

The Love of Innovation: Toward a Theology of Breakthrough Corporate Innovation

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the **LOVE** of innovation

Outline

- I. Introduction
- II. Research: Serial Innovators
- III. Observations: Epistemology of Innovation
- IV. Reflection: The Love of Innovation
- V. Closing thought

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Notable product innovation in the past fifty years ...

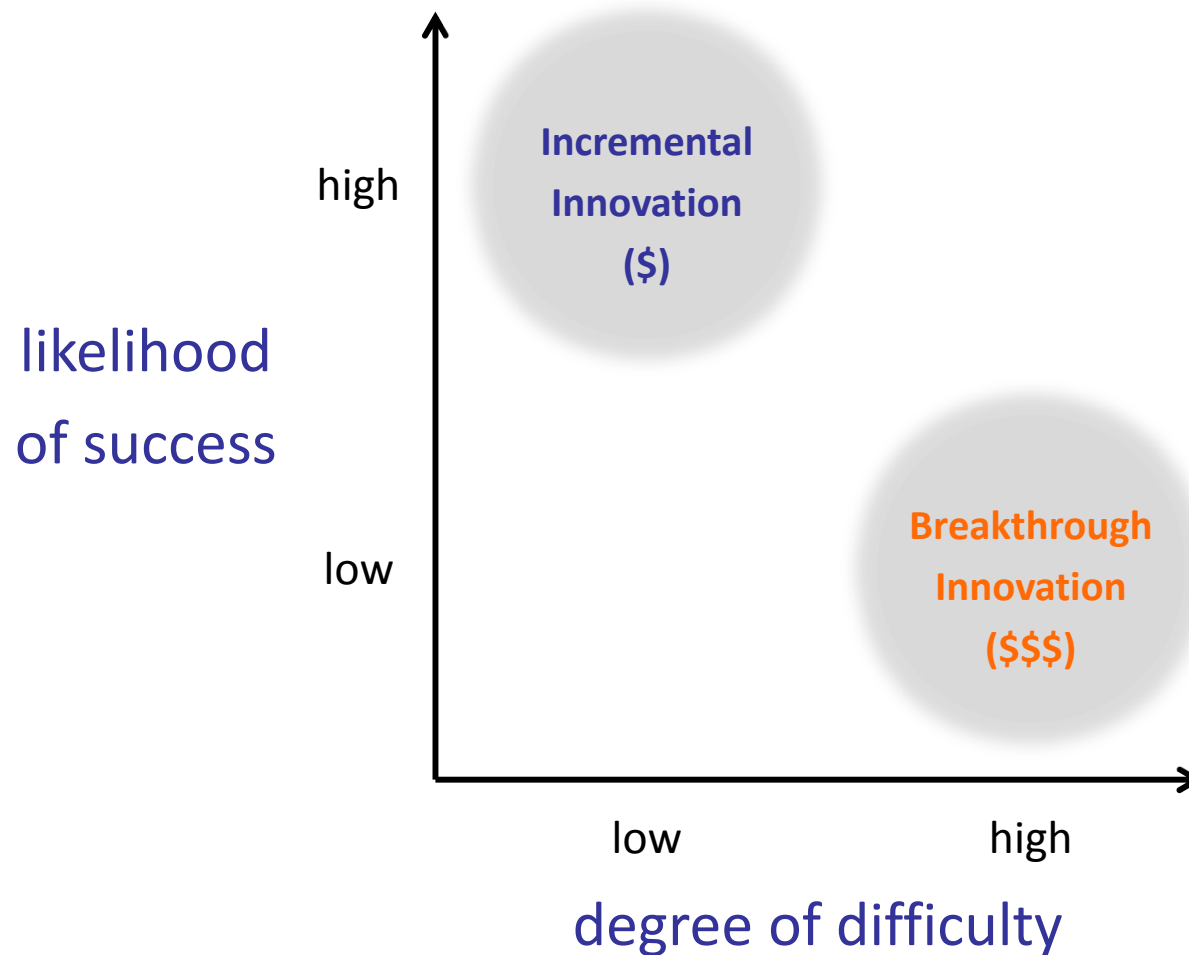
Product concept	1963 products	2013 products
Personal music	LP record, pocket radio	iPod
Portable computation	Slide rule	Calculator, laptop
Voice communication	Wireline telephone	Cell phone
Digital news	Teletype	Twitter
Computer memory	Paper punch card	Memory stick
Map	Paper	GPS, Google Earth
Diaper	Cloth	Paper disposable
Reading material	Book, news paper	eReader, iPad
General information	Print encyclopedia	Wikipedia

- The lives of individuals and the survival of firms are impacted by such innovation

Contrasting opportunities: incremental and breakthrough

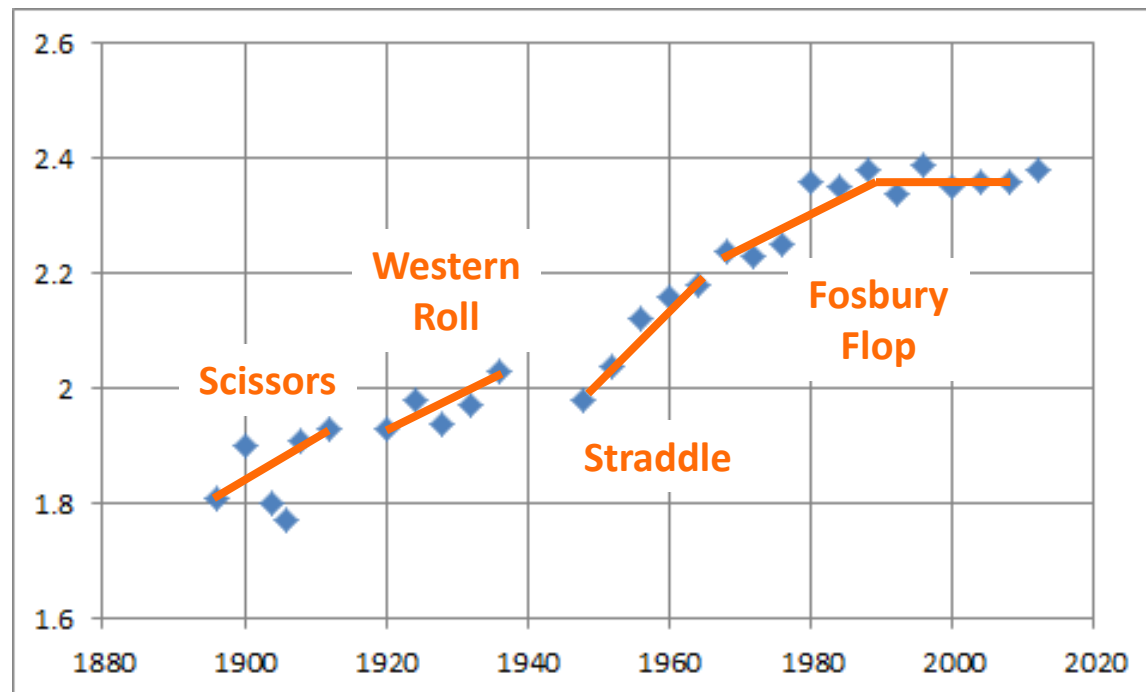
- Peeling carrots

Contrasting opportunities: incremental and breakthrough



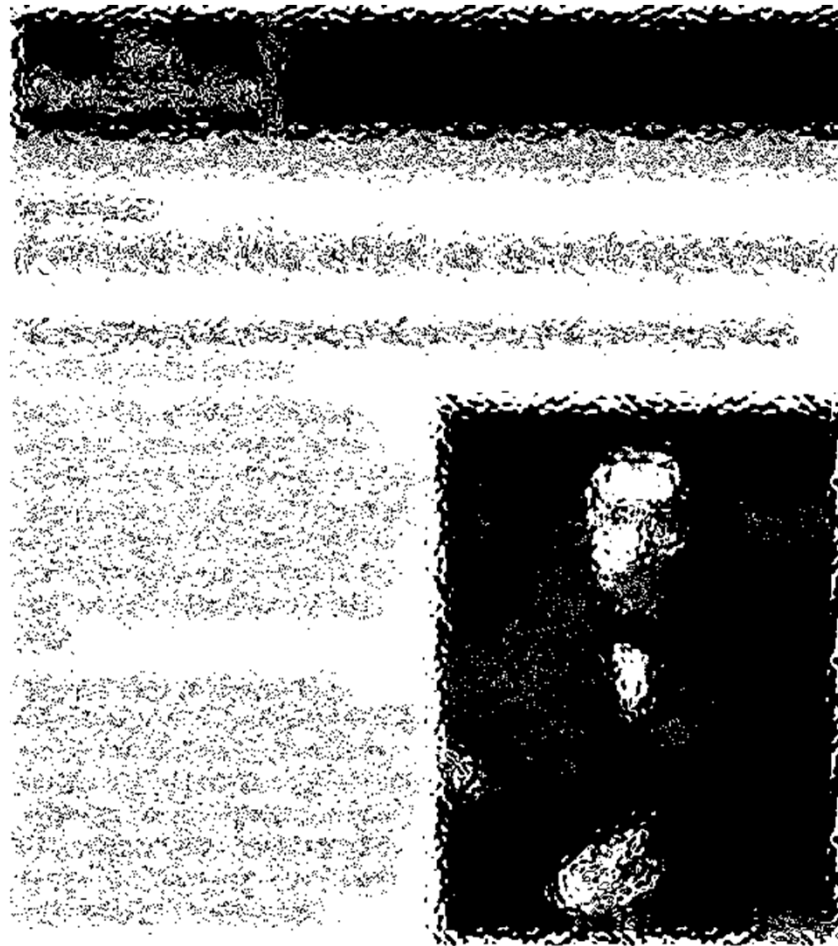
Yet, such innovation is not limited to business

Olympic high jump gold medal heights (m)

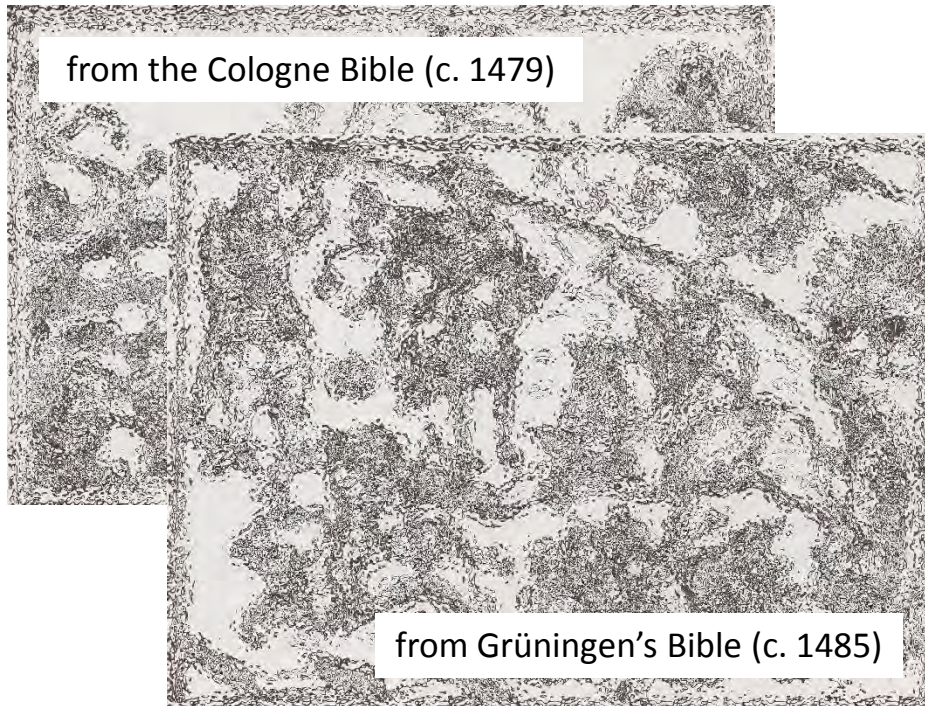


after Professor Vijay Govindarajan, Dartmouth University Tuck School of Business

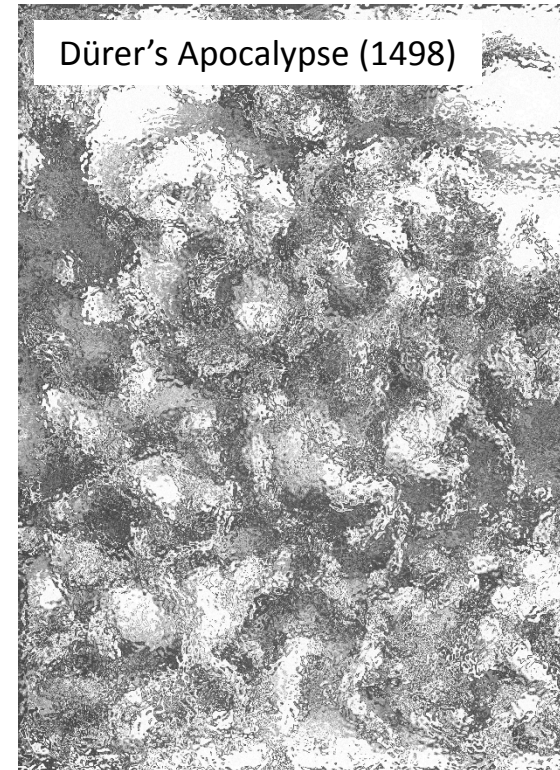
Nor is it limited to the present



the **LOVE** of innovation

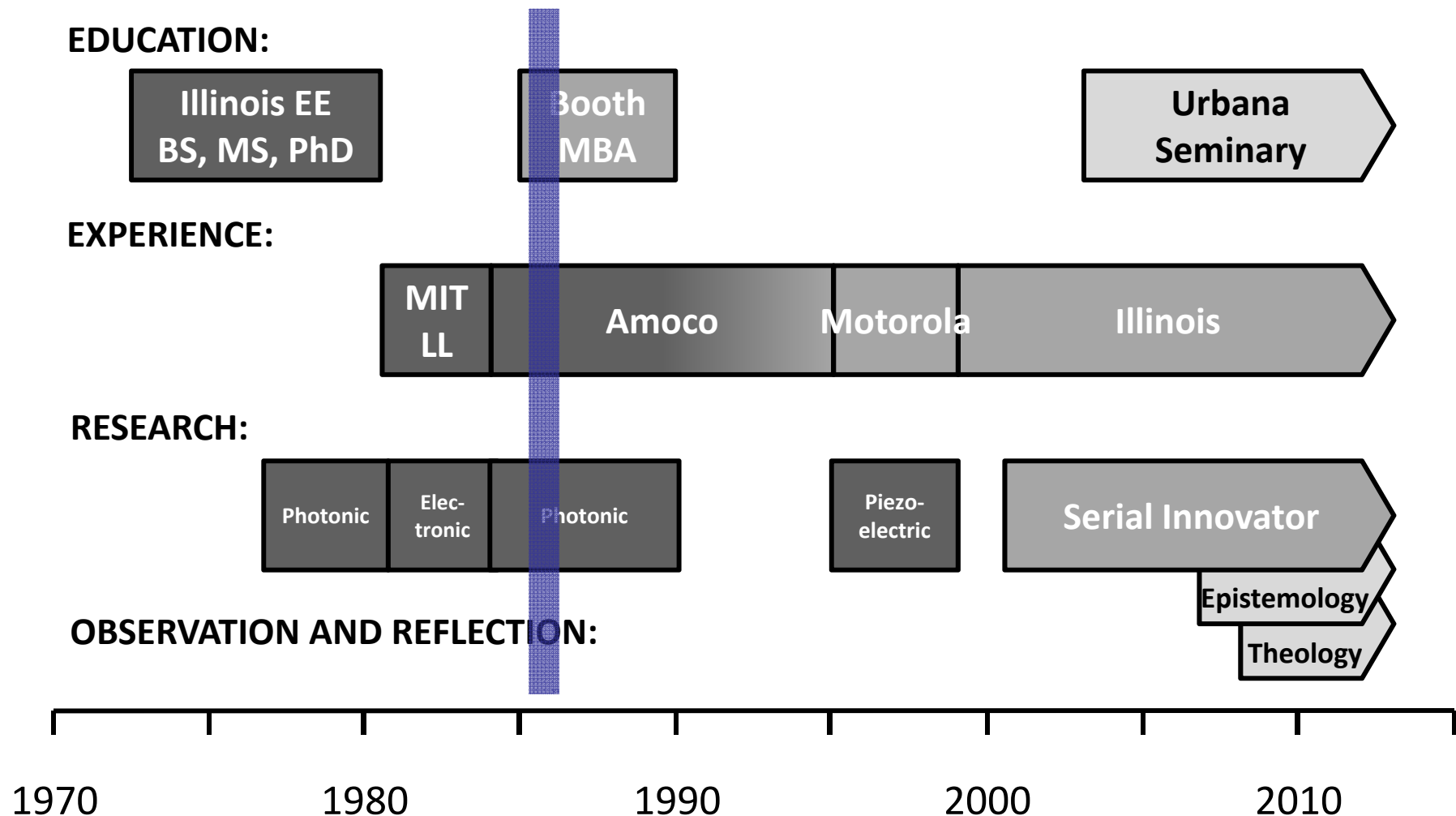


- Images stiff, unsophisticated
 - 'descriptive' lines define contours
 - 'optical' lines suggest light, shade, texture
- Requirements imposed on artist by commission-paying clients
 - Definition of subject
 - Inclusion of certain features in an image



- Images dynamic, realistic
 - 'descriptive' and 'optical' lines considered together, not artificially independent
- Novel business model freed Dürer from certain requirements
 - Produced and distributed woodcuts on his own, speculatively
 - Profitable due to re-use of wood blocks and unprecedented high-volume print runs

My path to the present



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My interest in these topics

- How do exemplar innovators come to know what to do today in order to have impact tomorrow?
- How do I reconcile what I observe with faith in Jesus Christ?

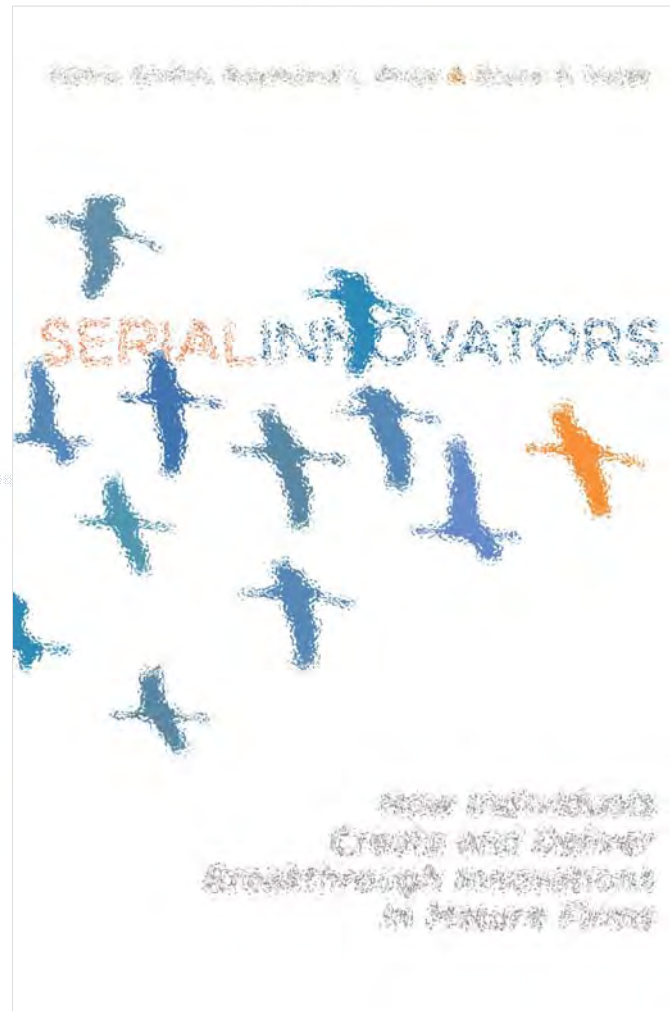
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Our research

- Over a dozen years exploring a “people” view of breakthrough innovation
- Rare individuals with significant and repeated breakthrough impact on their firms and industries
- On the order of 175 in-depth interviews; 418 survey responses
- Broad industry coverage
 - Including: aerospace, automotive, computer, consumer products, electronics, engineering services, food products, heavy equipment, materials, medical equipment, and semiconductor
- Results presented broadly
 - 1 book, 2 book chapters, 8 journal articles, and 12 conference presentations
- Implications for all

Our research



SERIAL INNOVATORS

Just how rare these people are



SERIAL INNOVATORS

All can be taught to sing, yet not all will star at the Met



Serial Innovator: an exemplar

Tom Osborn's story

Victor Mills Society

Procter & Gamble

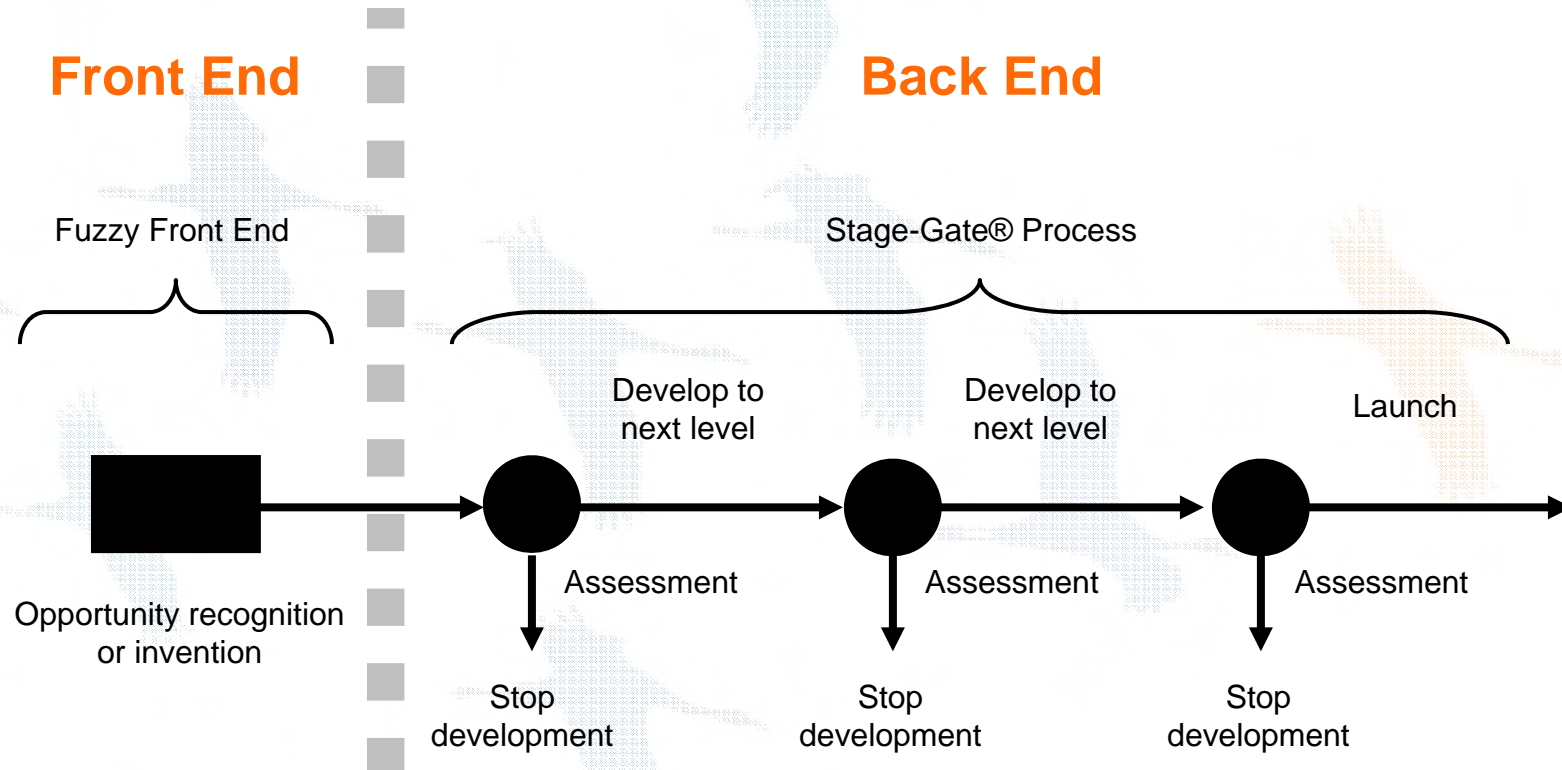
Serial Innovator characteristics: salient features

- Motivation – What drives them?
 - Self-motivated to solve customer problems
- Personality – How are they hard-wired?
 - Curious, systems thinking, creative
 - Tenacious, see it through to completion
- Perspective – How do they view the world?
 - Technology is the means to an end
 - In business to create value (profit)
 - Value people
- Preparation – How did they get ready to innovate?
 - Agile learners – broad and deep

Recognizing Serial Innovators: how they engage with ...

- Problems
 - Curious, systems thinking, creative
- Projects
 - Tenacious, see it through to completion
- Business and People
 - In business to create value (profit)
 - Technology a means to an end
 - Value people, see their strengths, enlist their help
- It is the complete set of characteristics

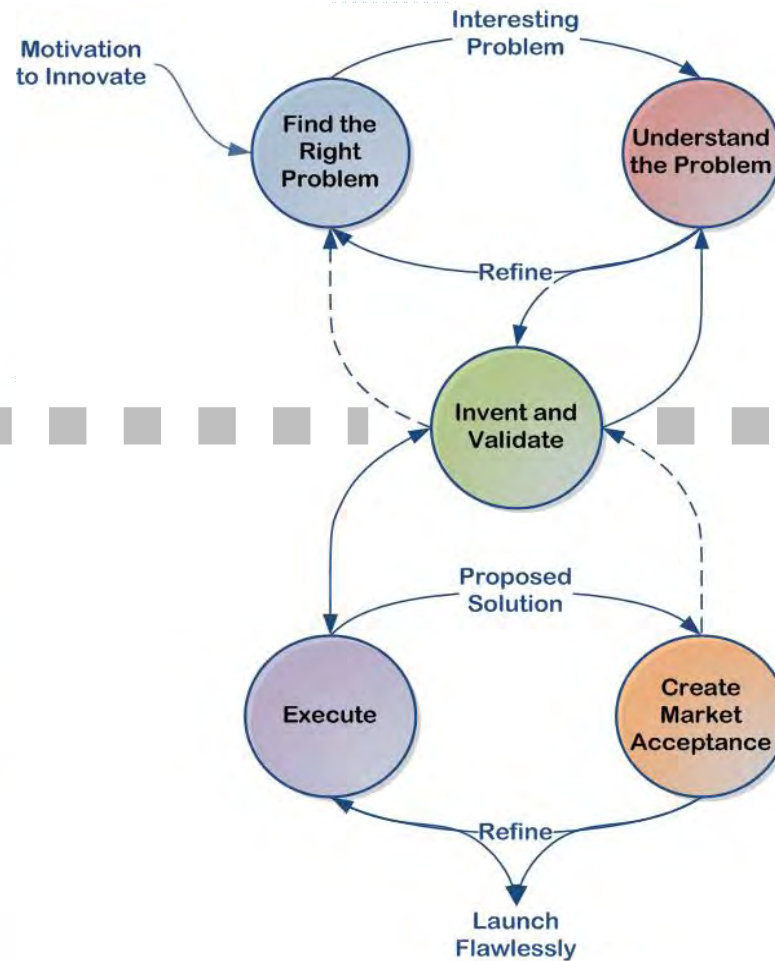
Innovation processes: Fuzzy Front End + Stage Gate



Serial Innovator processes: salient features

Front End

Back End



Serial Innovator politics: the naïve view



Naïve View

- Invention is sufficient – there is intrinsic value in my inventive contribution
- Others should recognize and act on these insights
- My tasks are complete once the product is developed

Serial Innovator politics: crossing the bridge

- Serial Innovator

- Accepts responsibility
- Becomes willing to engage



- Apply creative problem solving abilities to the "political" task
- Develop influence skills
- Engage others
- "It's my lot in life"
- Often work outside their personal comfort zone

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The epistemology breakthrough innovation

- Holistic
 - Speak of connecting the dots
 - See patterns in data that others do not
 - See new ways to frame questions and problems that others do not

The epistemology breakthrough innovation

- Holistic
 - Speak of connecting the dots
 - See patterns in data that others do not
 - See new ways to frame questions and problems that others do not
- Intimate
 - Deeply immerse themselves in the problems they seek to solve
 - The “dead metaphors” of knowing support this view
 - understand = stand in the midst of
 - apprehend = grasp
 - wrap one’s mind around
 - Grok
 - ruminate on / digest the facts

Intimate engagement with a cow's stomach



The epistemology breakthrough innovation

- Holistic
 - Speak of connecting the dots
 - See patterns in data that others do not
 - See new ways to frame questions and problems that others do not
- Intimate
 - Deeply immerse themselves in the problems they seek to solve
 - The “dead metaphors” of knowing support this view
- Non-linear
 - See how system elements work together beyond mere addition
 - The “dead metaphors” of innovation also support this view
 - As with the language of patent law, innovation is not a simple combination of ideas; instead, it propels us into new dimensions

Significance of these observations

- Collectively, these characteristics reveal that the Serial Innovator's best thinking is diametrically opposed to Modern thinking
 - Modern
 - Reductionist
 - Detached
 - Linear
 - Breakthrough innovation
 - Holistic
 - Intimate
 - Non-linear
- Yet, their skill in Modern thinking is their entry ticket
- Possessing both of these skills is necessary, but not sufficient, for success

So, where are we?

- The Enlightenment paved the way for Modernity and great progress with it
- Yet, contemporary breakthrough innovation regularly is characterized by a diametrically opposed way of thinking
- Thus, Serial Innovators represent something of a highly-successful “remnant”
- Still, innovation remains unconquered, profoundly unpredictable
 - Solutions may still be found “inside the box”
 - “He also serves who only stands and waits” still can apply
 - Open innovation still can be trumped
 - Diverse groups still may not solve the problem better or quicker

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My premise

- We're stuck: the limitations of Modern thinking remain
- Modernity is characterized by simultaneous views of
 - Hope
 - Knowledge is the solution
 - We have the capacity to know
 - Fear
 - We don't yet know enough
- Modernity's "Gospel of Innovation" is inconsistent with the Gospel of Jesus Christ
- Yet, a "Love of Innovation" can exist, albeit with very different meaning, in each of these gospels

Craig M. Gay's The Way of the (Modern) World

Contemporary society and culture are built on an embedded, unarticulated foundation that “even if God exists he is largely irrelevant to the real business of life.”

- Not explicitly hostile to God, merely indifferent
- Unfaithful humankind seeks to ...
 - Limit the world, to make it predictable
 - Re-make the world to make it new, eliminate fear, and bring hope to fruition

Craig M. Gay's The Way of the (Modern) World

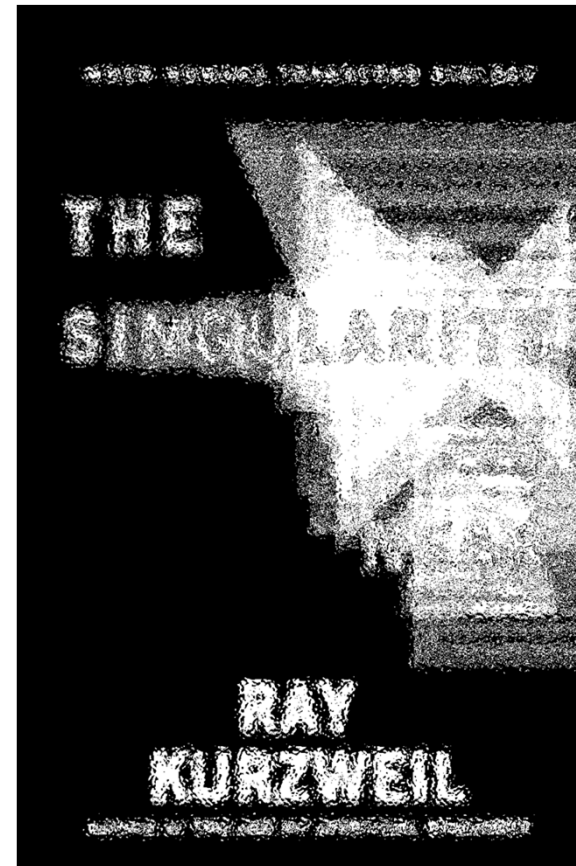
- To some extent, based on
 - The material world appears to be all that there is
 - Much of the material world functions within mathematical patterns
- Gay notes, however, that this constructed world view is fragile
 - When challenged by reality, it is exposed for what it is
 - “Our sinful bid for autonomy and mastery”

Modernity characterized by fear and a high level of self-confidence



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Modernity characterized by fear and a high level of self-confidence



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Modernity characterized by fear

AUTOS | July 29, 2012

GM Ousts Marketing Chief

"One of my jobs is to make sure people don't relax, to keep the tension high," he said in an interview. "I don't mean to hurt people, but everything matters now and we have to be great."

BOOKSHELF | September 2, 2012

You Can't Trust Airport Security

But don't worry: It has always been easy to cheat, steal or kill, and few people do

September 12, 2012

For the Fearful Who Have Everything...

You can never be too rich or too secure. At least that's what high-tech security experts and gadget makers say when pitching their products and services to the rich and famous.

BOOKSHELF | November 22, 2012

The Worst Is Yet to Come

A tongue-in-cheek catalogue of what to worry about in an age when Americans have objectively never been so safe.

December 2, 2012

Helicopter Parents, Meet Helicopter Pet-Owning

You can't be too careful. Avoid dog parks—they're like poorly supervised playdates.

from: THE WALL STREET JOURNAL.

Modernity characterized by a high level of self-confidence

BOOKSHELF | March 19, 2011

The Religion of Prediction

Baseball's sabermetricians are not scientists but mystics

THE SATURDAY ESSAY | October 8, 2011

Steve Jobs: The Secular Prophet

Steve Jobs turned Eve's apple, the symbol of fallen humankind, into a religious icon for true believers in technology. But can salvation be downloaded?

March 8, 2012

What Big Business Can Learn From God

"Because we are embodied creatures – sensory animals as well as rational beings – we stand to be lastingly influenced by concepts only when they come at us through a variety of channels. As religions seem alone in properly understanding, we cannot be adequately marked by ideas unless, in addition to being delivered through books, lectures, and newspapers, they are also echoed in what we wear, eat, sing, decorate our houses with and bathe in. The challenge of the 21st century is to create multinationals that, while they apply all the organizational skills of their predecessors, also seek to attend to the whole human being, especially the complex bit we might just as well, to follow religions, call the soul."

from: THE WALL STREET JOURNAL.

Modernity characterized by a high level of self-confidence

BUSINESS WORLD | July 24, 2012

Can Data Mining Stop the Killing?

Did the National Security Agency capture James Eagan Holmes's transactions in cyber space? If not, why not?

December 2, 2012

Sandy Blew Away Illusions About U.S. Digital Infrastructure

"Let's hope that Sandy will go down in history as a much needed wake-up call that significantly accelerated the development of a high capacity, highly resilient 21st century digital infrastructure across the country."

THEORY & PRACTICE | April 30, 2013

The Science of Serendipity in the Workplace

To Encourage Interaction and Innovation, Companies Try Smaller Spaces, Games; Trivia Helps Break Awkward Silences

June 25, 2013

Transcript of President Obama's Remarks on Climate Change

"New York City is fortifying its 520 miles of coastline as an insurance policy against more frequent and costly storms. And what we've learned from Hurricane Sandy and other disasters is that we've got to build smarter, more resilient infrastructure that can protect our homes and businesses, and withstand more powerful storms. That means stronger seawalls, natural barriers, hardened power grids, hardened water systems, hardened fuel supplies."

from: THE WALL STREET JOURNAL.

Toward a theology of breakthrough innovation

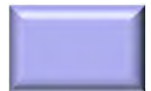
- A personal theology ...
 - From one that is embedded, unarticulated
 - To one that is deliberate, explicit, and more coherent

Toward a theology of breakthrough innovation

- Salient dichotomies
 - Two gospels: hope in the face of despair
 - Two loves: love for whose sake?
- Some additional observations
 - The innovator's perspective and posture
 - The purpose of ...
 - Innovation
 - Innovative products
 - How innovation appears to play out in the arc of history

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Two gospels: hope in the face of despair

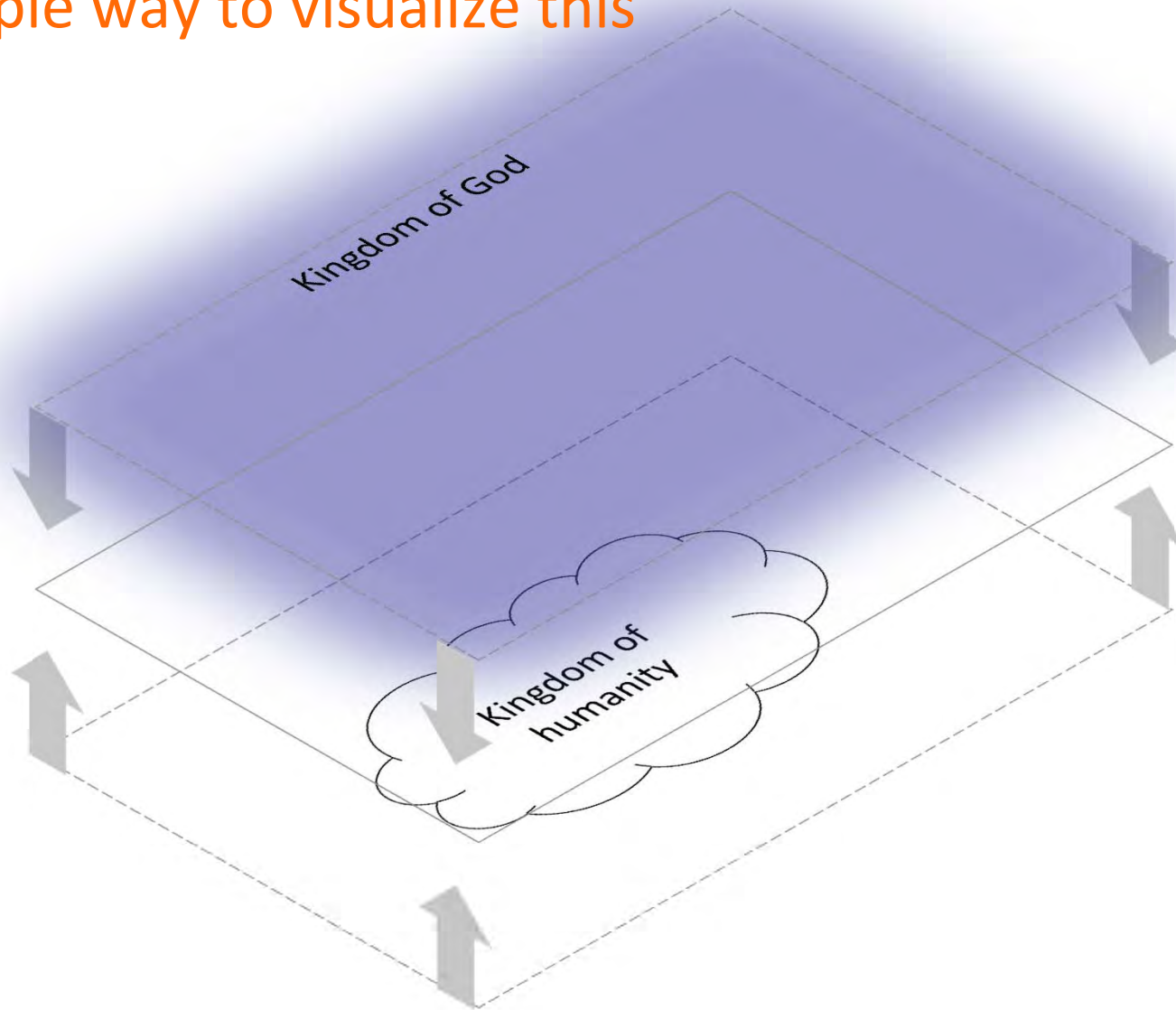
- Gospel of Jesus Christ

- The Lord God saves us from our ills
 - our sinful selves and the legacy of sin we share with Adam
- Sin separates humankind from God
- Jesus Christ and His work on the cross provides redemption
- There is more than the material, more than what meets the eye
- Humankind created in the image of God (*imago Dei*) and given creative mandate, as well as the skill, from God

- “Gospel of Innovation”

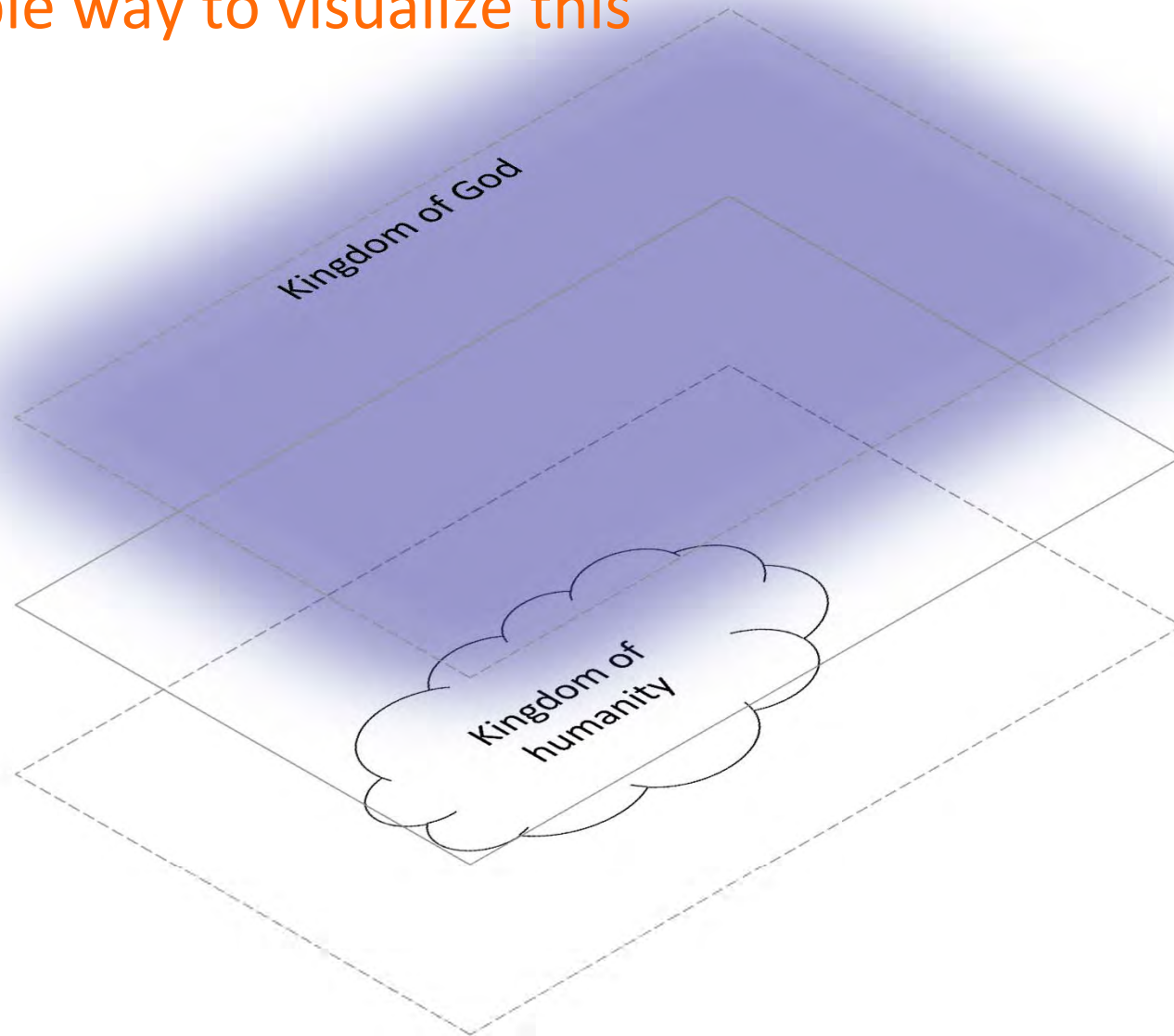
- Innovation can save us from our ills – those things that cause fear, make us unhappy, unsatisfied
- Humankind is frustrated, merely dis-satisfied or just not satisfied
- New products and processes remove dis-satisfiers, secure satisfiers
- The material is all that is, all that matters
- Humankind holds significant power to create – can create / innovate in their own power / skill

A simple way to visualize this



the **LOVE** of innovation

A simple way to visualize this



the **LOVE** of innovation

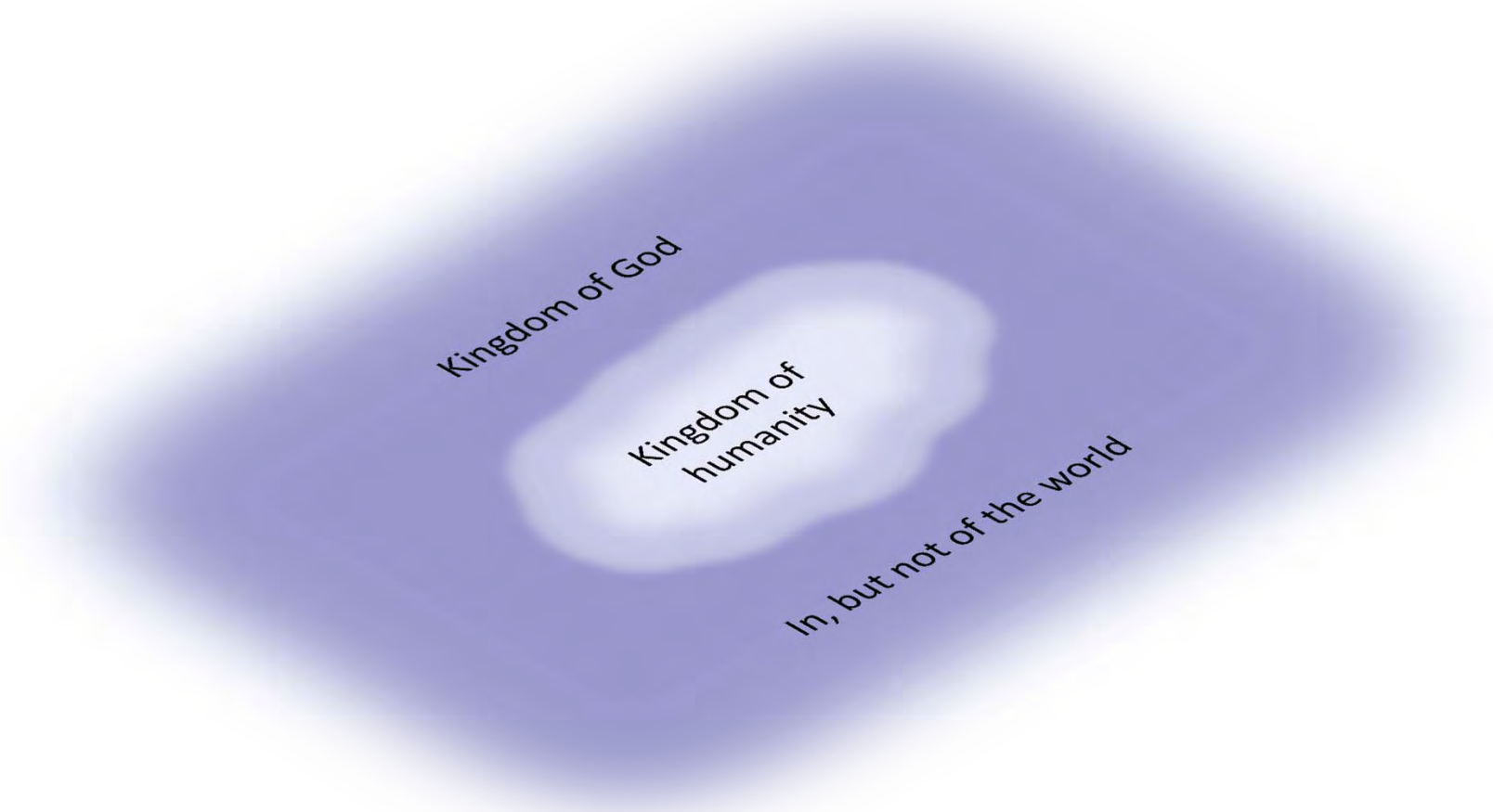
As if God does not exist: “Gospel of Innovation”



God of the gaps



Gospel of Jesus Christ



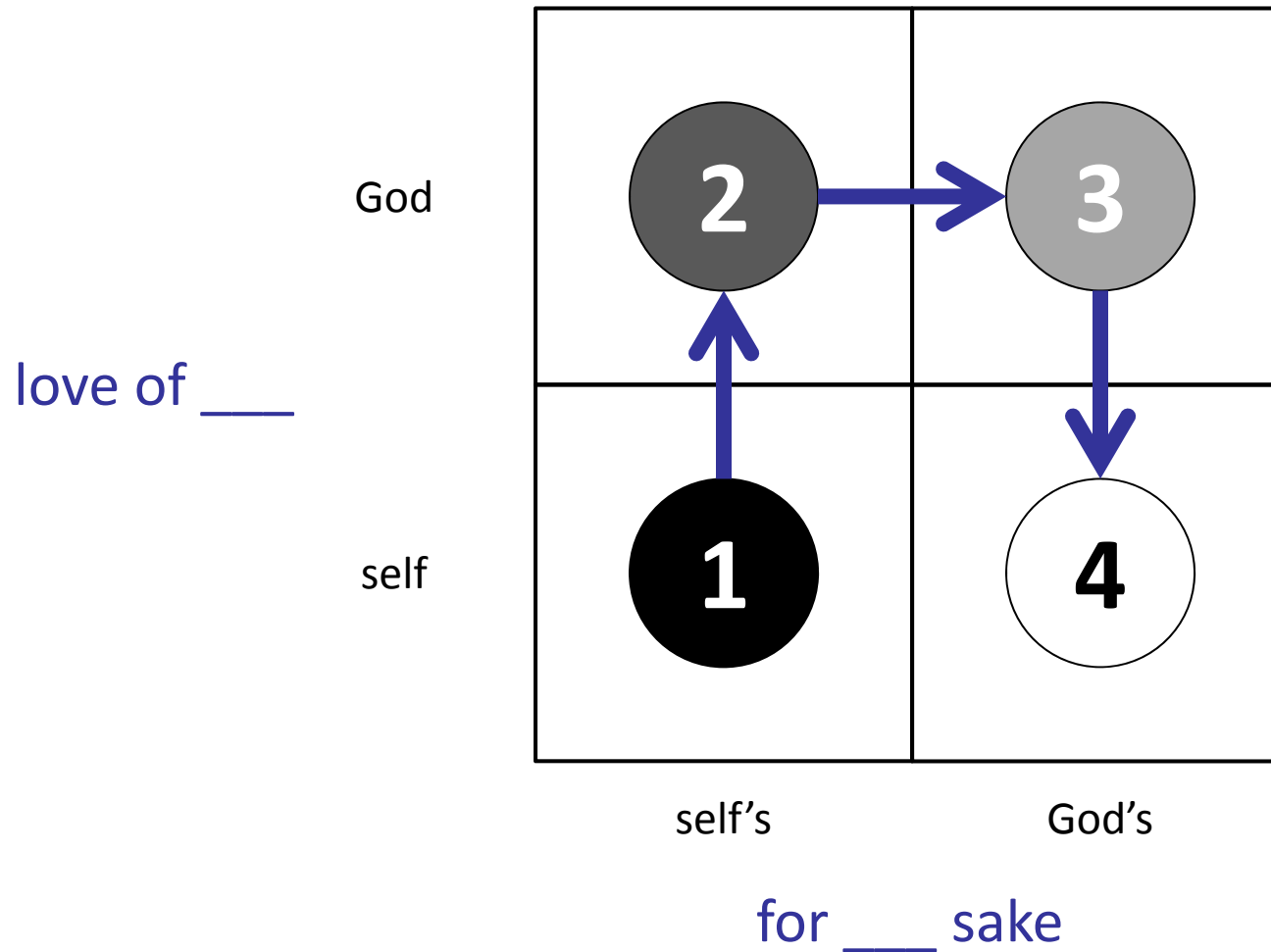
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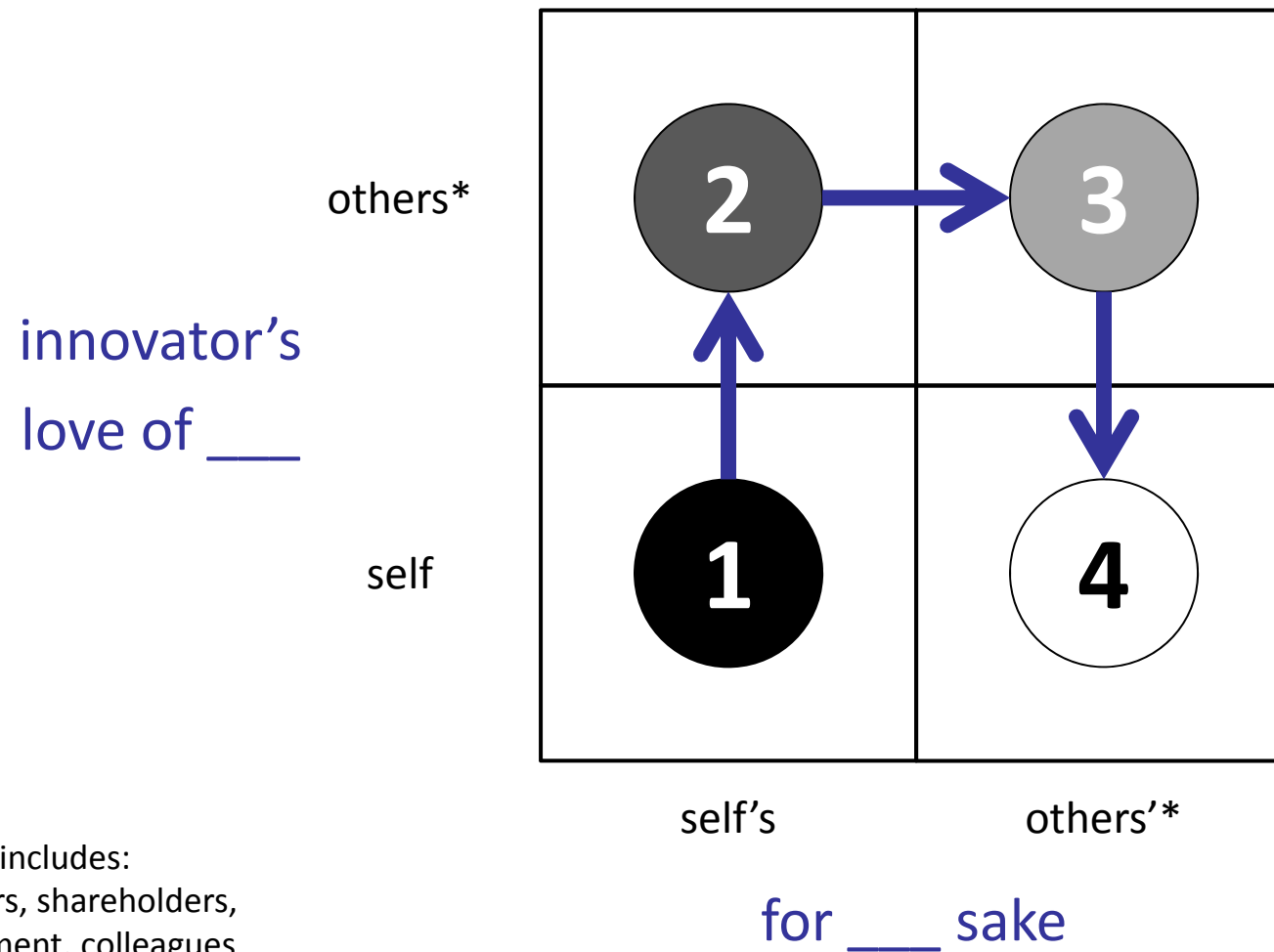
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On Loving God by St. Bernard of Clairvaux



Variation on a theme by St. Bernard of Clairvaux



* "others" includes:
customers, shareholders,
management, colleagues

the **LOVE** of innovation

Two loves: love for whose sake?

- Love for self's sake

- Self-motivated variously, but not to solve other's problems
- “I want to be an innovator”
- Driven, with the ability to operate in essentially only one gear
 - Self-confident to an extreme
 - High standards
 - Aggressive; often lacking tolerance of other's mistakes
 - Intense, near-continuous human effort expended
 - Rarely “light touched”
 - Insubordinate to serve self

- Love for other's sake

- Self-motivated to solve other people's problems
- “I want to do the work that innovators do”
- Wisdom, with the ability to operate variously
 - Self-confident, yet generally humble
 - High standards
 - Assertive; helping others as appropriate, although not necessarily indefinitely
 - Intense human effort expended as appropriate
 - “Light touched” as appropriate
 - “Insubordinate” to serve others

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The classical spirit of challenge and self-discovery

- “Economic justice and the spirit of innovation” per Edmund Phelps (in *First Things*)
 - The classical spirit of challenge and self-discovery is a fundamental human trait
 - What Augustine called our “restlessness of heart”
 - Societies that suppress this stagnate and die
 - The issue of morality in economics is neither fairness nor stability
 - Fairness of income distribution
 - Stability of financial systems
 - It is how human institutions can be shaped to correspond to humankind’s nature as an innovator

Discerning of, and submission to, a hidden reality

- “The morality of true innovation” in response (in *First Things*)
 - Breakthrough innovators are discoverers
 - Of problems, solutions, how to interact with others
 - The most successful are remarkable
 - Possess vision to see innovative concepts
 - Transcend formal innovation processes and mere guessing
 - Speak with a faith-like expectation that they will discover something of value
 - This discovery manifests like a discerning of, and submission to, a hidden reality
 - It is beautiful to hear breakthrough innovators tell their stories
 - One has the sense that they have, in a way, sought first the Kingdom of God and his righteousness – and that all these things have been added to them, as well

How are innovators to possess the vision to see?

- Prospective innovators are charged to “find what’s hiding in plain sight”
 - But how?!
 - It is a familiar pattern in scripture
 - Ever hearing but not understanding, seeing but not perceiving
 - Deut. 29:2-4; Is. 6:9; Jer. 5:21; Mark 4:12; Matt. 13:14; Acts 28:26
 - Such vision is a gift
 - Reminded of Nebuchadnezzar's Dream (Dan. 2)
 - Tell us your dream and we’ll interpret it (Nebuchadnezzar's magicians)
 - If you don’t make known to me the dream and its interpretation ... (Nebuchadnezzar)
 - No magicians, etc. can show to the king the mystery, but there is a God in heaven who reveals mysteries (Daniel)

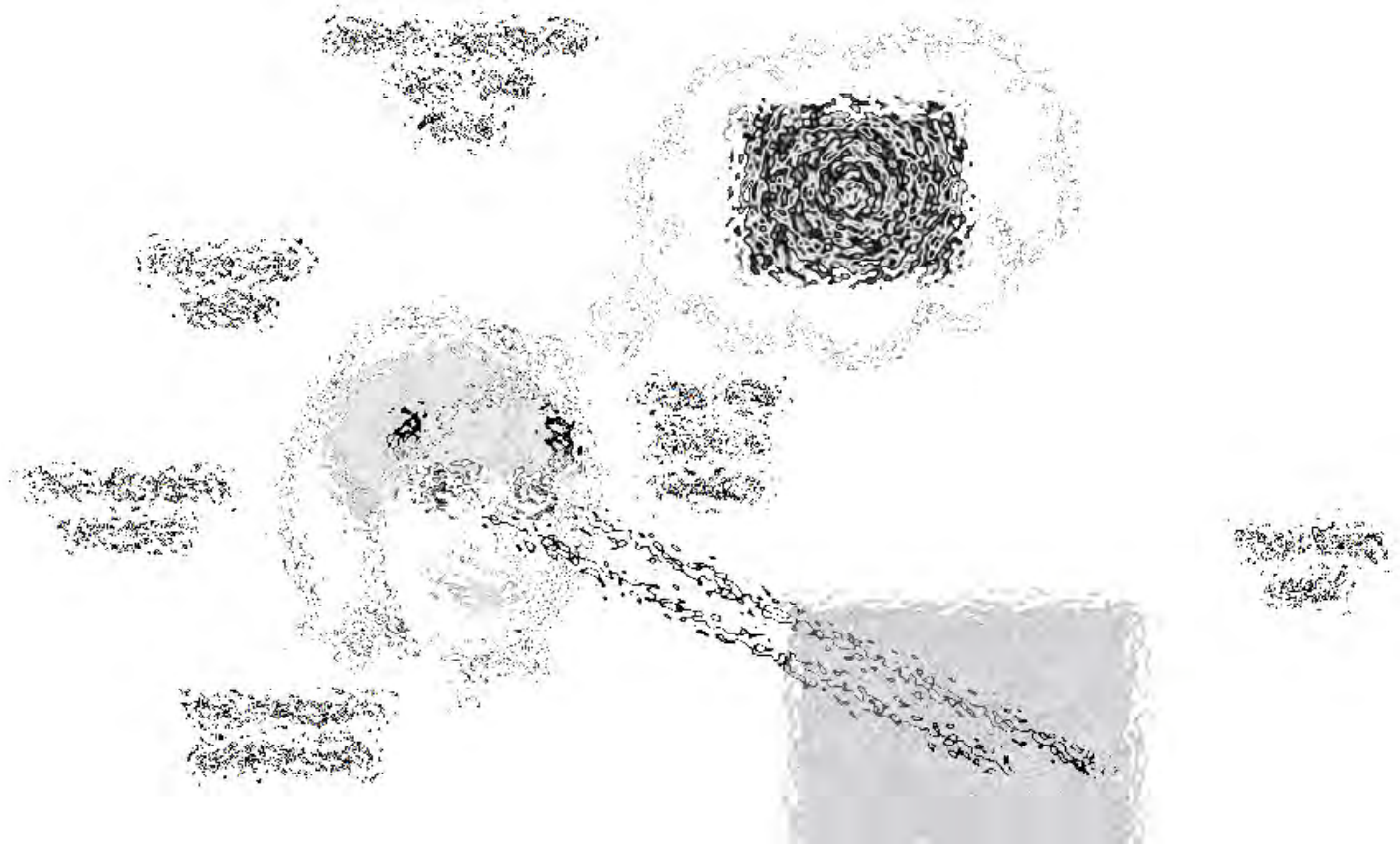
Discovery as recognizing patterns

- Yet, in addition to being poor in spirit, in addition to submission to the Lord to accept the gift, there is a familiar posture of knowing
 - In scripture
 - In breakthrough innovation
- Two key features of discovery that we miss when immersed in Modernity
 - Believing comes before knowing
 - Per Augustine: don't know in order to believe, but believe in order to know
 - Knowing is like
 - Hearing and recognizing a voice (Ps. 95:7; John 10:3, 27)
 - Viewing a Magic Eye® image

Discovery as recognizing patterns



Discovery as recognizing patterns



Discovery as recognizing patterns

- Just as Jesus rebukes, chides the Pharisees and Sadducees
 - Able to interpret the weather but not the signs of the times (Matt. 16:2-4)
 - Seeing patterns, but only in the physical world
 - Search scriptures diligently but not see that they testify to him (John 5:39-40)
 - Focusing only on the dots
- Similarly, consider aspiring innovators who
 - Behave as though the world is limited to the physical
 - Focus on the details without realizing that they point beyond the details

Summarizing the innovator's perspective and posture

- The most successful have a faith-like perspective and posture
 - Accepting uncertainty, expecting serendipity
 - Like farmers, they plant seeds, plow, care for their fields in anticipation, expectation of a later harvest
 - Accepting innovation as a gift
 - Like farmers, they recognize that there is only so much that they can control
- While innovation appropriately remains unconquered and profoundly unpredictable, surprising outcomes can more readily be accepted
 - Solutions may be found “inside the box”
 - “He also serves who only stands and waits” can apply
 - Open innovation can be trumped
 - Diverse groups may not solve the problem better or quicker

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The purpose of innovation

- Innovation is the engine of contemporary capitalism
- By gaining temporary advantage, through innovation, a firm
 - Receives economic spoils of victory
 - Survives to compete another day
- Innovation both ...
 - Energizes and rewards those most skilled in it
 - Demoralizes and penalizes those left behind by it
- From a Modern, human perspective, it lies at the heart of epic battles
 - Between economic systems
 - Between industry and government

The epic battle between capitalism and communism

investor / owner

innovation
energizes and rewards
those most skilled in it



employee / laborer

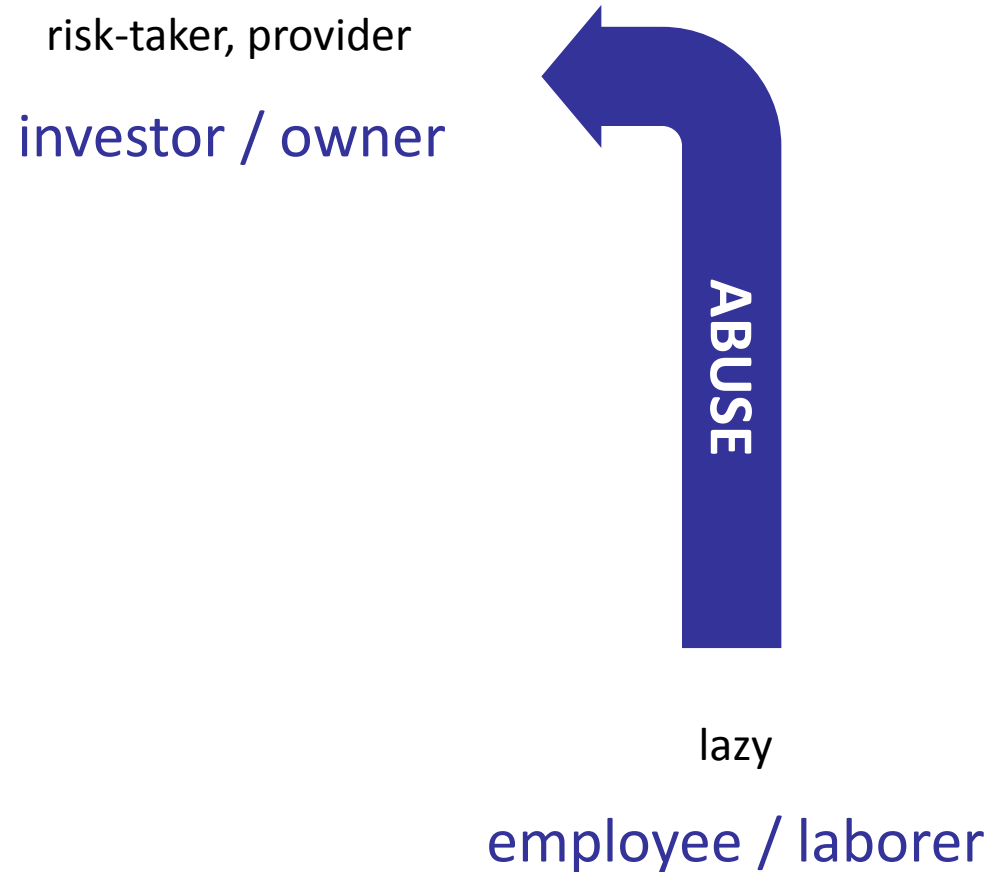
innovation
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the **LOVE** of innovation

Patterns of abuse

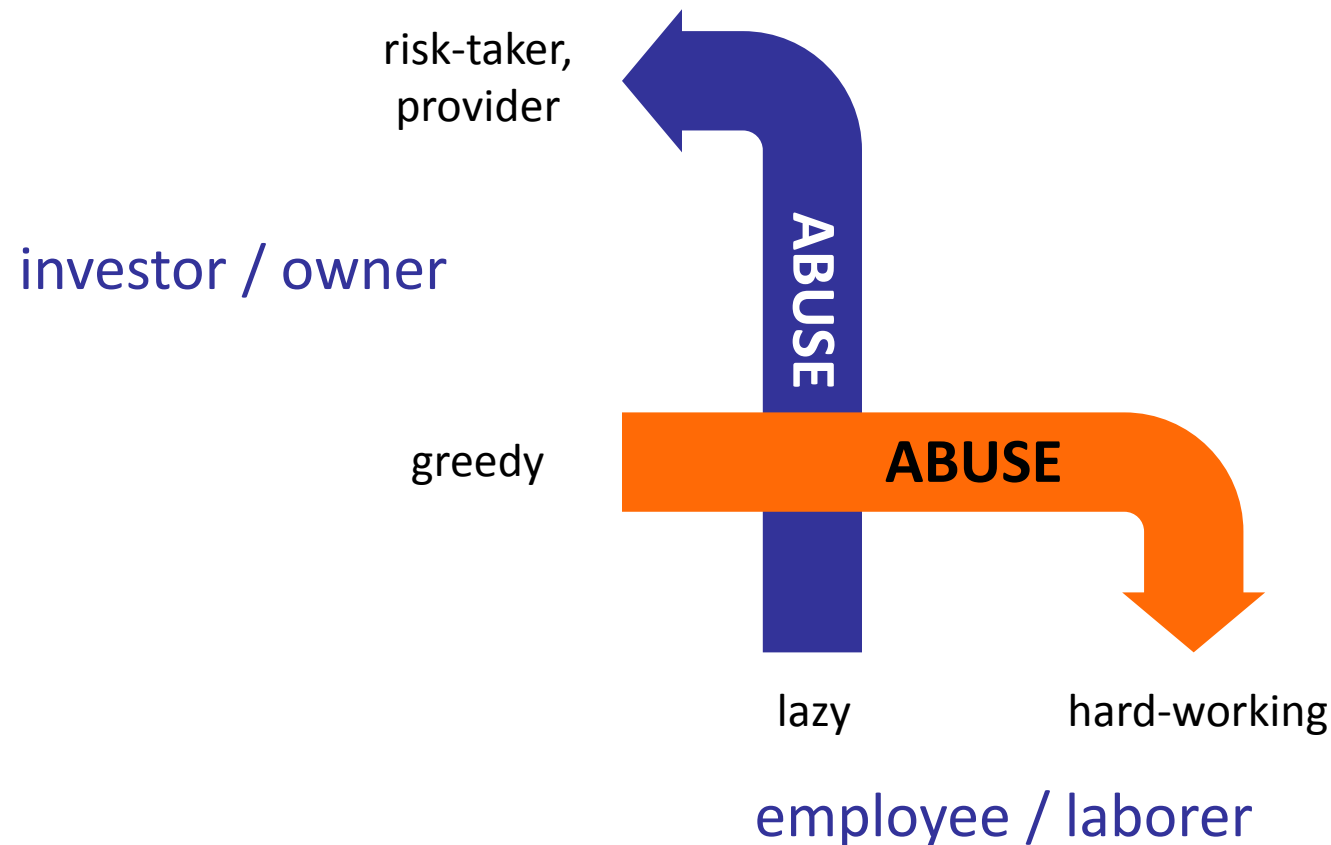


Patterns of abuse



the **LOVE** of innovation

The epic battle between capitalism and communism

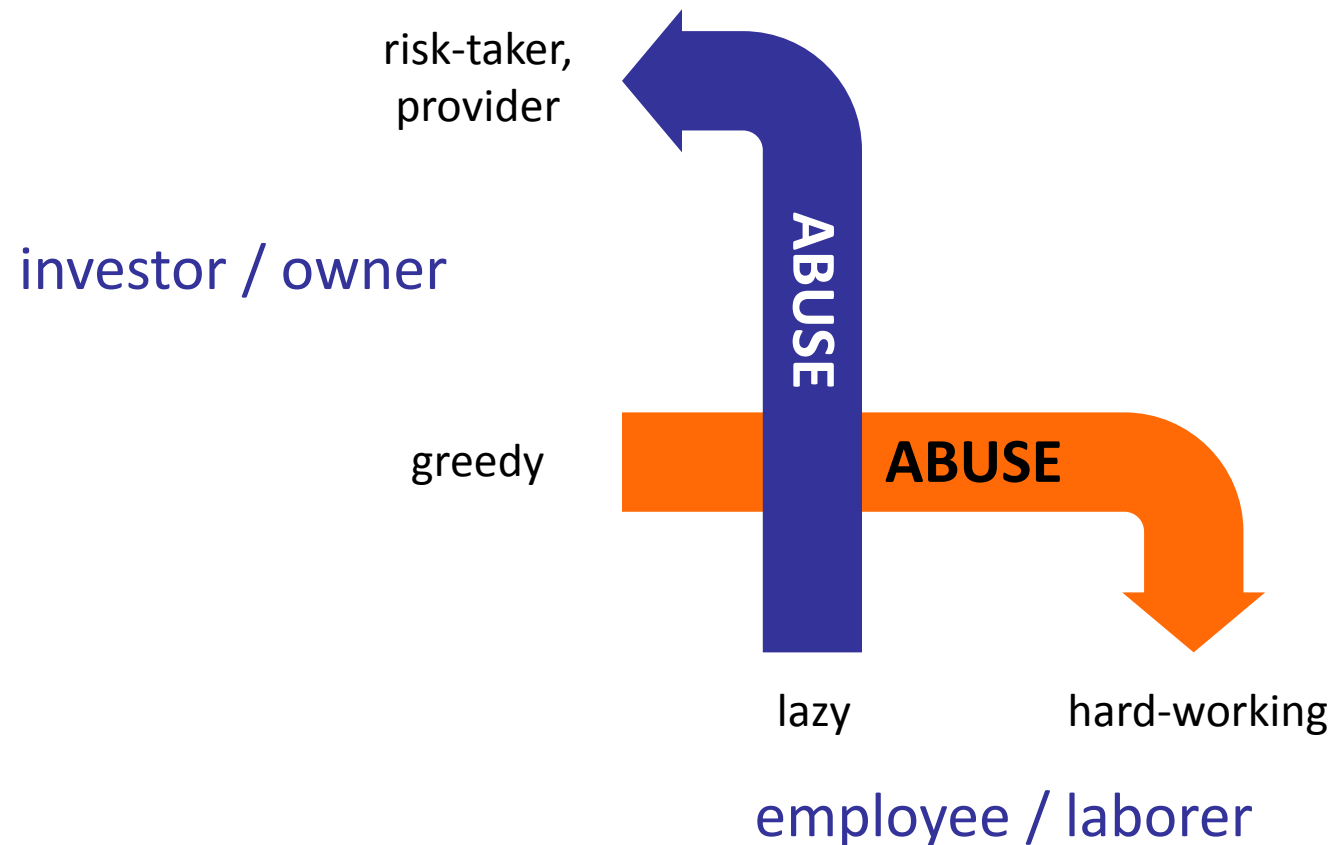


the **LOVE** of innovation

But what if we re-frame this question?

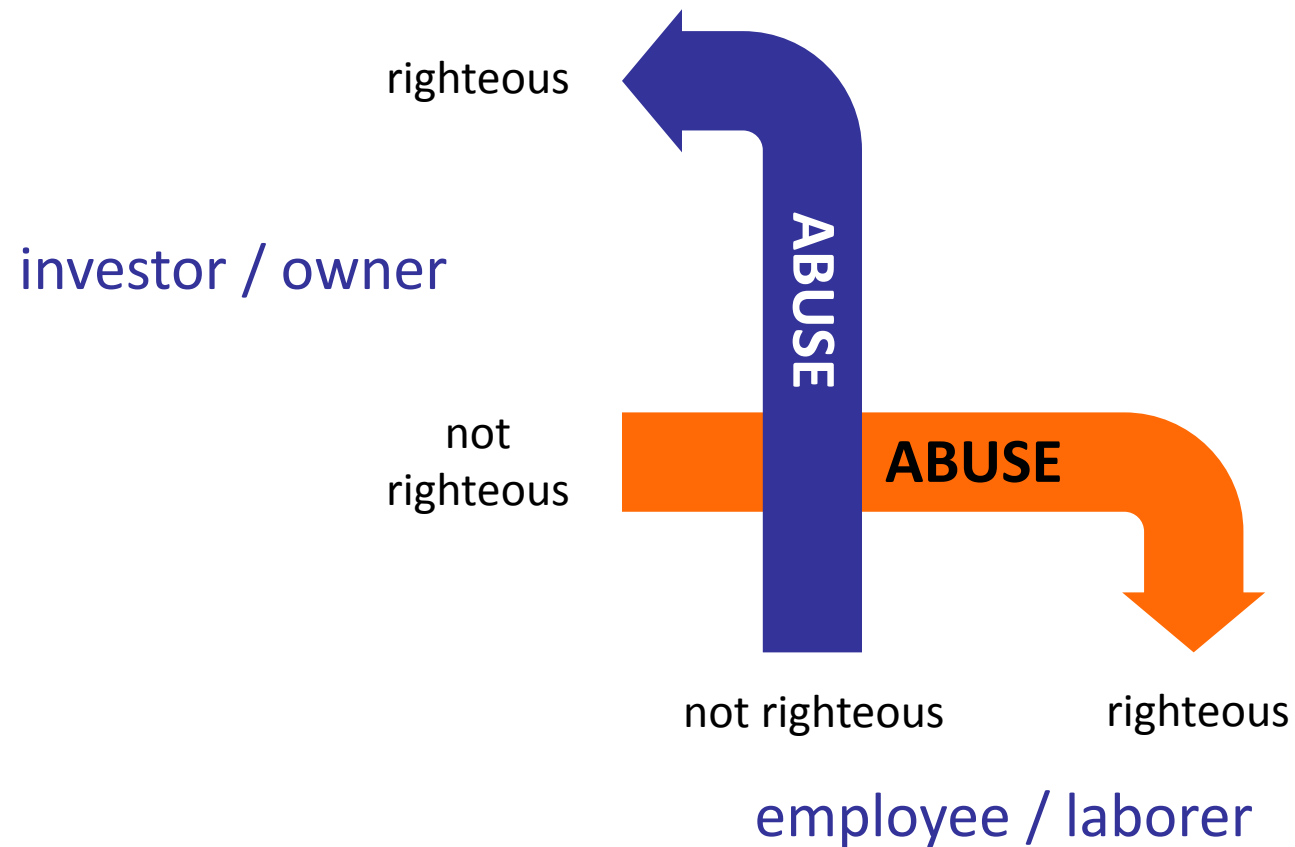
- In scripture, both the wealthy and the poor are portrayed variously as righteous and not righteous
 - The Rich Man and Lazarus (Luke 16:19-31)
 - Joseph of Arimathea (in all four Gospels)
 - Those who fell away from following Jesus, even after being fed by Him

The epic battle between capitalism and communism



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Re-framing this question

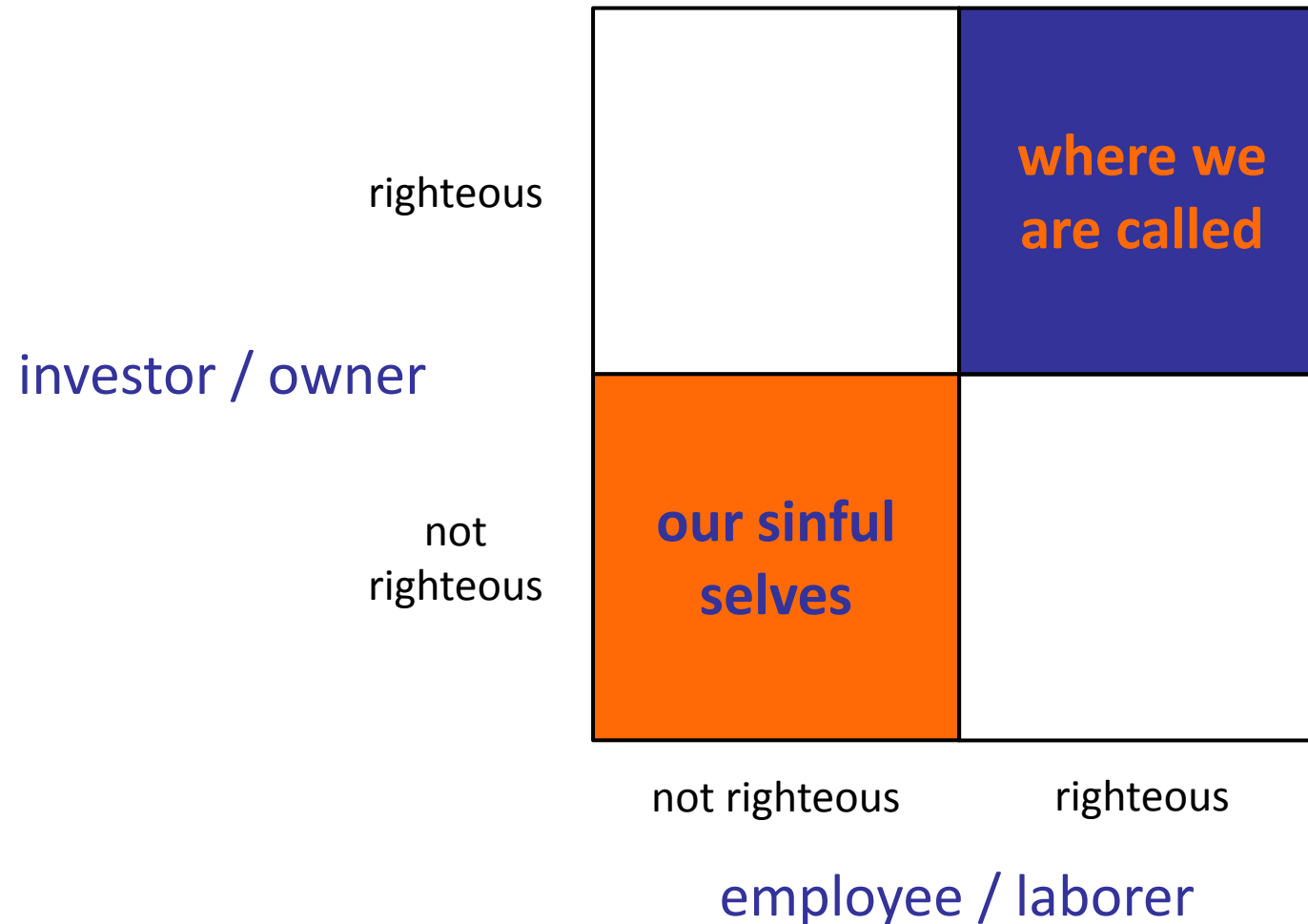


Re-framing this question

investor / owner	righteous		
	not righteous		
		not righteous	righteous
		employee / laborer	

the **LOVE** of innovation

Re-framing this question



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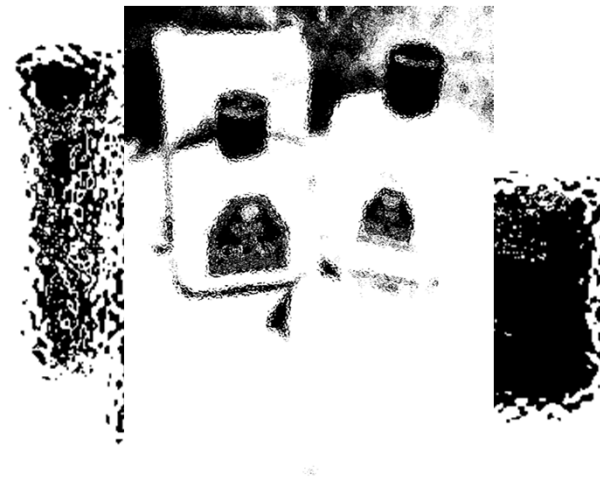


The purpose of innovative products

- How might we develop a personal theology for a product or technology we are working on?
 - It's relatively easy when products are for “widows and orphans”
 - But what of those for “weapons and ornamentation”?

The purpose of innovative products

- How might we develop a personal theology for a product or technology we are working on?
 - It's relatively easy when products are for “widows and orphans”
 - But what of those for “weapons and ornamentation”?
- Consider cosmetics



The purpose of innovative products

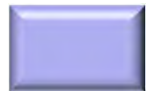
- At the Fall
 - Had been seen, but not observed → now observed
 - Aging, in various forms, to be expected
- The attractiveness of ...
 - An adulterous woman in Proverbs
 - Significantly, but not entirely, her speech
 - Some righteous women
 - The Proverbs 31 woman – includes her clothing
 - Esther – includes cosmetics
- Generic uses of cosmetics as
 - “fig leaf” – pretending to restore the created norm
 - “air-brushing” – beyond real to something more than real

Finding the balance of grace in reflecting on their purpose

- To what extent do
 - Cosmetics appeal in extreme and inappropriate embedded, unarticulated ways?
 - Making things appear right, enabling a false sense of confidence?
 - Distracting the user from addressing other questions?
 - We run the risk of becoming sinfully self-absorbed as we challenge such products, such tools?

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How innovation appears to play out in the arc of history

- “War” is a widely-accepted and -used business metaphor
 - Military classics commonly appear on executive reading lists
 - Sun Tzu’s Art of War
 - Carl von Clausewitz’s On War
 - Military metaphors abound in everyday business usage
 - Sauer Energy Innovation Broadens Patent **Arsenal**
 - Carlos Slim's Empire Under **Assault**
 - A New Digital **Battlefield**
 - Nintendo Readies Games **Blitz** for Wii U Console
 - City, Suburbs Being **Bombarded** by Burgers
 - Employers Tread a **Minefield**
 - AIG Compensation Proposals Fail to Pass **Muster**
 - Caspian Investments Hires Central Asia Specialist to **Spearhead** Investment Activities
 - A **Truce** Needed for Europe's Banking Union
 - Defining Moments in So-Called Currency **War**

How innovation appears to play out in the arc of history

- As the engine of contemporary capitalism, innovation plays a key role in this “war” metaphor
- I suggest that we might glean some insight into how innovation contributes to the arc of history by comparing it to Old Testament war
 - Times when the apparently weak or outnumbered win
 - Jericho; David and Goliath
 - Times when those seemingly under God’s protection lose
 - Ai; Philistines capture the ark (1 Sam. 4)
 - Times when the apparently most impossible events occur
 - Ahab killed in battle (1 Kings 22:34)
 - Times when people and nations are clearly rebuked and punished
 - Cycles of the Judges; Israel and Judah fall and go into exile
- Keeping in mind that not all attribution is tied to sin (John 9:2)

Toward a theology of breakthrough innovation

- Salient dichotomies
 - Two gospels: hope in the face of despair
 - Two loves: love for whose sake?
- Some additional observations
 - The innovator's perspective and posture
 - The purpose of ...
 - Innovation
 - Innovative products
 - How innovation appears to play out in the arc of history

Outline

- I. Introduction
- II. Research: Serial Innovators
- III. Observations: Epistemology of Innovation
- IV. Reflection: The Love of Innovation
- V. Closing thought

But he said to me, “My grace is sufficient for you, for my power is made perfect in weakness.” Therefore I will boast all the more gladly of my weaknesses, so that the power of Christ may rest upon me. For the sake of Christ, then, I am content with weaknesses, insults, hardships, persecutions, and calamities. For when I am weak, then I am strong.

(2 Cor. 12:9-10)

Feedback?
Observations?
Questions?

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the **LOVE** of innovation