

Planet of the Apps: The Myth of Innovation

A talk by Langdon Winner

SLIDE #1 – bio

Slide #2 – GOD TERMS

This afternoon I'm want to talk about one of the main ideas used to describe the process and promise of technological and social change in our time.

Philosophers and scholars of rhetoric point to the significance of what they call "god terms": concepts that have a certain "inherent potency." God terms sweep up whole periods of history as nations and cultures strive to reach a higher state.

SLIDE #3 -- Revolution

For example, during the late 18th century and throughout the 19th century a prominent "god term" was "Revolution".

SLIDE #4 - FRONTIER

Always popular in the United States is another god term, "Frontier". Over many decades this term, this concept, has been continually redefined. Where the Frontier was, the significance it had for people, changed over time.

SLIDE #5 – SPACE FRONTIER

But in the American experience there was always a "New Frontier" toward which we were striving.

SLIDE #6 – TODAY’S “GOD TERM”

Today's favorite god term identifies an object of veneration, and even worship in universities, think tanks, corporations, on Wall Street and in the dreams of our social elites.

A good number of my own students and colleagues, for example, are attracted to and mobilized by this grand idea.

SLIDE #7 -- ASSOCIATED WITH ...

The concept is widely associated with creativity, ingenuity, success, wealth, fame, personal virtue, national prosperity and cultural vitality. All of these are understood to be good things. They are, I would say, for many people the source of their deepest spiritual aspirations and the object of their highest spiritual longings.

SLIDE #8 – INNOVATION !!!

By now you’ve probably guess that the god term I’m talking about is “innovation.”

The word comes from the Latin *innovare*, which means "to renew."

It's an inherently, overwhelmingly positive concept, which is one reason why so many are attracted to it.

Innovation discourse is popular because it carries the aura of **creativity**. People imagine that they will be working with new ideas, starting new enterprises, revitalizing regional economies, playing a leading part in creating what they imagine to be a lively and engaging social future.

Today everyone wants to be associated with innovation. Some of my best friends are right in that zone.

SLIDE # 9 – TECH PARK - INGREDIENTS

In many ways the study and promotion of innovation has become a growth industry. There are now research centers, university departments, book series, academic journals, and endless conferences that engage in search for exactly the right formula, the right recipe, the right mix of ingredients to make it all happen.

Are emerging technologies the key? Or should we look to ingenious styles of management? What about the role of the arts and of artists? Do they have a place in this wonderful alchemy?

Which kinds of corporate culture, which models of university education, which varieties of government support, which social and psychological traits are the ones best suited to fostering innovation?

In discussions of business strategy and public policy, this has become a key concern.

I am certainly not immune to this way of thinking and talking. Right now I teach in a university program – Product Design and Innovation and a related one -- Design, Innovation and Society.

Indeed, many of my own questions today stem from a simple desire to understand: What is this stuff all about?

SLIDE #10 – VENERATION OF THE GADGET

To begin, it's clear that young people in colleges and universities are transfixed by what might be called The Gadget Focus in innovation: the search for the next iPod, iPhone, iPad, and so forth. Or the next fabulous smart phone APP!

Some of the accomplishments called "innovations" these days include:

SLIDE #11 – AUDI SELF-PARKING

Behold the Audi self-parking car. Let's say you're in a tight spot in a garage. You get out of the car & it parks itself. Such are the miracles of our time.

SLIDE #12 -- INTERNET OF CARING THINGS

In many cases fascinating innovations appear to us not as single objects, but as whole genres, elaborate projects with a great many manifestations.

At present people are getting excited about "The Internet of Things." But clearly, that's not enough. Moving onward we have folks talking about "The Internet of Caring Things." In a Society that seems to care less and less, we'll have things that care about us more and more.

A good example, shown here, is Cuptime, a plastic cup that "connects wirelessly with a cell phone, allowing consumers to monitor their water intake."

Of course, you could also just watch how much you're drinking, but that would not be especially innovative. And

above all, of course, we want to be “innovative.”

SLIDE #13 -- TEXT

It is impressive to see such ingenuity and devotion lavished upon such products and apps. [Slide change...]

SLIDE # 14 – PLANET OF THE APPS?

Yet one has to wonder: Is this becoming The Planet of the Apps?

A distinctive characteristic of the kinds of products identified as “innovative” are ones that serve the needs of high end consumers and of wealthy global firms.

SLIDE #15 -- MILES DAVIS – Benign innovation

Despite my misgivings, it’s clear that many of the kinds of ingenuity and creativity today called “innovations” truly are worth celebrating. One could mention contributions that change, enliven and enrich long standing and practices in the arts, crafts, music and technology.

An example that I find interesting is the career of the great innovator in twentieth century jazz, Miles Davis. Beginning in the 1940s as a rather ordinary player in the style of bebop, Miles soon moved on to a more smooth, mellow harmonically complex style known as cool jazz. Over the years he again and changes his way of playing initiating or contributing to hard bop, orchestral jazz, jazz/rock fusion, hip-hop, and other styles.

Miles never rested on his laurels. At the pinnacle of success of one style he would drop it and move on to something else. Thus, he left to the history of jazz a long sequence of stunning, successful, highly generative innovations.

To my way of thinking activities and projects that modify and renew traditions and instruments of practice, might be called graceful or benign innovations. What characterizes them, in my view, is that they usually deeply respect what came before and yet chart new, challenging, fruitful possibilities. The old traditions are not trashed, but they are modified, unfolding into something new.

But in today's understandings of technological, financial and corporate strategy, it is not the model of benign innovation that is the object of fascination and advocacy.

Instead the models that are worshipped are ones that involve deliberate violence, destruction and disruption.

SLIDE #16– JOSEPH SCHUMPETER

Far from respecting and building upon a tradition of tools and practices, the recommendation is to enter in discrediting, smashing up rapidly replacing what came before, usually with a narrow set of motives in mind – corporate profit and market capture.

While the term innovation has long has a long history in European languages, it is possible to date its emergence as a key concept in thinking about technology policy to the middle 20th-century, especially in the writings of the Austrian thinker Joseph Schumpeter, who eventually taught economics at Harvard.

Looking at the dynamics of modern capitalism and in particular the ways in which new industries replace old ones and new products replace functionally similar products of earlier times, Schumpeter proposed the notion of **Creative Destruction**.

SLIDE # 17 – CREATIVE DESTRUCTION

He wrote, “The fundamental impulse that sets and keeps the capitalist engine in motion comes from the new consumers’ goods, the new methods of production or transportation, the new markets, the new forms of industrial organization that capitalist enterprise creates.”

He emphasizes the dynamics of a “process of industrial mutation ...— that incessantly revolutionizes the economic structure from within, incessantly destroying the old one, incessantly creating a new one. This process of **Creative Destruction** is the essential fact about capitalism.”

Although Schumpeter’s term was a new and catchy one, the basic idea had been around for some time. Much of social and political commentary on the rise of industrialism and industrial society emphasized the kinds of sweeping economic and social disruptions that accompanied technological change from the late eighteenth century into the early twentieth.

SLIDE #18 – DISRUPTIVE INNOVATION

At the present moment, the person most widely recognized as a proponent of an openly aggressive program for innovation in the mode of creative destruction is Clayton Christensen at the Harvard Business School.

Christensen's method is to locate existing sources of value contained within existing fields of endeavor — communications, transportation, health care, hotels, education, etc. and fundamentally restructure them with a disruptive innovation of some kind or another. If you can crack open the existing social container of economic value and strongly reconfigure its flows and contents, then the rewards will come pouring out, captured as profits for some new business enterprise.

You can see why this idea is so popular in business schools and the corporations they advise.

Christensen's view is that, in fact, such disruptions are inevitable given the continuing emergence of new forms of hardware and software that eventually challenge and destroy the status quo in just about any form of organized social activity one can mention.

SLIDE #19-- DISRUPTOR AND DISRUPTEE

In Christensen's schema, disruptive innovations occur when a new product or idea "transforms an existing market or sector by introducing simplicity, convenience, accessibility, and affordability where complication and high cost are the status quo."

Here's a slide from Prof. Christensen's web site. You see the Disruptor and Disruptee

His key model is the replacement of the DEC mini computer with the laptop.

Christensen and his followers now apply this way of thinking in many areas of business & social life, including **education.**

SLIDE #20 – DISRUPTING CLASS

His book on that topic is *Disrupting Class: How Disruptive Innovation Will Change the Way the World Learns.*

The book makes it clear that innovation must be aggressive and forceful. At the book's conclusion he advises his readers:

“The tools of power and separation, though they seem foreign to leaders who have been schooled in consensus, are the key pieces of the puzzle of education reform. As you face budget crises and difficulty finding teachers, don't solve the problems by doing less in the existing system. Solve it by facilitating disruption.”

It's interesting that he openly embraces the classic military and political strategy of divide and conquer.

SLIDE #21: AMERICAN PHILOS OF EDUCATION

SLIDE #22 -- IF IT AIN'T BROKE

In America there's a traditional saying: “If it ain't, don't fix it.”

In stark contrast, the advice of the disruptive innovator seems to be: “If it ain't broke, by all means **BREAK IT!**”

I will return to the vision of Education that characterizes the

disruptive innovation. But before I do that I want to make some general observations about this phenomenon

SLIDE #23 – INNOVATION REPLACES “PROGRESS”

Today’s ideas of “innovation” inherits the optimistic aura of the **idea of progress**, a notion that took root in the 16th century and eventually came to define the highest aspirations of modernity.

The idea of progress expressed conviction that humanity’s prospects depend upon continuing expansion of scientific knowledge, embodied in technological advance, leading to inevitable improvement in nutrition, health, mobility, and other kinds of material wellbeing along with general improvement in social, moral and political conditions.

SLIDE #24 – UNIVERSAL TENDENCY: NO

Today’s ideas of “innovation” inherit the optimistic aura of the **idea of progress**, but with significant differences. Innovation is often conceived as a matter of limited application and market-centered benefits.

A product or idea is useful, accessible, flexible, lower cost than the available alternatives. It helps a business or organization to vanquish the competition and capture savings and profits.

The belief in an **inevitable, universal tendency** toward improvement in living conditions for **all of humanity** – that’s **no longer part of the scheme**.

SLIDE # 25-- JEWEL IN THE CROWN OF NEOLIBERALISM

In that light, the concept of “Innovation” is perhaps best seen as a key feature, the jewel in the crown, in the world view of neoliberalism, the ruling ideology of our time.

SLIDE 26 -- NEOLIBERALISM

Neoliberalism is an economic and political philosophy which advocates . . . “privatization, free trade, open markets, deregulation, and reductions in government spending in order to enhance the role of the private sector in the economy.” [*Wikipedia*]

In this ideology, market approaches are believed to be superior because they foster a **spirit of innovation** by those who hope to profit from their success.

The core belief is that the world will improve incrementally by the proliferation of clever innovations that succeed in the global market.

We can feel good about the renunciation of any widely shared idea of the common good, ... We can celebrate the destruction of institutional and material frameworks that previously sought to realize social, economic and political wellbeing for all BECAUSE neoliberal policies generate innovative activity.

SLIDE # 27 -- SHOCK DOCTRINE

Seen in the mode of “creative destruction” and “disruptive

innovation,” theories and projects of innovation bear a strong resemblance to the episodes of “**Shock Doctrine**” described in the writings Naomi Klein.

Klein argues that when an earthquake, tsunami, war, revolution, coup d’etat, or financial crash upsets the existing order of things, often the event is seized upon as an opportunity for radical, right wing, market-centered restructuring.

In her view the deliberate, well planned results of Shock Doctrine in practice are almost always to the benefit of political oligarchs, billionaires and global firms. By the same token they are almost always at the expense of anything one might call “the common good” in the societies affected.

Policies of neoliberalism – outsourcing, privatization, anti-unionism, deregulation in banking and environmental protection, dismantling of public services, pressures to maintain low wages, imposition of a mountain of debt on college students, and similar measures are now widely recognized to have led to the erosion of the wellbeing of the middle class and working poor in the USA during the past three decades.

SLIDE #28 – Solution to the worlds great problems

Beyond its central role in the twisted ideology of neoliberalism and its applications, there are other ways in which the cult of innovation has destructive effects.

In today’s discussions of global issues, **innovation is often upheld as the ultimate solution to humankind’s greatest problems:**

World poverty, inequality, energy crisis, resource depletion, global climate change, etc.

Many people like to say: “If only we were *innovative enough*, these problems would surely be solved.”

Is this confidence warranted?

Slide #29 -- Will we innovate ourselves out of the glaring gaps of inequality that now afflict many world societies?

Slide #30 -- Will we innovate ourselves away from the utter dependence upon fossil fuels upon which modern civilization depends?

Slide #31 -- Will we innovate in ways that remove the rapidly moving threat **global climate crash** poses to modern civilization and countless biological species including our own?

Slide #32 – (Rodin’s Thinker)

It’s a serious puzzle.

Slide #33 -- Bill Gates – “Innovating to Zero”

A good example of the common tendency to insert the idea of “innovation” when confronted with world historical crises comes from Bill Gates vision announced in his TED Talk on global warming, “Innovating to Zero” (Feb. 2010)

“We need solutions,” Gates exclaimed, “either one or several that have unbelievable scale and unbelievable reliability...”

“These **breakthroughs**, we need to move those at full

speed, and we can measure that in terms of companies, pilot projects, regulatory things that have been changed.”

Gates mused optimistically that if the expected technological miracles all happened as expected, then the world could reach ZERO carbon emissions in just a few decades.

It's worth noting Gates holds similar views about education, by the way. He believes that what we need are clever infusions of new digital technology and ingenious programs of “innovation.” The more disruption in the schools the better.

34 -- Comparison: IPCC Report 2014

One can compare the enthusiasm of Mr. Gates on climate and “innovating to Zero” to the ongoing stream of scientific reports published recently.

Here, very quickly, are some of the findings from the 2014 report of the U.N. Intergovernmental Panel on Climate Change.

Profound effects of global warming are already felt around the globe.

The rate of greenhouse gas emissions is rising twice as fast as in the late 20th century

The UN target of no more than 2 degrees Celsius increase is already in serious jeopardy

A 40 to 70% reduction in greenhouse gases is urgently needed by mid-century.

Only 15 years are left to bend the emissions curve downward, otherwise the costs become prohibitive

From this standpoint a hugely important question is this:

SLIDE #35 – Innovation or Evasion?

If one compares happy expectations about several decades of innovation to the emergencies the climate scientists persuasively exhort us to recognize, an interesting question looms:

Are we engaged in “innovation” or “evasion”? (The words sound about the same when spoken rapidly.)

For instance, should the program in which I teach be called:

Design, Innovation and Society
Or Design, *Evasion* and Society?

A leading research center bears the name “Global Center for Entrepreneurship and Innovation”

A realistic appraisal might suggest it be called the “Global Center for Entrepreneurship and *Evasion*.”

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I realize that what I am saying here is heresy and perhaps even blasphemy.

What we’re doing here is to explore key tenets of a basic faith of this period of history -- the ideas and strategies that are objects of veneration and devotion in universities, business

firms and the life projects of many of you in this room.

My basic point is that the focus upon “innovation” very often harbors an unspoken, unacknowledged **tendency toward evasion and delay.**

Rather than confront the world’s great problems and challenges face to face;

Rather than draw upon available knowledge to propose intelligent remedies, we say “Well, let’s innovate and see if something clear turns up that will save us.”

SLIDE #36 – Innovation is often an excuse

In sum, talk of “innovation” is often an excuse – a self-centered, self-interested excuse to justify evading and delaying practical steps that might be taken immediately:

For example, steps relevant to global warming: instituting stiff carbon taxes worldwide; taking well-known measures To reduce energy use, including lowering highway speed limits right now.

As an emphasis that insists upon finding new blends of science, technology and social cleverness, the strategy of “innovation” delays offering more immediate, perhaps simple solutions – with available knowledge – that may be close at hand.

Slide #37 –“Reform in the schools”

Reform in the schools of the USA typically involve one or more of the following “innovations”

- More rigorous forms of “high stakes testing” with tough discipline for teachers and schools whose test scores do not rise

Nationwide “Common Core” curriculum

Privatization of public schools (Charter Schools industry)

Infusions of the latest generation of computers along with ideas of student-centered learning [Christensen’s proposal]

Slide # 38 --- REFORM RESULTS

All such intensive reforms

- Devalue the knowledge, skill and creativity of teachers
- deemphasize students’ love of learning
- show little if any improvement in students achievement

Slide #39

TODAY’S EDUCATION HEADLINES:

“U.S. STUDENT PERFORMANCE SLIPS ON NATIONAL TEST”

[test scores fall, not rise after “reforms”]

“DECLINING STUDENT RESILIENCE: A SERIOUS
PROBLEM FOR COLLEGES”

[students educated with incessant standardized testing and with no love of learning are in a **panic.**” **I see these students in my classroom frequently.**

Slide # 40 Thinking outside the box Is the new box.

A common phrase used to exhort people to take up the cause of “innovation” is the need “Think outside the box.” One way to summarize what I’ve argued this afternoon is the conclusion that: Thinking outside the box IS the new box.