# Things you Really Need to Learn

Stephen Downes

May 30, 2007
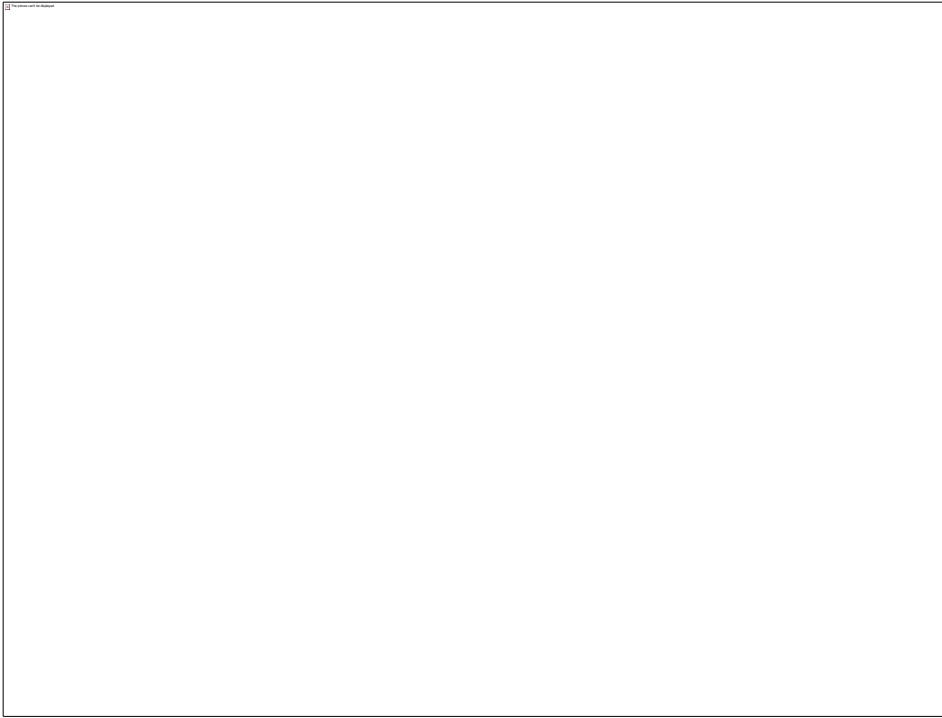
# How to predict consequences

Even though we are epistemologically shut off from the "ocean of consequences," it is critical to be conscientious of the immense power an action can have.
*- Jack Cohen*

# A combination of science, mathematics, and visualization

… the ability to create a mental model imaging the sequence of events that would follow, "what would likely happen if...?"

Games of:

- numbers and counting (eg., darts)
- action (eg., billiards, baseball)
- chance (eg., poker)
- strategy (eg., chess, go)

… and a little bit of science and mathematics education, to fill out the theory

what to watch for

## *Wishful Thinking*

focusing on what you want to happen rather than what might happen instead.

Common sense: everyday generalizations

but: *over-simplification*

.. will allow us to explore complex phenomena and their consequences

- increased physicality (eg. Wii)

- increased complexity (eg. Sim City)

- increased interactivity (eg. WoW)

http://www.elearnmag.org/subpage.cfm?section=reviews&article=7-1

# How to read

How to look at some text and to understand, in a deep way, what is being asserted…

Understanding the four major types of writing:

- Description

- Argument

- Explanation

- Definition

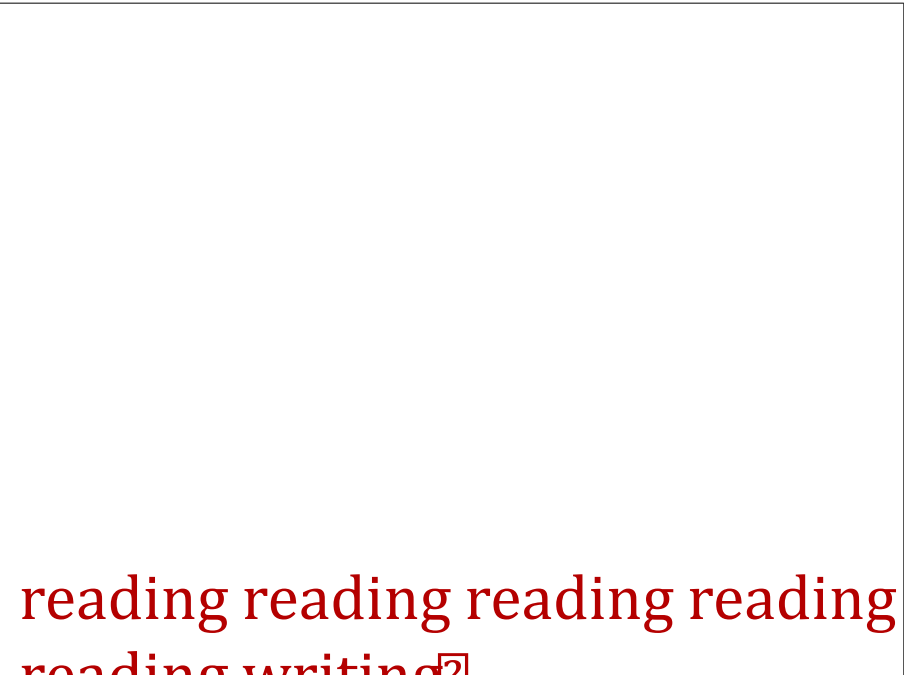http://www.isoc.org/inet2000/cdproceedings/6d/6d_1.htm

how we learn it today

grammar and language classes

and if we're lucky

logic and rhetoric

reading reading reading reading writing reading reading writing readi
reading writing

what to watch for

- reading without comprehension

- reading without meaning or purpose

## Other Literacies

- graphics and maps

- videography
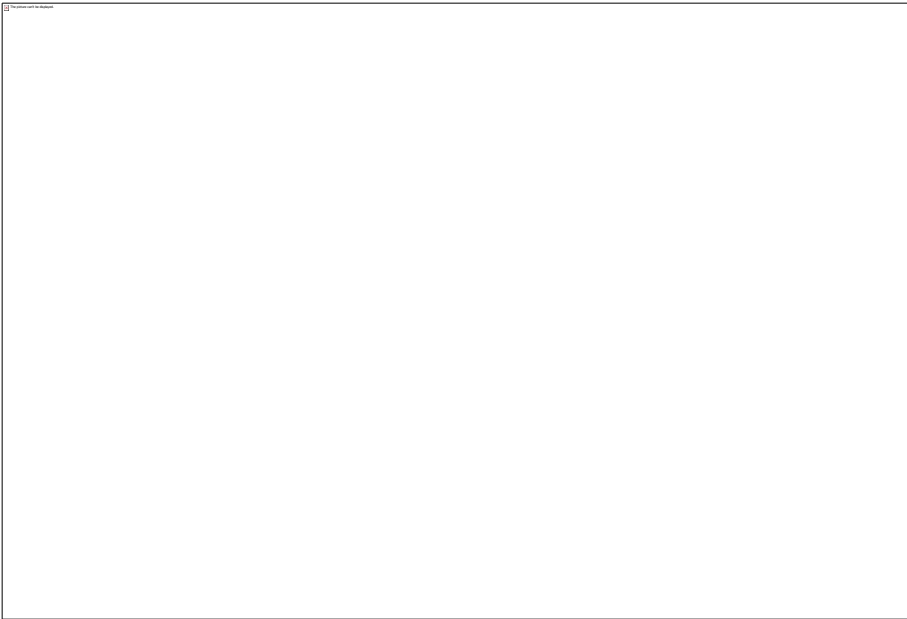
- signs and symbols

- music

- body language
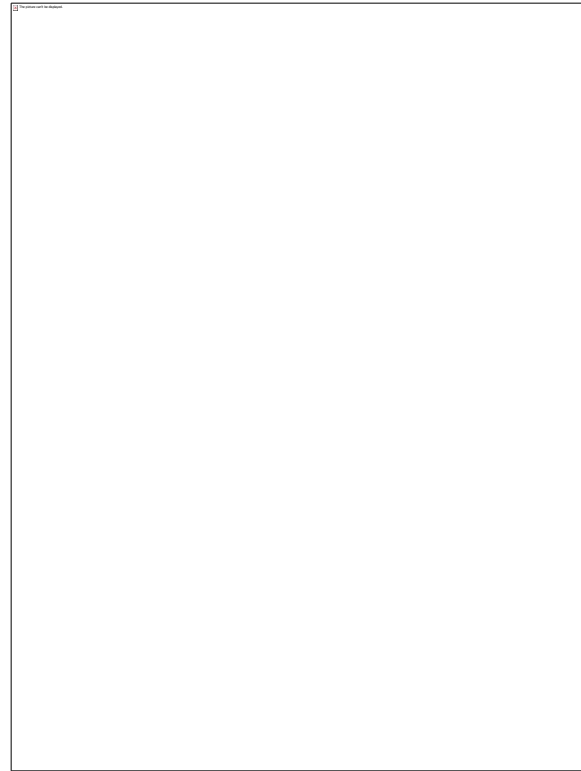
Rather than memorizing form (the old way) multimedia teaches to look for *signs* in the environment (the new way)

these are indicators
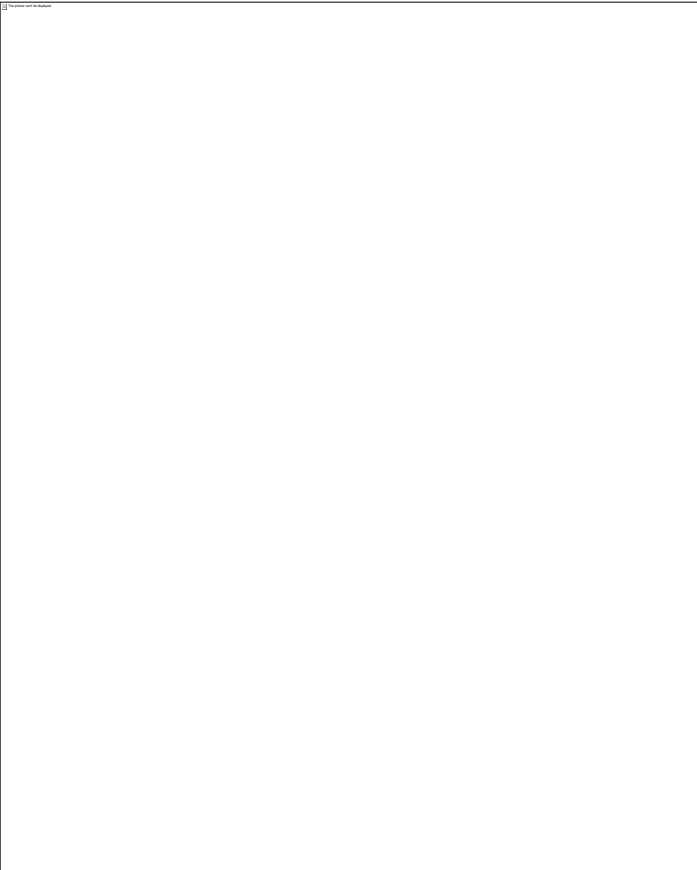
We don't just consume, we also create

reading reading reading reading writing reading reading writing readi reading writing

# How to distinguish truth from fiction

The first thing to learn is to actually question what you are told, what you read, and what you see on television.
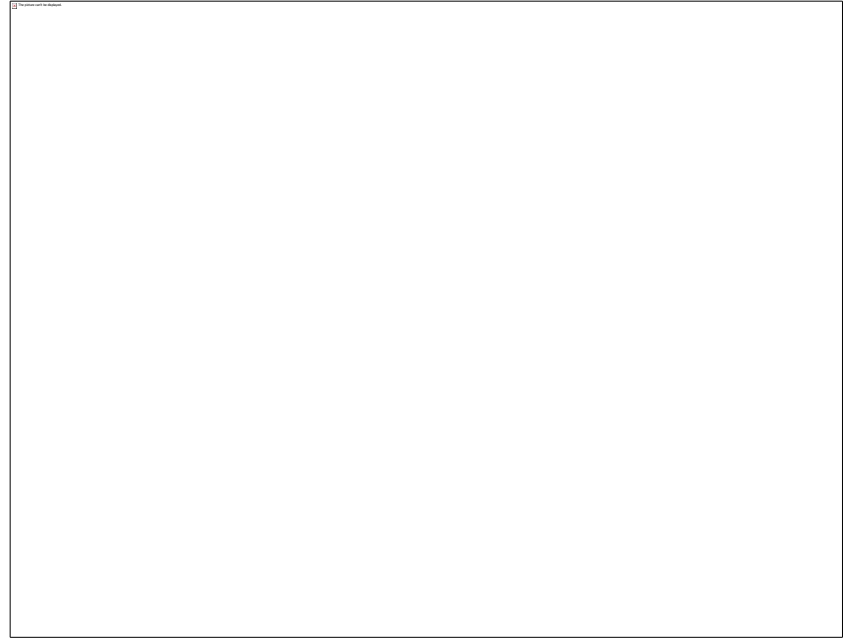
# what it is

The picture can't be displayed.

- judging for yourself

- observing

- questioning

- verifying

- putting into context

http://www.downes.ca/post/4

Mostly, we don't

The picture can't be displayed.

We are taught to depend on…

• authority (including media)

• counting (including popularity)

what to watch for

- framing
   (motives matter)

- backgrounding
   (our hidden assumptions)
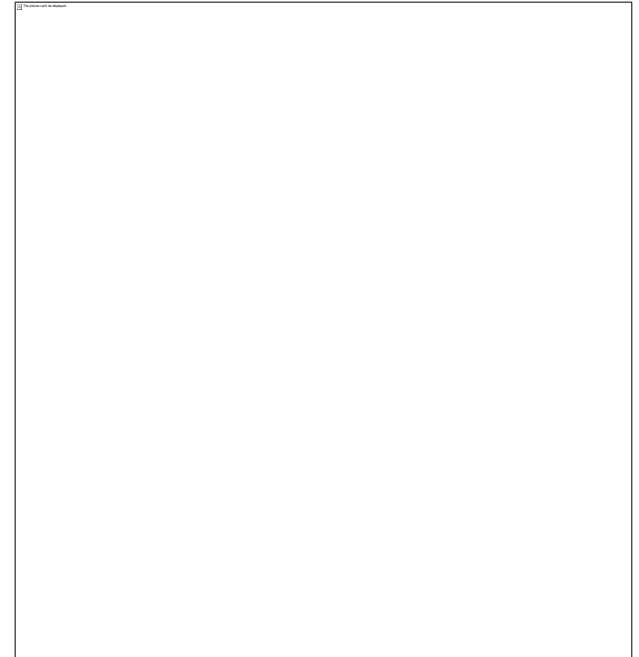
- misperception
   (we see what
   we're looking for)

# fisking

http://en.wikipedia.org/wiki/Fisking

- autonomy

- diversity

- connectedness

- openness

The Semantic Condition

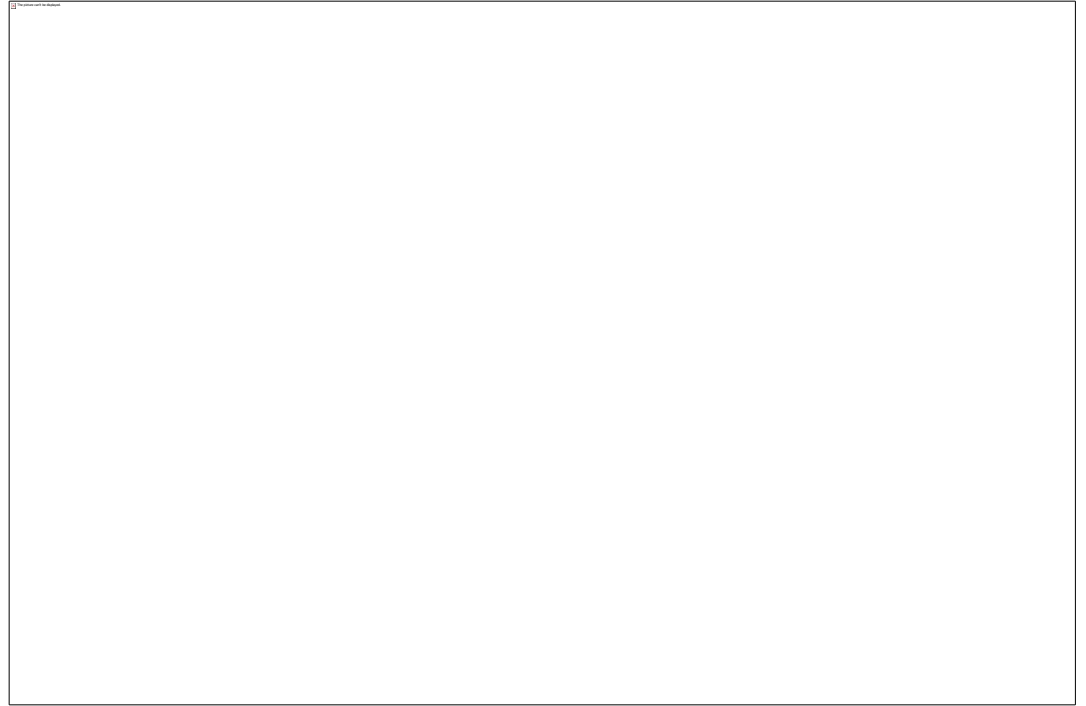http://www.theaugeanstables.com/wp-content/images/17_02.jpg

# fact-check your a

# How to empathize

The ability to imagine oneself as another person…
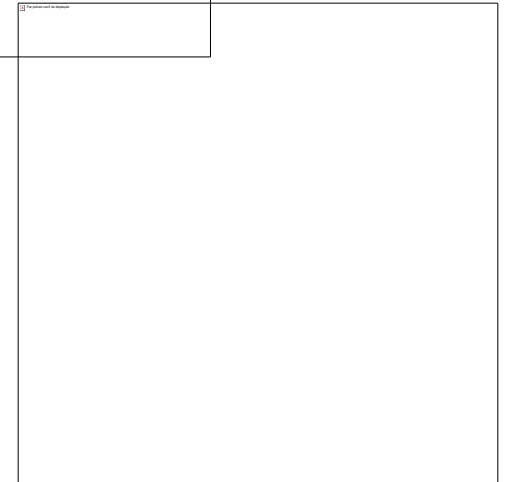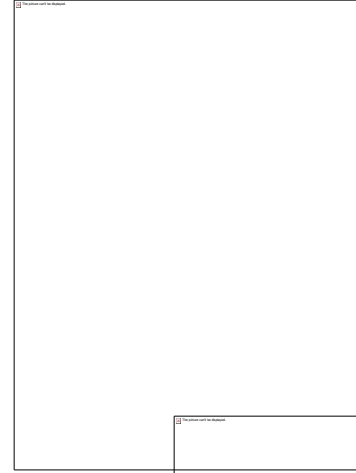
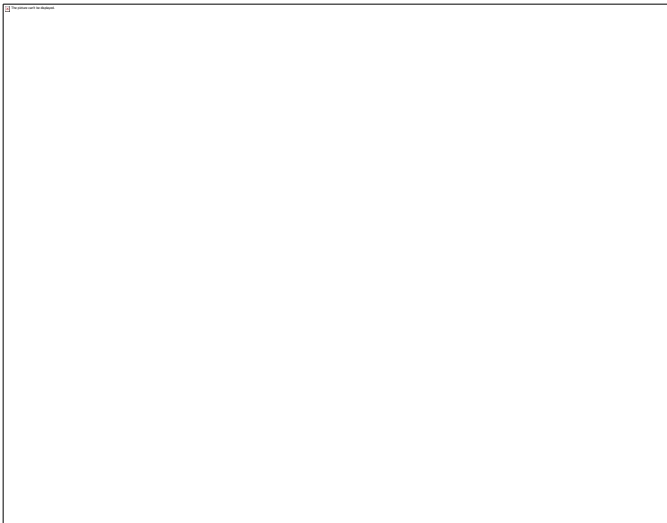The ability to *be* another person…

what it is

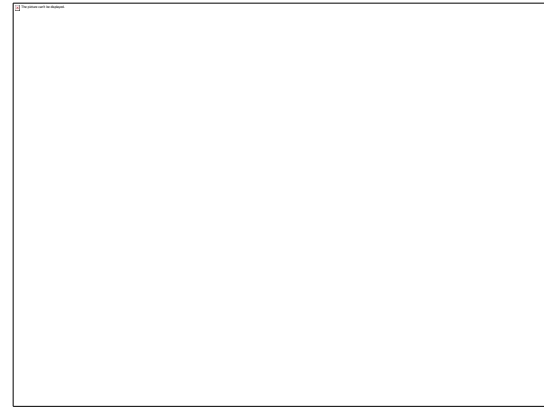a mental model of the other person's thoughts and feelings in your own mind

a genuine feeling in yourself that operates in synch with the other person

how we learn it today

… is mostly as theory

Religion

Psychology

Drama

Many schools have stopped teaching these…

what to watch for

- assuming everyone else is like you

- assuming empathy is a bargain

like, say, the golden rule

# IDENTITY SHIFTING

new tech

*World* Wide Web

*Read My Blog*

*MMRPGs*

Opens new worlds and puts us into the shoes of other people

MIRROR NEURONS

How to be creative

- A transfer of knowledge from one domain to another

- A manipulation of that knowledge

Operates by *metaphor*

thinking outside the box

Requires *pattern recognition*

that's why it's hard

It is *not* the filling of a blank slate

how we learn it today

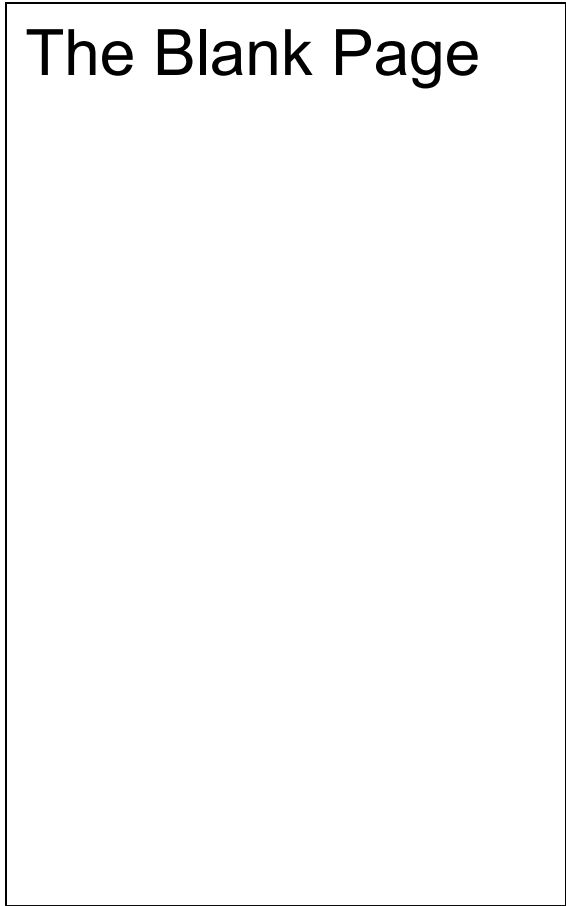by *creating thing* (usually from scratch)

Art

Music

Design

Writing

Play?

The Blank Page

Creativity is a *response* to something… how to rescue a cat, how to cross a gap, how to hang laundry…

Has unprecedented tools for creating… capturing… combining…

Mash-Ups

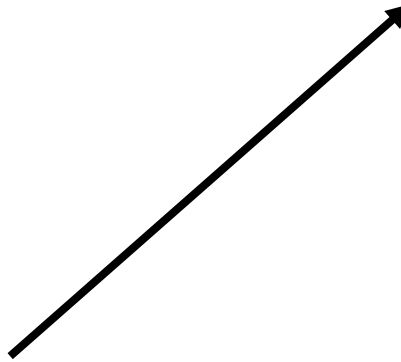Unprecedented challenges too: Have you tried to play Myst?

devote some time every day to an art - music, photography, video, drawing, painting or poetry.

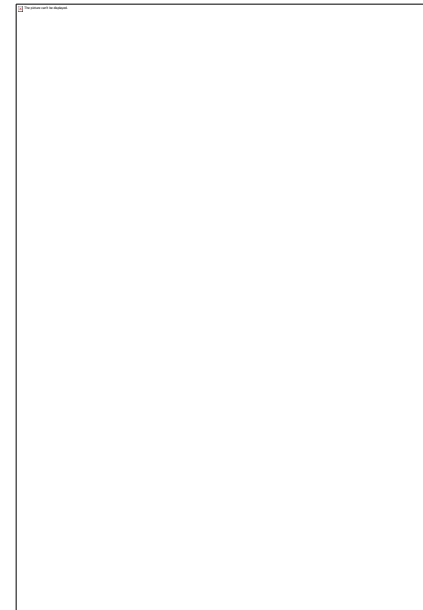# How to communicate clearly

what it is

probably the hardest

- knowing what you want to say

- knowing how to say it

**simple tools...**

how we learn it today

writing

public speaking

debating

note: mostly takes place
in closed environment
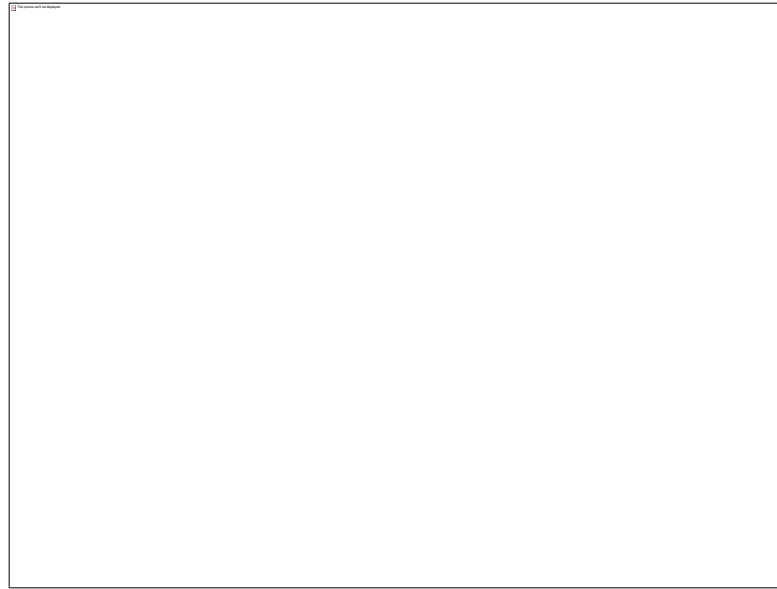
what to watch for

PYRAMID STYLE

WIN FRIENDS

It's not something you can simply teach…

It's something you need to *practice* in a real environment

new tech

Gives people a *real* audience and allows them to pose real questions

Educational Blogging

and lets them create

collaboratively

gliffy wiki co-comment subthaedit youtube wordpress drupal flickr faceb

# How to Learn

When you learn, you are trying to create patterns of connectivity in your brain. You are trying to connect neurons together, and to strengthen that connection.
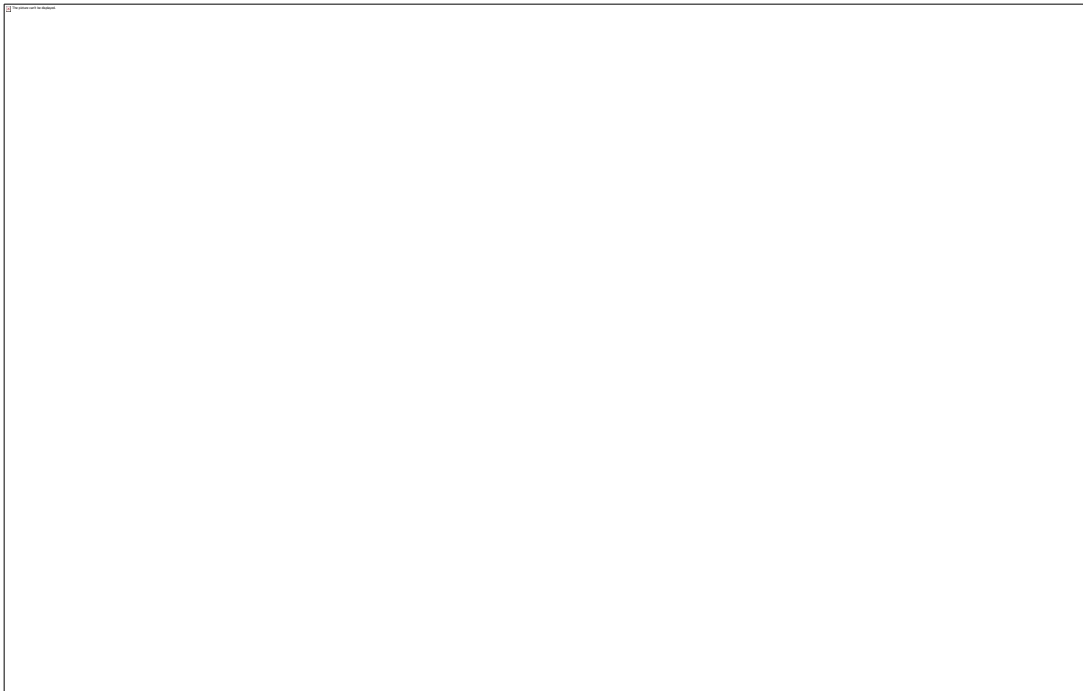
Learning is like recognition…

To *teach* is to model and demonstrate

# pattern recognition

To *learn* is to practice and reflect

Models, archetypes, flows…

how we learn it today

We listen to someone tell us about it in a class

(or maybe read a self-help book)

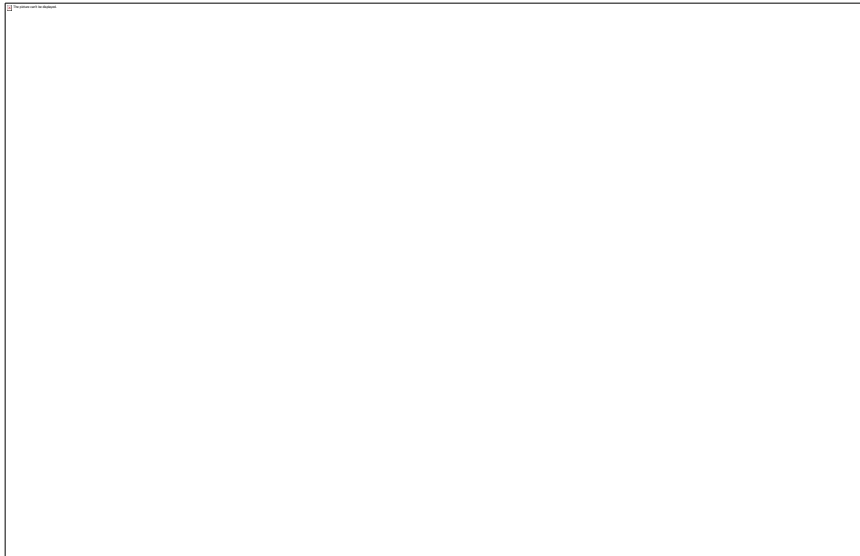what to watch for

We are always learning

The question is…

What?

Learning how to learn is learning how to *create patterns* in our mind rather than merely *acquiring* them

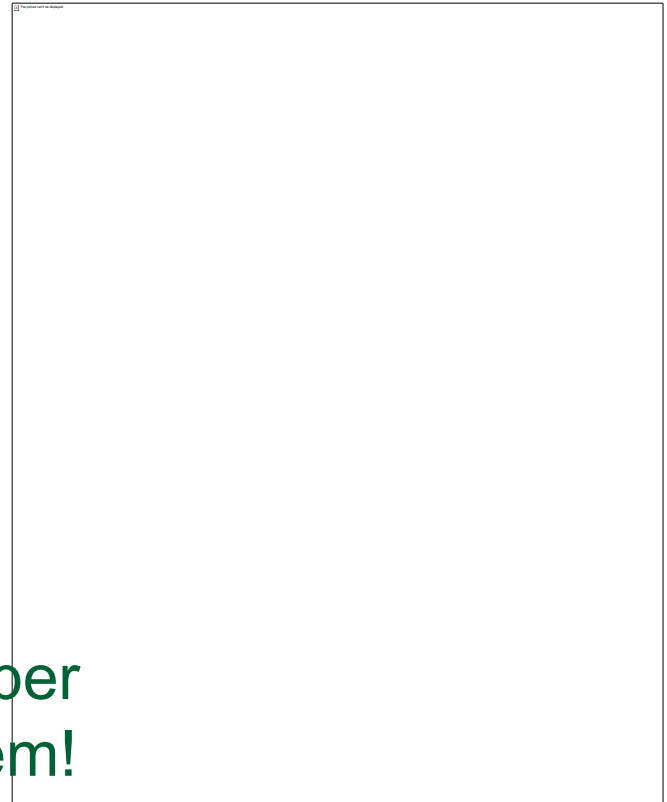lets us take control….

(yes, it's that simple)

It's our media

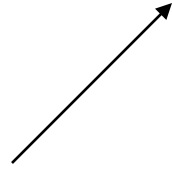It's our content

It's our patterns
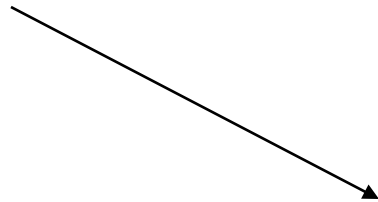
It's our learning

Be the Node

# How to stay healthy

If your school is not facilitating proper exercise and nutrition, demand them!

.. to toxins, diseases, threats, etc

Minimize exposure
Maximize resistance

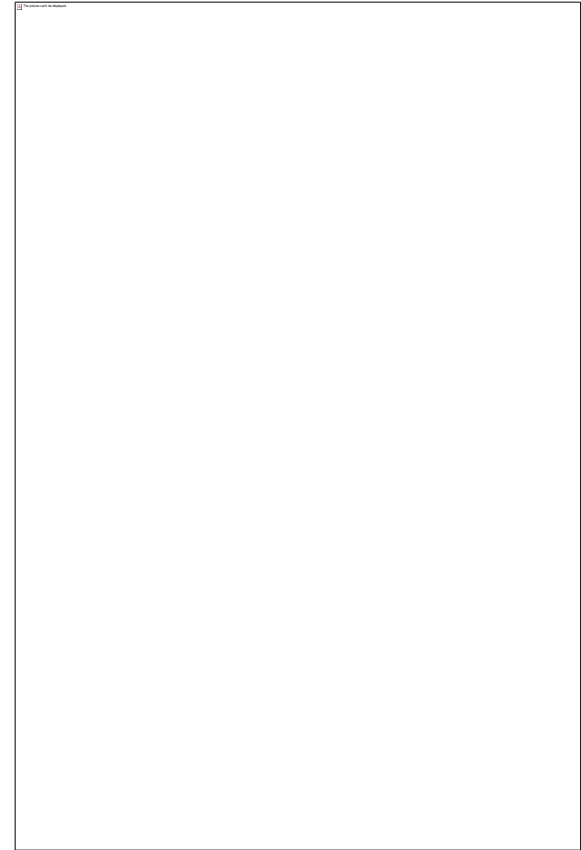.. with good foods, exercises, practices

how we learn it today

school

parents

friends

media

OMG WE'RE ALL GONNA DIE!

what to watch for

In a word: misinformation

Hit-button issues
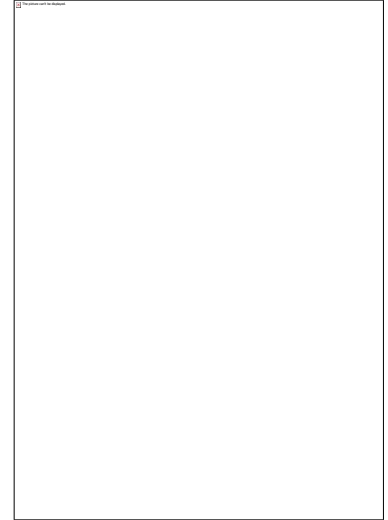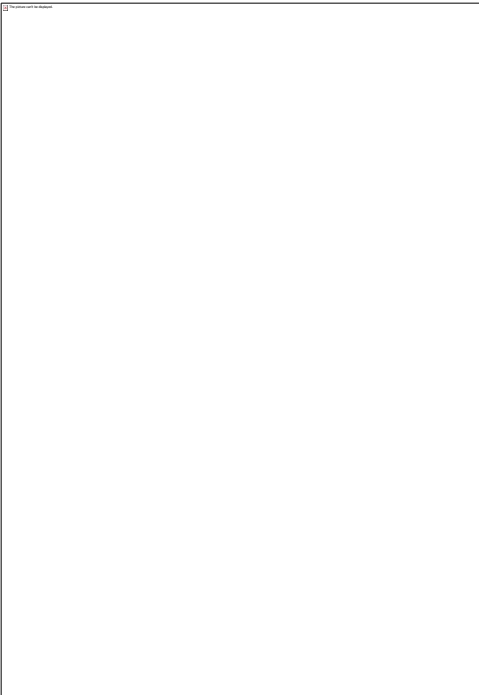
Scare tactics

Advertising

Lets us check

Lets us learn for ourselves

Lets us compare notes

Lets us exercise

Together

# How to value yourself

In order to value yourself, you have to say "I am valuable."

the belief that you are good enough (to have an opinion, have a voice, and have a say, that your contributions do matter)

the belief that you are capable (that you can learn to do new things and to be creative)

your ability to be independent (to not rely on some particular person or institution for personal well-being)

and autonomous (capable of making your own decisions and living your live in your own way)

how we learn it today
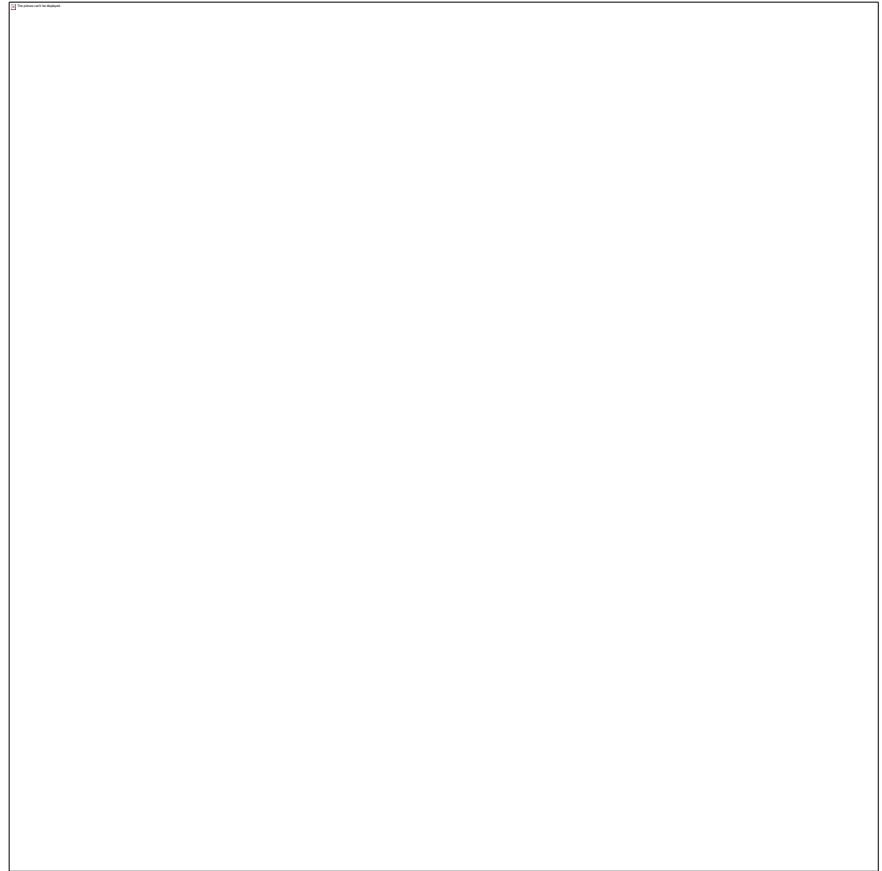
We watch Dr. Phil

who tells us it's ok…

after this commercial break

# People who say you're worthless

## (unless you vote for them, do what they say, buy their product)

If somebody tells you that you are worthless over and over, and if you do nothing to counteract that, then you will come to believe you are worthless, because that's how your neural connections will form.
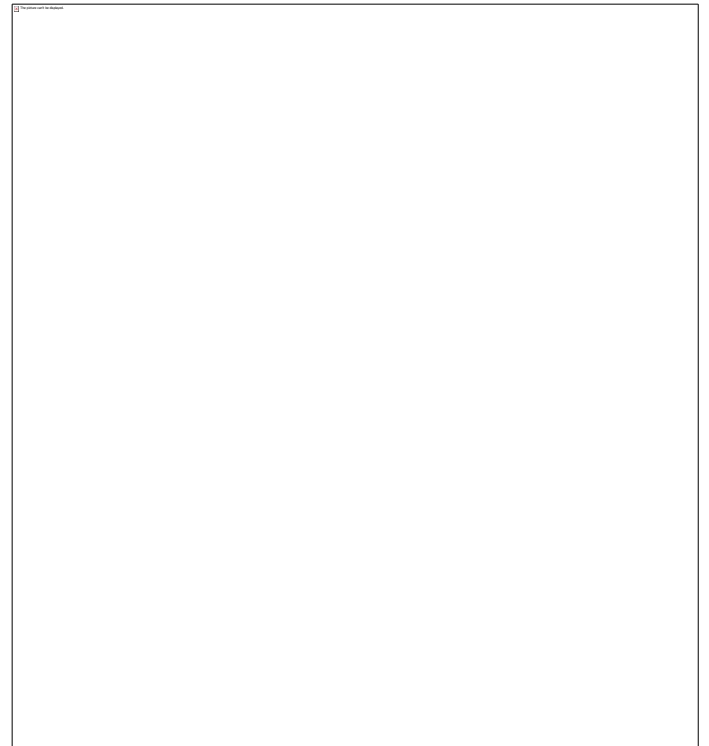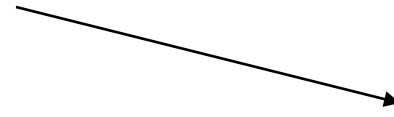
new tech

Tell yourself that you are smart, you are cool, you are strong…
Say it out loud, in the morning, each day
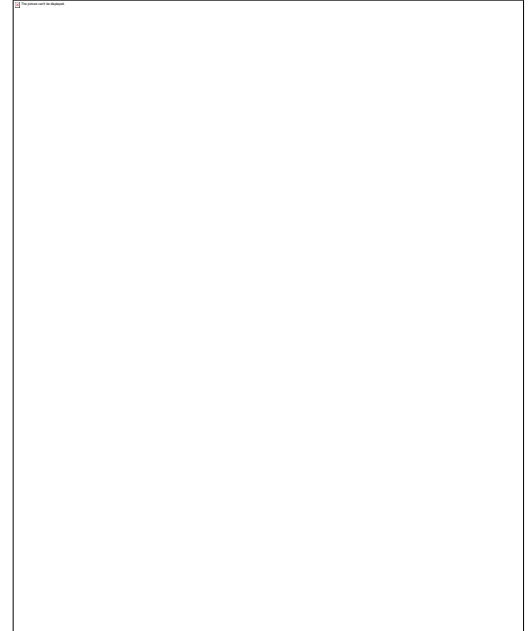Then, practice these attributes.
Be smart…

ONLINE…

# Google / Yahoo Groups

My network is my support group

# Skype / IM / Email

I am the network

# Blog / Wiki / YouTube

# How to live meaningfully
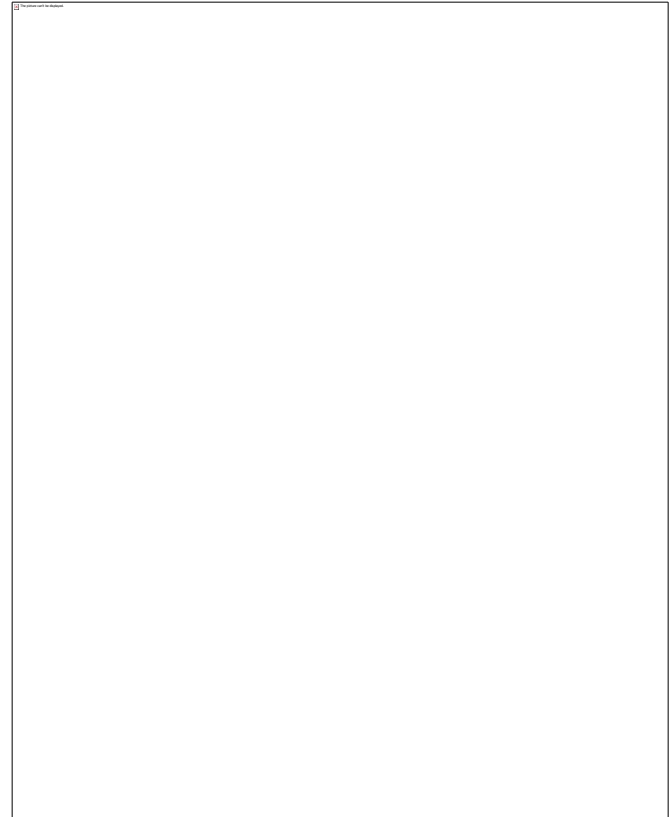
What you are doing right now is the thing that you most want to do

# Dedication to a goal or cause

# Appreciation of the here and now

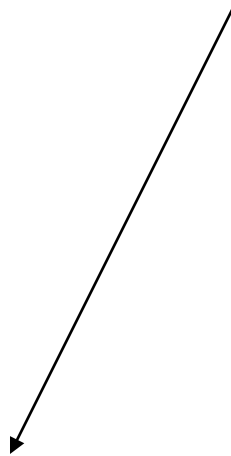- educate people
- cure diseases
- explore space
- worship God
- raise a family
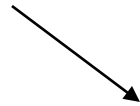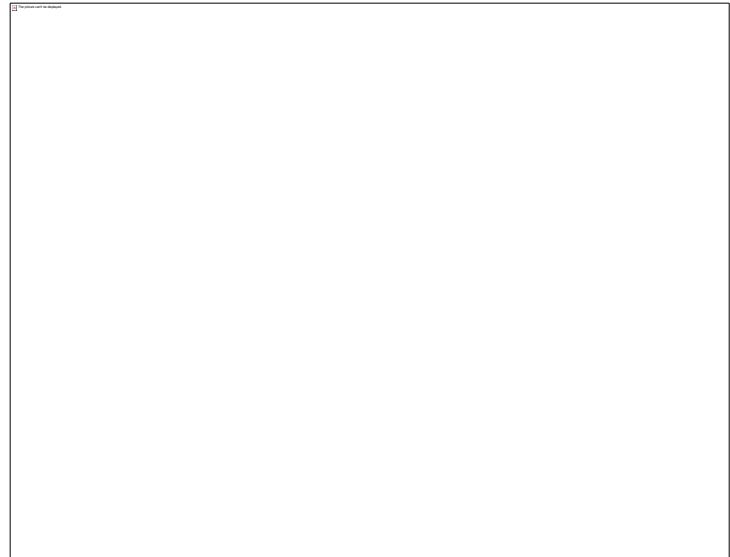- design cars
- make art
- attain enlightenment

http://web.ncf.ca/ek867/feininger.bridge.jpg

how we learn it today

# Good question…

There's no shortage of people who will tell us how

But do we ever learn to decide for ourselves?

what to watch for

The difference between means and ends
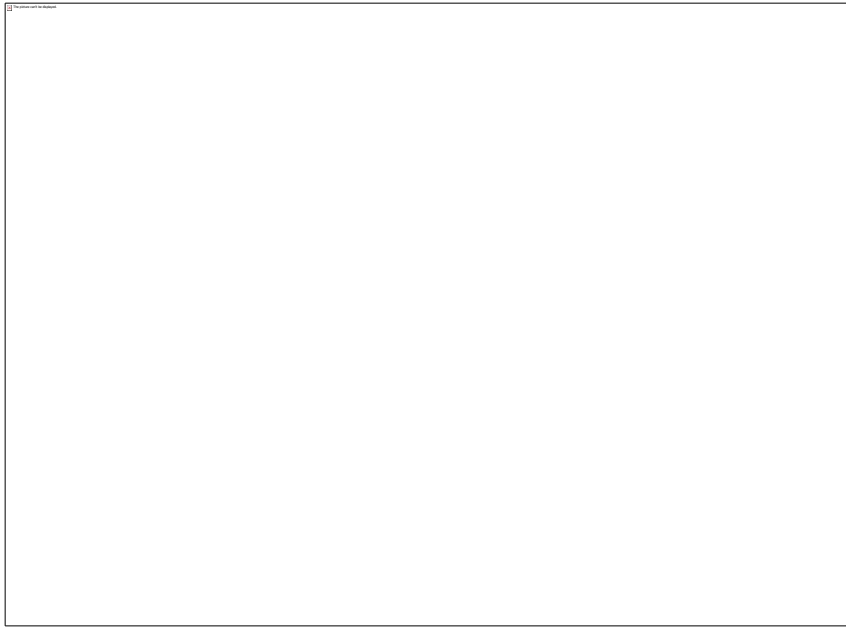
money, fame and power are things people seek in order to do what is worth doing.
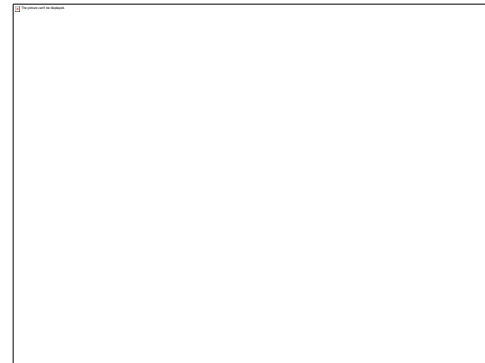
What is worth doing?

# New technologies give us choice

# The world is (quite literally) what we make it

## (just ask the people who made Second Life)

When you realize you have the power to choose what you are doing, you realize you have the power to choose the consequences.

Everything you do has meaning

Stephen Downes

http://www.downes.ca