take time off to have a child. What the future held, for either one of them, they weren't entirely sure: Joyce was beginning to get interested in running for political office, while

Paul felt that film directing might be something that would make the greatest use of his varied talents.

The difference between these two couples is not of ability. Bob always got better grades than Paul, and Susan could easily have made just as good a doctor as Joyce did a lawyer. The difference between them is one of outlook and attitude. Bob and Susan had a life plan, based on the maturity myth, on conformity and self-sacrifice. Joyce and Paul had instead a life strategy, based on taking things as they came, on analyzing what course would be most fulfilling for them in the short run while retaining the option of changing their minds and their lives as they went along. Bob and Susan's life plan had no built-in options: Joyce and Paul's did. This is not to say, of course, that it is wrong to go to work for a corporation or to have children when you are in your early twenties. That can be just the *right* thing that may be wrong is to assume that you will never want anything else. The difference between a static life plan and a dynamic life strategy doesn't lie in what you *do* at any given point, but in how you *regard* what you are doing. If you think it is the *one* path to self-fulfillment, you have a life plan and not a life strategy. If you think the only possible path to self-fulfillment is to be an actor or a painter, and base everything on that, you are just as likely to run into trouble as the person who thinks that the only possible path is to work for a corporation.

There isn't *one* possible path, not for any of us. We change the world around us changes. We need to have specific goals, yes; but we also need to be able to change our minds about what those goals are. For Joyce and Paul, their first goal was Joyce's law degree, their next goal was the completion of Paul's novel. In achieving these two different goals, they shifted gears, each taking a different role at a different point.. And their overall approach to life allowed this shift, and would allow future shifts. Their life strategy took into account the need for such shifts, it gave them the flexibility to adapt to both internal and external change. If Joyce had failed to get her degree or Paul's novel had never been published, they could have shifted gears again. Shifting gears is the process by which we choose change; our life strategy is the open-minded attitude that allows us to make that choice. Only you can choose change. Only you can design a life strategy that allows you to make that choice. The rest of this book is concerned with the skills that each of us can use to develop a personal life strategy, the skills that can help you to identify your own individual needs, to recognize the points of transition

between one psychic phase and another, and to shift in accordance with the particular pattern of growth that is yours alone.

9 Beyond the Bayou

Kate Chopin

Boston and New York, Houghton Mifflin and Company, The Riverside Press,
Cambridge, 1895

Beyond the Bayou

The bayou curved like a crescent around the point of land on which La Folle's cabin stood. Between the stream and the hut lay a big abandoned field, where cattle were pastured the bayou supplied them with water enough. Through the woods that spread back into unknown regions the woman had drawn an imaginary line, and past this circle she never stepped. This was the form of her only mania.

She was now a large, gaunt black woman, past thirty-five. Her real name was Jacqueline, but everyone on the plantation called her La Folle¹, because in childhood she had been frightened literally "out of her sense," and had never wholly regained them

It was when there had been skirmishing and sharpshooting all day in the woods. Evening was near when P'tit Maitre², black with powder and crimson with blood, had staggered into the cabin of Jacqueline's mother, his pursuers close at his heels. The sight had stunned her childish reason.

She dwelt alone in her solitary cabin, for the rest of the quarters had long since been removed beyond her sight and knowledge. She had more physical strength than most men, and made her patch of cotton and corn and tobacco like best of them. But of the world beyond the bayou she had long known nothing, save what her morbid fancy conceived.

People at Bellissime had grown used to her and her way, and they thought nothing of it. Even when "Old Miss" died, they did not wonder that La Folle had not crossed the bayou, but had stood upon her side of it, wailing and lamenting.

P'tit Maitre was now the owner of Bellissime. He was a middle-aged man, with a family of beautiful daughters about him, and a little son whom La Folle loved as if

he had been her own. She called him Cheri³, and so did every one else because she did.

None of the girls had ever been to her what Cheri was. They had each and all loved to be with her, and to listen to her wondrous stories of this that always happened “yonda, beyon’ de bayou”

But none of them had stroked her black and quite as Cheri did, nor their head against her knee so confidingly, nor fallen asleep in her arms as he used to do. For Cheri things now, since he had become the proud possessor of a gun, and has black curls cut off.

That summer – the Cheri gave La Folle two black curls tied with a knot of red ribbon – the water ran so low in the bayou that even the little children at Bellissime were able to cross it on foot, and the cattle were sent to pasture down by the river. La Folle was sorry when they were gone, for she loved these dumb companions well, and like to feel that they were there, and to hear them browsing by night up to her own enclosure.

It was Saturday afternoon, when the fields were deserted. The men had flocked to a neighboring village to do their weeks trading, and the women were occupied with household affairs – La Folle as well as the others. It was then she mended and washed her handful of clothes, soured her house, and did her baking.

In this last employment she never forgot Cheri. Today she had fashioned croquignoles⁴ of the most fantastic and alluring shapes for him. So when she saw the boy come trudging across the old field with his gleaming little new rifle on his shoulder, she called out gaily to him, “Cheri! Cheri!”

But Cheri did not need the summons, for he was coming straight to her. His pockets bulged out with almonds and raisins and an orange that he had secured for her from the very fine dinner which had been given that day up at his father’s house.

He was a sunny-faced youngster often. When he had emptied his pockets, La Folle patted his round red cheek, wiped his soiled hands on her apron, and smoothed his hair. Then she watched him as, with his cakes in his hand, he crossed her strip of cotton back of the cabin, and disappeared into the wood.

He had boasted of the things he was going to do with his gun out there.

"You think they got plenty of deer in the wood, La Folle?" he had inquired, with the calculating air of an experienced hunter.

"*Non, non!*" the woman laughed. "Don't you look fo' no deer, Cheri. Dat's too big. But you bring La Folle one good fat squirrel fo' her dinner to-morrow, an'd she goin' be satisfi'."

"One squirrel ain't a bit. I'll bring you mo' 'an one, La Folle." He had boasted pompously as he went away.

When the woman, an hour later, heard the report of the boy's rifle close the wood's edge, she would have thought nothing of it if a sharp cry of distress had not followed the sound.

She withdrew her arms from the tub of suds in which they had been plunged, dried them upon her apron, and as quickly as her trembling limbs would bear her, hurried to the spot whence the ominous report had come.

It was as she feared. There she found Cheri stretched upon the ground, with his rifle besides him. He moaned piteously:

"I'm dead, La Folle! I'm gone!"

"*Non, non!*" she exclaimed resolutely, as she knelt besides him. "Put you' arm 'roun' La Rolle's nake, Cheri. Dat's nuttin', dat goin' be nuttin'." She lifted him in her powerful arms.

Cheri had carried his gun muzzle-downward. He had stumbled, he did not know how. He only knew that he had a ball lodged somewhere in his leg, and he thought that his end was at hand. Now, with his head upon the woman's shoulder, he moaned and wept with pain and fright.

"Oh, La Folle! La Folle! It hurt so bad! I can't stan' it, La Folle!"

"Don't cry, *Mon bebe*⁵, *mon bebe, mon Cheri!*" the women spoke soothingly as she covered the ground with long strides. "La Folle goin' min you; Doctor Bonfils

goin' come make *mon Cheri* well again." She had reached the abandoned field. As she crossed it with her precious burden, she looked constantly and restlessly from side to side. A terrible fear was upon her – the fear of the world beyond the bayou, the morbid and insane dread she had been under since childhood.

When she was at the bayou's edge she stood there, and shouted for help as if a life depended upon it:

"oh, P'tit Maitre! *Venez donc! Au secours! Au secours!*"⁶

No voice responded. Cheri's hot tears were scalding her neck. She called for each and every one upon the place, and still no answer came.

She shouted, she wailed; but whether her voice remained unheard or unheeded, no reply came to her frenzied cries. As all the while Cheri moaned and wept and entreated to be taken home to his mother.

La Folle gave a last despairing look around her. Extreme terror was upon her. She clasped the child close against her breast, where he could feel her heart beat like a muffled hammer. Then shutting her eyes, she ran suddenly down the shallow bank of the bayou, and never stopped till she had climbed the opposite shore. She stood there quivering an instant as she opened her eyes. Then she plunged into the footpath through the trees.

She spoke no more to Cheri, but muttered constantly, "Bon Dieu, ayez pitie La Folle! Bon Dieu, ayez pitie moi!!"⁷

Instinct seemed to guide her. When the pathway spread clear and smooth enough before her, she again closed her eyes tightly against the sight of that unknown and terrifying world.

A child, playing in some weeds, caught sight of her as she neared the quarters. The little one uttered a cry of dismay.

"La Folle!" she screamed, in her piercing treble. "La Folle done cross de bayou!"

Quickly the cry passed down the line of cabins.

"Yonda, La Folle done cross de bayou!"

Children, old men, old women, young ones with infants in their arms, flocked to doors and windows to see this awe-inspiring spectacle. Most of them shuddered with superstitions dread of what it might portend. "She totin' Cher!" come of the shouted.

Some of the more daring gathered about her, and followed at her heels, only to fall back with new terror when she turned her distorted face upon them. Her eyes were bloodshot and the saliva had gathered in a white foam on her black lips.

Some one had run ahead of her to where P'tit Maitre sat with his family and guests upon the gallery.

"P'tit Maitre! La Folle done cross de bayou! Look her yonda totin' Cheri!" This startling intimation was the first which they had of the woman's approach.

She was now near at hand. She walked with long strides. Her eyes were fixed desperately before her, and she breathed heavily, as a tired ox.

At the foot of the stairway, which she could not have mounted, she laid the boy in his father's arms. Then the world that had looked red to La Folle suddenly turned back I like that day she had seen powder and blood.

She reeled for an instant. Before the sustaining arm could reach her, she fell heavily to the ground. When La Folle regained consciousness, she was at home again, in her own cabin and upon her own bed. The moon rays, streaming in through the open door and windows, gave what light was needed to the old black mammy who stood at the table concocting a tisane of fragrant herbs. It was very late. Others who had come, and found that the stupor clung to her, had gone again. P'tit Maitre had been there, and with him Doctor Bonfils, who said that La Folle might die.

But death had passed her by. The voice was vey clear and steady when she spoke to Tant⁸ Lizette, brewing her tisane there in a corner.

"Ef you will give me one good drink tisane, Tante Lizette, I b'lieve I'm goin' sleep me.!

And she did sleep; so soundly, so healthfully, that old Lizette without compunction stole softly away to creep back through the moonlit fields to her own cabin in the new quarters.

The first touch of the cool gray morning awoke La Folle. She arose calmly, as if no tempest had shaken and threatened her existence but yesterday.

She donned her new blue cottonade⁹ and white apron, for she remembered that this was Sunday. When she had made herself a cup of black strong coffee, and drunk it with relish, she quitted the cabin and walked across the old familiar field to the bayou's edge again.

She did not stop there as she had always done before, but crossed with a long steady stride as if she had done this all her life.

When she had made her way through the brush and scrub cottonwood-trees that lined the opposite bank, she found herself upon the border of a field where the white, bursting cotton, with the dew upon it, gleamed for acres and acres like frosted silver in the early dawn.

La Folle drew a long, deep breath as she gazed across the country. She walked slowly and uncertainly, like one who hardly knows how, looking about her as she went.

The cabins, that yesterday had sent a clamor of voices to pursue her, were quite now. No one was yet asir at Bellissime. Only birds that darted here from hedges were awake, and singing their matins.

When La Folle came to the broad stretch of velvety lawn that surrounded the house, she moved slowly and with delight over the spring turf, that was delicious beneath her tread.

She stopped to find whence came those perfumes that were assailing her senses with memories from a time far gone.

They were stealing up to her from the thousand blue violets that peeped out from green, luxuriant beds. There they were, showering down from the big waxen bells

of the magnolias far above her head, and from the jessamine⁹, clumps around her.

There were roses, too, without number. To right and left palms spread in broad and graceful curves. It all looked like enchantment beneath the sparkling sheen of dew.

When La Folle had slowly and cautiously mounted the many steps that led up to the veranda, she turned to look back at the perilous ascent she had made. Then she caught sight of the river, bending like a silver bow at the foot of Bellissime. Exultation possessed her soul.

La Folle rapped softly upon a door near at hand. Cheri's mother soon cautiously opened it. Quickly and cleverly she dissembled the astonishment she felt at seeing La Folle.

"Ah, La Folle? It is you, so early?"

"Oui,¹⁰ madame. I come ax how my po'li'le Cheri to, 'smo'nin."

"He is feeling easier, thank you, La Folle. Dr Bonfils says it will be nothing serious. He's sleeping now. Will you come back when he awakes?"

"Non, madame. I'm goin' wait yair tell Cheri wake up." La Folle seated herself upon the topmost step of the verdana.

A look of wonder and deep content crept into her face as she watched for the first time in the sun rise upon the new, the beautiful world beyond bayou.

1 The crazy woman

2 Little Master

3 Darling

4 Biscuits

5 My baby

6 Come here! Help! Help!

7 Good Lord, have pity on La Folle! Good Lord, have pity on me!

8 Aunt

9 Cotton fabric made to resemble wool

10 Yes

10 Hot, flat, and crowded: why we need a green revolution, and how it can renew America

by **Thomas L Friedman**

ISBN 978/1/846/14129/4, Penguin Press

Thomas L. Friedman's no. 1 bestseller *The World Is Flat* has helped millions of readers to see globalization in a new way. Now Friedman brings a fresh outlook to the crises of destabilizing climate change and rising competition for energy—both of which could poison our world if we do not act quickly and collectively. His argument speaks to all of us who are concerned about the state of America in the global future.

Friedman proposes that an ambitious national strategy—which he calls "Geo-Greenism"—is not only what we need to save the planet from overheating; it is what we need to make America healthier, richer, more innovative, more productive, and more secure.

As in *The World Is Flat*, he explains a new era—the Energy-Climate era—through an illuminating account of recent events. He shows how 9/11, Hurricane Katrina, and the flattening of the world by the Internet (which brought 3 billion new consumers onto the world stage) have combined to bring climate and energy issues to Main Street. But they have not gone very far down Main Street; the much-touted "green revolution" has hardly begun. With all that in mind, Friedman sets out the clean-technology breakthroughs we, and the world, will need; he shows that the ET (Energy Technology) revolution will be both transformative and disruptive; and he explains why America must lead this revolution—with the first Green President and a Green New Deal, spurred by the Greenest Generation.

Hot, Flat, and Crowded is classic Thomas L. Friedman—fearless, incisive, forward-looking, and rich in surprising common sense about the world we live in today.

EXCERPT

ONE

Where Birds Don't Fly

For an excerpt of this book, please visit the following website:

http://us.macmillan.com/BookCustomPage.aspx?isbn=9780374166854&m_type=1#excerpt

11. Thinking in Systems

http://www.chelseagreen.com/bookstore/item/thinking_in_systems:paperback#

A Primer

by [Donella Meadows](#)

Edited by Diana Wright

"Dana Meadows' exposition in this book exhibits a degree of clarity and simplicity that can only be attained by one who profoundly and honestly understands the subject at hand--in this case systems modeling. Many thanks to Diana Wright for bringing this extra legacy from Dana to us."

—**Herman Daly**, Professor, School of Public Policy, University of Maryland at College Park

In the years following her role as the lead author of the international bestseller, *Limits to Growth*—the first book to show the consequences of unchecked growth on a finite planet— Donella Meadows remained a pioneer of environmental and social analysis until her untimely death in 2001.

Meadows' newly released manuscript, *Thinking in Systems*, is a concise and crucial book offering insight for problem solving on scales ranging from the personal to the global. Edited by the Sustainability Institute's Diana Wright, this essential primer brings systems thinking out of the realm of computers and equations and into the tangible world, showing readers how to develop the systems-thinking skills that thought leaders across the globe consider critical for 21st-century life.

Some of the biggest problems facing the world—war, hunger, poverty, and environmental degradation—are essentially system failures. They cannot be solved by fixing one piece in isolation from the others, because even seemingly minor details have enormous power to undermine the best efforts of too-narrow thinking.

While readers will learn the conceptual tools and methods of systems thinking, the heart of the book is grander than methodology. Donella Meadows was known as much for nurturing positive outcomes as she was for delving into the science behind global dilemmas. She reminds readers to pay attention to what is important, not just what is quantifiable, to stay humble, and to stay a learner.

In a world growing ever more complicated, crowded, and interdependent, *Thinking in Systems* helps readers avoid confusion and helplessness, the first step toward finding proactive and effective solutions.

About the Author

http://ackoffcenter.blogs.com/ackoff_center_weblog/2005/10/dancing_with_sy.html

Donella Meadows

A woman whose pioneering work in the 1970s still makes front-page news, Donella Meadows was a scientist, author, teacher, and farmer widely considered ahead of her time. She was one of the world's foremost systems analysts and

lead author of the influential *Limits to Growth*—the 1972 book on global trends in population, economics, and the environment that was translated into 28 languages and became an international bestseller. That book launched a worldwide debate on the earth's capacity to withstand constant human development and expansion. Twenty years later, she and co-authors Dennis Meadows and Jorgen Randers reported on their follow-up study...

April 27, 2009

OP-ED CONTRIBUTOR

End the University as We Know It

By MARK C. TAYLOR

GRADUATE education is the Detroit of higher learning. Most graduate programs in American universities produce a product for which there is no market (candidates for teaching positions that do not exist) and develop skills for which there is diminishing demand (research in subfields within subfields and publication in journals read by no one other than a few like-minded colleagues), all at a rapidly rising cost (sometimes well over \$100,000 in [student loans](#)).

Widespread hiring freezes and layoffs have brought these problems into sharp relief now. But our graduate system has been in crisis for decades, and the seeds of this crisis go as far back as the formation of modern universities. Kant, in his 1798 work "The Conflict of the Faculties," wrote that universities should "handle the entire content of learning by mass production, so to speak, by a division of labor, so that for every branch of the sciences there would be a public teacher or professor appointed as its trustee."

Unfortunately this mass-production university model has led to separation where there ought to be collaboration and to ever-increasing specialization. In my own religion department, for example, we have 10 faculty members, working in eight subfields, with little overlap. And as departments fragment, research and publication become more and more about less and less. Each academic becomes the trustee not of a branch of the sciences, but of limited knowledge that all too often is irrelevant for genuinely important problems. A colleague recently boasted to me that his best student was doing his dissertation on how the medieval theologian Duns Scotus used citations.

The emphasis on narrow scholarship also encourages an educational system that has become a process of cloning. Faculty members cultivate those students whose futures they envision as identical to their own pasts, even though their tenures will stand in the way of these students having futures as full professors.

The dirty secret of higher education is that without underpaid graduate students to help in laboratories and with teaching, universities couldn't conduct research or even instruct their growing undergraduate populations. That's one of the main reasons we still encourage people to enroll in doctoral programs. It is simply cheaper to provide graduate students with modest stipends and adjuncts with as little as \$5,000 a course — with no benefits — than it is to hire full-time professors.

In other words, young people enroll in graduate programs, work hard for subsistence pay and assume huge debt burdens, all because of the illusory promise of faculty appointments. But their economical presence, coupled with the intransigence of tenure, ensures that there will always be too many candidates for too few openings.

The other obstacle to change is that colleges and universities are self-regulating or, in academic parlance, governed by peer review. While trustees and administrations theoretically have some oversight responsibility, in practice, departments operate independently. To complicate matters further, once a faculty member has been granted tenure he is functionally autonomous. Many academics who cry out for the regulation of financial markets vehemently oppose it in their own departments.

If American higher education is to thrive in the 21st century, colleges and universities, like Wall Street and Detroit, must be rigorously regulated and completely restructured. The long process to make higher learning more agile, adaptive and imaginative can begin with six major steps:

1. Restructure the curriculum, beginning with graduate programs and proceeding as quickly as possible to undergraduate programs. The division-of-labor model of separate departments is obsolete and must be replaced with a curriculum structured like a web or complex adaptive network. Responsible teaching and scholarship must become cross-disciplinary and cross-cultural.

Just a few weeks ago, I attended a meeting of political scientists who had gathered to discuss why international relations theory had never considered the role of religion in society. Given the state of the world today, this is a significant oversight. There can be no adequate understanding of the most important issues we face when disciplines are cloistered from one another and operate on their own premises.

It would be far more effective to bring together people working on questions of religion, politics, history, economics, anthropology, sociology, literature, art, religion and philosophy to engage in comparative analysis of common problems. As the curriculum is restructured, fields of inquiry and methods of investigation will be transformed.

2. Abolish permanent departments, even for undergraduate education, and create problem-focused programs. These constantly evolving programs would have sunset clauses, and every seven years each one should be evaluated and either abolished, continued or significantly changed. It is possible to imagine a broad range of topics around which such zones of inquiry could be organized: Mind, Body, Law, Information, Networks, Language, Space, Time, Media, Money, Life and Water.

Consider, for example, a Water program. In the coming decades, water will become a more pressing problem than oil, and the quantity, quality and distribution of water will pose significant scientific, technological and ecological difficulties as well as serious political and economic challenges. These vexing practical problems cannot be adequately addressed without also considering important philosophical, religious and ethical issues. After all, beliefs shape practices as much as practices shape beliefs.

A Water program would bring together people in the humanities, arts, social and natural sciences with representatives from professional schools like medicine, law, business, engineering, social work, theology and architecture. Through the intersection of multiple perspectives and approaches, new theoretical insights will develop and unexpected practical solutions will emerge.

3. Increase collaboration among institutions. All institutions do not need to do all things and technology makes it possible for schools to form partnerships to share students and faculty. Institutions will be able to expand while contracting. Let one college have a strong department in French, for example, and the other a strong department in German; through teleconferencing and the Internet both subjects can be taught at both places with half the staff. With these tools, I have already team-taught semester-long seminars in real time at the Universities of Helsinki and Melbourne.

4. Transform the traditional dissertation. In the arts and humanities, where looming cutbacks will be most devastating, there is no longer a market for books

modeled on the medieval dissertation, with more footnotes than text. As financial pressures on university presses continue to mount, publication of dissertations, and with it scholarly certification, is almost impossible. (The average university press print run of a dissertation that has been converted into a book is less than 500, and sales are usually considerably lower.) For many years, I have taught undergraduate courses in which students do not write traditional papers but develop analytic treatments in formats from hypertext and Web sites to films and video games. Graduate students should likewise be encouraged to produce "theses" in alternative formats.

5. Expand the range of professional options for graduate students. Most graduate students will never hold the kind of job for which they are being trained. It is, therefore, necessary to help them prepare for work in fields other than higher education. The exposure to new approaches and different cultures and the consideration of real-life issues will prepare students for jobs at businesses and nonprofit organizations. Moreover, the knowledge and skills they will cultivate in the new universities will enable them to adapt to a constantly changing world.

6. Impose mandatory retirement and abolish tenure. Initially intended to protect academic freedom, tenure has resulted in institutions with little turnover and professors impervious to change. After all, once tenure has been granted, there is no leverage to encourage a professor to continue to develop professionally or to require him or her to assume responsibilities like administration and student advising. Tenure should be replaced with seven-year contracts, which, like the programs in which faculty teach, can be terminated or renewed. This policy would enable colleges and universities to reward researchers, scholars and teachers who continue to evolve and remain productive while also making room for young people with new ideas and skills.

For many years, I have told students, "Do not do what I do; rather, take whatever I have to offer and do with it what I could never imagine doing and then come back and tell me about it." My hope is that colleges and universities will be shaken out of their complacency and will open academia to a future we cannot conceive.

Mark C. Taylor, the chairman of the religion department at Columbia, is the author of the forthcoming "Field Notes From Elsewhere: Reflections on Dying and Living."

'Walk the Market': Tapping into Africa's 900 Million Consumers

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Knowledge @Wharton

'Walk the Market': Tapping into Africa's 900 Million Consumers Published: July 15, 2009 in Knowledge@Wharton

When multinational companies want to tap into the massive pent-up consumer demand in emerging markets, the first countries that they usually think of are China and India. But what about Africa, asks Vijay Mahajan, author of *Africa Rising: How 900 Million Consumers Offer More Than You Think* (Wharton School Publishing). Though often overlooked in global corporate growth strategies, he argues, Africa as a whole has enough consumer power to give China and India a run for their money.

Having returned from various fact-finding missions, he uses his new book to dissect the vast, complex markets of Africa, starting with a look at the home-grown entrepreneurs who have overcome political, economic and social barriers to grow and innovate. For multinationals, particularly those facing shrinking revenues from other emerging markets affected by the global economic downturn, the lessons are timely.

The topic isn't entirely new for Mahajan, a marketing professor at the University of Texas in Austin. In 2006, he was co-author of *The 86% Solution: How to Succeed in the Biggest Marketing Opportunity of the 21st Century* (Wharton School Publishing), a look at how companies can reach the vast majority of the population in countries with a per capita gross national product of less than \$10,000. In an interview with Knowledge@Wharton, Mahajan talks about *Africa Rising*.

An edited transcript of the conversation follows.

Knowledge@Wharton: What is the market opportunity that Africa offers? And why do so many companies tend to overlook it?

Vijay Mahajan: Your first question is the heart of the book. Like most of us, I did not realize until I started working on the book that the population of Africa -- at about 950 million -- is comparable in size to the population of India. And if you look at growth rates, the population could be equal in size in a few years to the population of even China.

The next point is about market opportunity. Are there consumers in Africa who have the resources to buy products like consumers in India and China do? The fact is that the GDP of Africa -- that is, looking at the continent as if it were a sort of United States of Africa -- is actually higher than India's. If all the countries in Africa combined forces, they would be the 10th largest economy in the world, one notch above India, and ahead of the other big emerging economies, Brazil and Russia.

In terms of market opportunity, the data I was collecting was so intriguing that it drove me to visit Africa and to speak with a range of companies there, from local entrepreneurs to U.S. and European multinationals. And at the end of the day, I was convinced that the market opportunities in Africa for all kinds of products are similar to the market opportunities that you see in places like India.

Why has Africa been ignored? That has puzzled me. When I travelled from Southern Africa to Northern Africa, I was surprised that I didn't see more U.S. or Western European companies than I did. One U.S. multinational with an exceptionally big presence is Coca-Cola. It has been there more than 90 years. Another company with a big presence there is Unilever, the Anglo-Dutch consumer goods producer. So while there are some multinationals, it's not to the same extent as what I saw in India and China when I was researching my previous book, *The 86% Solution*.

The other thing is that here in the United States and in other developed countries, we get nothing but bad news about Africa in the press. Not to criticize CNN, but you know how badly the Africa that is portrayed in the media like CNN is. The CEOs I was interviewing were so happy that, for the first time, a professor from America was interested in learning about what they were doing.

But it could just be a matter of time. When I started working on *The 86 Percent Solution* 15 years ago, I used to hear the same stories from many Indian and Chinese entrepreneurs.

Knowledge@Wharton: Africa is clearly a large market, but it is obviously not a monolithic market. How is the market structured across the different countries?

Mahajan: The market is not different from any other developing country. After speaking with a lot of advertising agencies, multinationals and local entrepreneurs, I decided that there are three major groups in Africa, which I refer to in the book as Africa 1, Africa 2 and Africa 3. The terminology is actually taken from an Indian entrepreneur mentioned in the book.

Africa 1 comprises between 5% and 15% of the population of each country. These people could be from anywhere in the world. They may be senior government officials, expats, people working for [non-government organizations], people working for large, international banks. This segment was not as interesting to me as the others.

The segment that really was interesting is what I call Africa 2.

People in this segment are neither poor nor rich; this segment comprises average people living from month to month. They may have some savings. And you can guess that these people are civil servants

-- hardworking nurses, hardworking teachers and so on -- or work in the hospitality industry.

This segment has very high aspirations. These people believe Africa is going somewhere, and they are upbeat. I spend a lot of time in the book on what a big opportunity Africa 2 is. The size of this group is between 35% and 50% of a country's population, the equivalent of between 350 million and 500 million people. Divide that number by 5, which is the average size of a family in Africa (in the U.S., it is 3; in India it is 4)... So there is a very viable Africa 2, which is really going to drive the economy and the consumer markets.

Now, Africa 3 -- the remaining 35% to 60% of an African country's population -- is the one that is struggling. These are the stories that you typically hear about. But that number is not any different from other developing countries. After all, there are 700 million people in India and 750 million people in China who do not have access to a toilet. What's interesting about Africa 3 is that many of them work for Africa 2 and Africa 1, as maids and the like, and they aspire to perhaps one day be part of Africa 2.

Knowledge@Wharton: Would you be able to give a few examples of innovative, home-grown firms or burgeoning sectors that have identified opportunities in Africa?

Mahajan: One example of a remarkable firm is a company in Kenya called Mabati Rolling Mills. The name is the Swahili word for the rolled metal roofing that many Kenyans use for their houses. For people in Africa 2 and Africa 3, one of their main goals when they save some money is to build a house. So they build one room at a time, which may take years to complete. And they need a roof -- that is, the 20 to 30 roofing sheets they need, which they will slowly buy, two or three at a time. You will often see people transporting the sheets on top of a taxi or balanced on two bicycles. Mabati's entrepreneurs saw that need and the company is now the dominant manufacturer of the \$180 million metal roofing market in Kenya. It's also continuously updating its product lines, and now exports to around 50 countries world-wide.

Then there's the film industry. For example, Nigeria's Nollywood makes more movies than India's Bollywood in India and Hollywood [in the U.S]. The quality, of course, is questionable. And many countries do not have cinemas, so every Nollywood movie is available only on tape, not even DVD or CD.

Another burgeoning area is cosmetics or personal-care products, keeping in mind that African women are not any different from women anywhere else. While many multinationals have not tailored their products as much as they could to suit African consumers, locals have, and so you will see a lot of local hair products.

There's also a big market for used, or second-hand, products. When you or I change our mobile every two or three years, we do not even think about where it might end up. Actually, the used mobiles from Europe and the United State often go to Africa.

And interestingly, death, too, has a role to play. Although it may not be openly admitted in many of these countries, death is often a celebration. Many people use their savings if someone close to them dies, and they host a wake or what have you. You can imagine when a whole community is invited. So some companies have been set up to cater to those occasions.

Knowledge @ Wharton: You mentioned Coca-Cola and Unilever. What are multinationals doing to serve the underserved markets in Africa?

Mahajan: In the last chapter of the book, I talk about "ubuntu", a Zulu word meaning, "I am because you are." In other words, we are in this together. Desmond Tutu uses the word to evoke harmony. And I tried to give it a business twist. The way I see it is that companies cannot exist unless they take care of their employees and they take of their customers.

A case in point is Coca-Cola. It has distribution centers in almost every nook and cranny of the continent, whether it means transporting their goods on buses, on donkeys, on bicycles or by whatever means.

Why not use that network to distribute condoms? So Coca-Cola has been working with NGOs like Population Services International, based in Washington, D.C., to help deliver condoms to parts of remote parts of Africa.

Unilever, meanwhile, is involved in HIV initiatives that I saw in Southern Africa, which are very different from other initiatives.

There they have focused on the orphans of families where both the parents have died because of AIDS. Unilever helps to find adopted mothers to raise these children.

Beyond ubuntu, something else that you see at successful multinationals in Africa is a very clear understanding of consumers.

They know that they have to do more on this continent [than in other developing countries] given the spectrum of the consumer they have to deal with.

Knowledge@Wharton: Given your marketing background, what struck you most about marketing in Africa?

Mahajan: I often saw kids buying a bottle of Coke, which is expensive, and they would put the bottle right in the middle of the table so everybody can see it, and they would have enough glasses out to share that Coke with friends. It is an aspiration product. Aspiration also is an important element that I saw in many of marketing campaigns.

Another thing to keep in mind there is that Africa has a young population. A little more than 40% of the population is younger than 15, compared with about 30% in India. That's why the use of sports in advertisements is very predominant. So is music.

Knowledge@Wharton: What about pricing strategies? Do they address Africa 1, Africa 2 and Africa 3?

Mahajan: Something I had seen in other developing countries was the predominance of the "lowest coinage strategy". So when you and I buy a bottle of water here, we pay whatever we need to pay -- sometimes \$1 or at airports we might be paying even higher. You would find that bottled water there from multinationals, such as Nestle. But the local entrepreneurs have developed products that they sell at the lowest monetary unit, which, for example, in Nigeria is 5 naira. But the water might not be sold as it would be in developed countries, and many times it may not be filtered water. It may be the tap water, but they sell it in a small plastic bag.

Now, who is buying that? In many cases, it could be people standing in front of a mosque or a church or a temple and asking passersby for money. Because it's so hot, they cannot go the entire day without water. Some entrepreneurs figured out that that they could sell water to these people, at the lowest currency.

Knowledge@Wharton: What are the major hurdles that you found, political or otherwise, that companies face?

Mahajan: When I was there, I made a point of not talking to any politicians or any chambers of commerce. I figured that politics is not any different than in India and China, and I wanted to avoid that.

Putting aside all the rules and regulations, I wanted to see how companies are able to still get close to Africa's 950 million consumers.

I saw some very creative solutions. For example, one of the most interesting companies that I studied was Innscor, a fast-food restaurant chain from -- of all the places -- Zimbabwe. But the interesting thing I discovered about this company was how they are able to cope with their country's turmoil by, for example, expanding into other parts of Africa.

Then there's its crocodile farm, the largest in the world. I asked Innscor's executives: "You have the restaurants and you also have a distribution channel used by multinationals to ship their products, so why this crocodile farm?" The answer was that because of the political situation, they realized that they would not have access to foreign currencies. So the crocodile farm, you can guess -- the skin is sold to Europeans and the meat to Chinese.

Knowledge @ Wharton: You referred to China and India. In both countries, there is an overseas diaspora that gets actively engaged in the development efforts of the homeland. Did you find the same sort of phenomenon in Africa as well?

Mahajan: Yes, diaspora is involved in Africa. According to estimates based on formal and informal remittances, Africa gets about \$40 billion a year, the same amount that India gets. And there are organizations, such as one in London called Recruit Africa, which has been set up to help African emigrants find jobs. But in the book, I make a plea to the African diaspora to really get more involved.

Mo Ibrahim, the founder of mobile-phone company Celtel, is part of the diaspora. He was originally from Sudan, educated in Alexandria, got his Masters and PhD in England while working for British Telecom, and then started the mobile phone company in Kenya. And it is a fascinating story -- how he dealt with no electricity, how he provides customer service to all these rural areas, and so on.

He is just one example of many from the diaspora who are returning home to start up companies. The university in Ghana, Ashesi University College, was started in 2002 by a Ghanaian, Patrick Awuah, who was part of the diaspora. He was a former software engineer at Microsoft and has created a very nice undergraduate university.

The person who was the head of Coca-Cola in Africa when I was finishing the book, Alex Cummings, is part of the diaspora. He is from Liberia, came to the United States to get his education, and now he has been promoted to chief administrative officer for the entire company at its global headquarters in Atlanta.

There are an estimated 100 million Africans living away from home. But the immigrants who are still connected to their homes -- like the immigrants from India and China -- are sometimes very innovative. I've been seeing some very clever ways that the diaspora is involved in talent, in helping their families to start businesses back home.

Knowledge@Wharton: What advice would you give to companies that want to tap into Africa?

Mahajan: The advice that I am going to offer is not any different than what I would offer for India and China. I met with some very interesting Unilever executives when I was in Harare, Zimbabwe, and they told me that if you really want to understand Africa, you have to go on "consumer safari". You have to go and see with your own eyes what is going on. A Coca-Cola executive in Kenya also gave me the same advice. And that's not always the case. Many companies, they said, manage their Africa businesses from their headquarters in Europe. If the top management is not there, they do not really understand the market themselves, and they do not get involved with the local institution. So the good advice that I was given was to "walk the market".

I would encourage companies to turn to that diaspora for help in penetrating those countries. To my great surprise or ignorance, I found out that the number of immigrants from Africa to the U.S. is close to 1.1 million, which is slightly less

than from India. Also, 10% of the population from North Africa is in Europe now. So you are talking about 100 million North Africans, and 10 million of them are in Europe, sending a lot of money back home. There is also a lot of talent there.

Another thing I would suggest is to think about making acquisitions.

There are many local entrepreneurs who are running remarkable companies, just like China and India. For example, there's a supermarket chain in East Africa called Nakumatt. It's just like a U.S.-style supermarket, but customized and it is growing very rapidly.

If somebody wants to go into retailing, I would see Nakumatt as a very nice candidate that they could leverage to really penetrate those markets.

The situation in Africa is not any different from India and China. You have to really get to know that continent and see for yourself what opportunities exist there.

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