Developing Innovation and Creativity for Business Advantage

Week – 5 Creativity, Innovation, & Entrepreneurship

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Recap

- Week 1 – Introduction to innovationWhy IT matters
- Week 2 – Concepts & techniques of innovation & creativity
- Week 3 – Innovative eBusiness / eCommerce
- Week 4 – Developing Innovation and Creativity for Business Advantage

This week – we will look “Creativity, Innovation, and Entrepreneurship".

Creativity; Past, Present & Future…..

- *“How Can we Know Where We’re Going Without Knowing First Where We ‘ve Been?”*

Creativity: What is it???……

"The ability to create and innovate has been observed throughout history and even though the fundamental tools may have changed the ability has been prevalent in every civilisation" (Hisrich, Peters and Shepherd, 2005, p. 8).

"May our species be resurrected and awakened by the Spirit of Creativity for this coming century" (Fox, 2002).

The Past…….

"Throughout history, the process of creation whether; paintings or musical compositions were thought of as 'spiritual experiences in the service of whatever muse held the artist in her thrall"

(Thorsby, 2001, p. 95).

"The artist was a channel for a superior power, creativity a gift from the gods, and the imagination a divine spark"

(Thorsby, 2001, p. 94).

A Gift from the Gods or a New Phenomenon?

Or…Could Both Be True????..... Maybe?

Natures Creation?	or	Human Creation
Venoms & Poisons	or	Anaesthetics
The Leaf	or	Solar Panel (energy from light)
Brain	or	Computer/Electronic Circuitry
DNA	or	Computer Program
Ear Drum	or	Microphone
Eye	or	Camera (lens, focus, iris, film)
Eye Lid	or	Windshield Wiper
Tears	or	Wiper Fluid
Incisor Teeth	or	Knife
Heart	or	Pump
Spinal Chord/Nervous system	or	Communication/Telephone Cables
Song Birds	or	Music

Creativity: Nature or Nurture?

- If we want to be great musicians what do we need?
  - A good “ear” – which may have some biological origin
  - Talent – again, an innate trait.
  - But also THEORY, STUDY, PRACTICE, PRACTICE, PRACTICE!

  - If I am super-talented through natural chance, I may become a great pianist – but only if I study hard
  - If I am not super-talented but I study hard, I may not be the greatest pianist in the world, but I can certainly become competent – and even make a living from it.

Creativity: Nature or Nurture (2)

- If business creativity depends on nature, then only a few of us can operate in that sphere.
- Result – business grinds to a halt!
- Luckily, we know, from experience and from research that we can learn techniques which support creativity.
- So, we may not all be creative business gurus who come up with fabulous ideas while sitting in our armchairs
- BUT
- We can apply creative techniques and thinking processes which help us develop new ideas and kee

Why is Creativity Important?

business sectors seek novelty

- Consumer products
- Media
- Fashion
- Travel

- Even seemingly conventional sectors respond to novelty, e.g. medicine seeks new formulations of existing drugs.
- Note that some novelty may be “better”, e.g. better medicine, some is simply a response to the desire for something new, e.g. fashion.
- So, a continual drive for novel developments suggests that creative thinking is key to success.

Creativity

“There is no doubt that creativity is the most important human resource of all. Without creativity there would be no progress, and we would be forever repeating the same patterns”

(Edward de Bono).

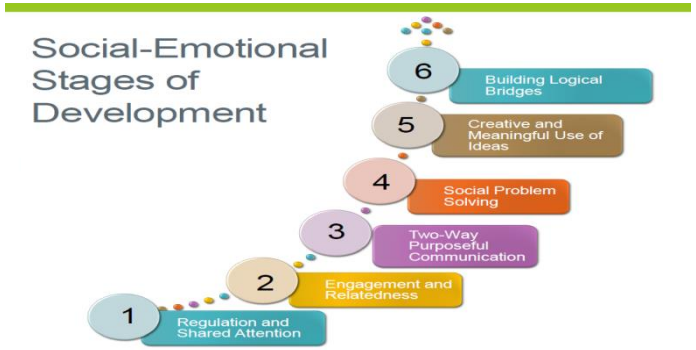
Who is Creative?

- Are creative people born or made?
- Think back to your first year management studies and discussions of what constitutes an entrepreneur, and whether these skills can be learned.
- The literature suggests that creativity can be innate (you're born with it), but can also be learned (you get better with practice).

Two views of Creativity

The Elite View

V's



The Developmental View

The Elitist View…

- Getting New & Valuable Ideas
- A Rare Talent
- Creating Great Works of Art or Scientific Discoveries
- Unable to be Taught
- Not Relevant in My Job/ Organisation
- A Lonely Individual Process

The Developmental View…

- Available to Everyone
- Evident in Personal & Modest Insights
- Released Through Training & Development of Personal Potential
- Within the Scope of All Jobs
- Encouraged or Discouraged Within Groups According to their Climate
- Escape from ‘Personal Stuckness’ & Reveals Itself in Results Which are Original & Potentially Valuable

Which View Do You Agree With?

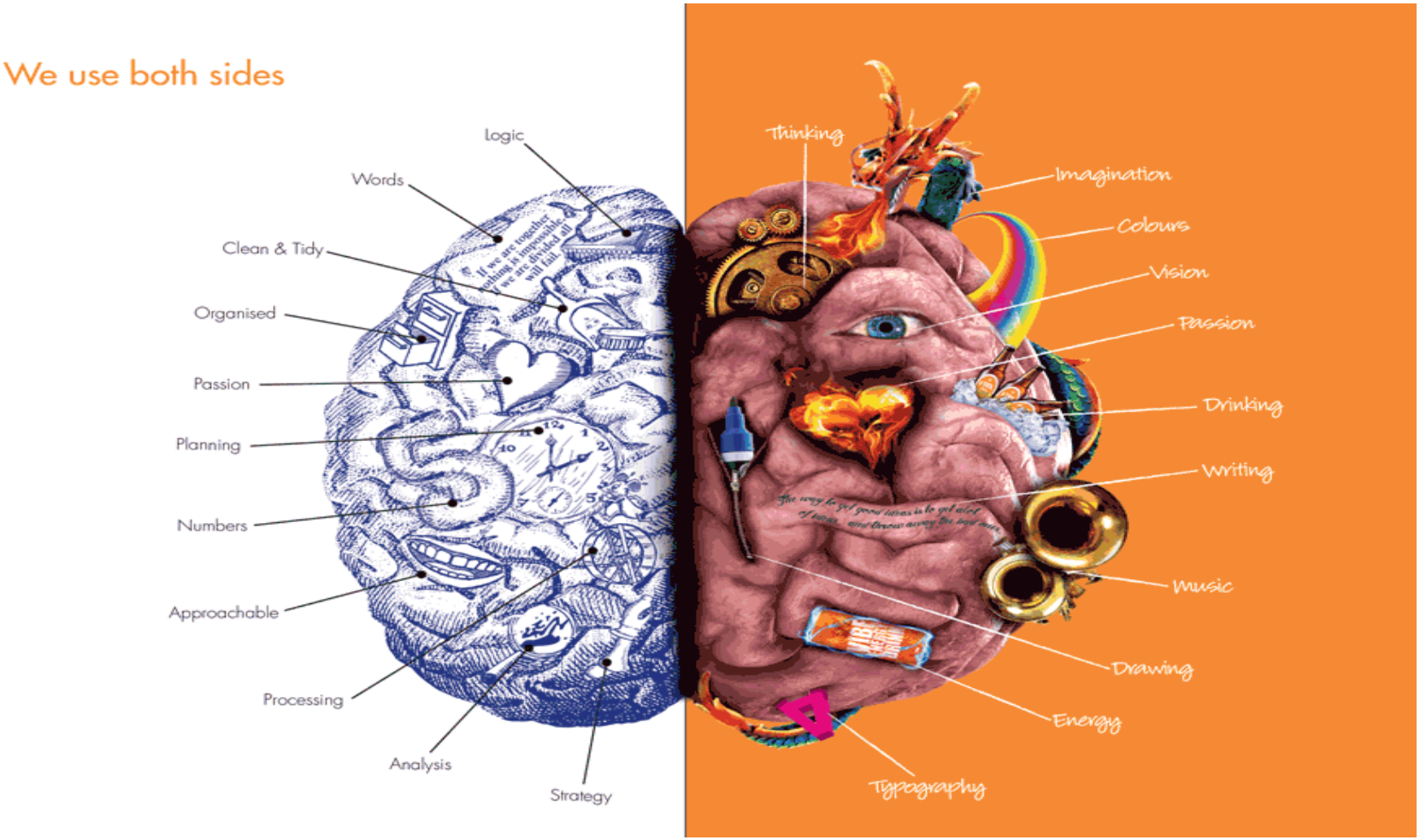
The Reality…..

- Creativity Is **Not** Exclusively for ‘Elite’ People
- It Can be Developed in **All** Persons
- Creativity is a Personal Problem-solving Process of a Non-routine Kind
- It Can be Learned, Practiced & Successfully Applied by all – in **Every** Walk of Life

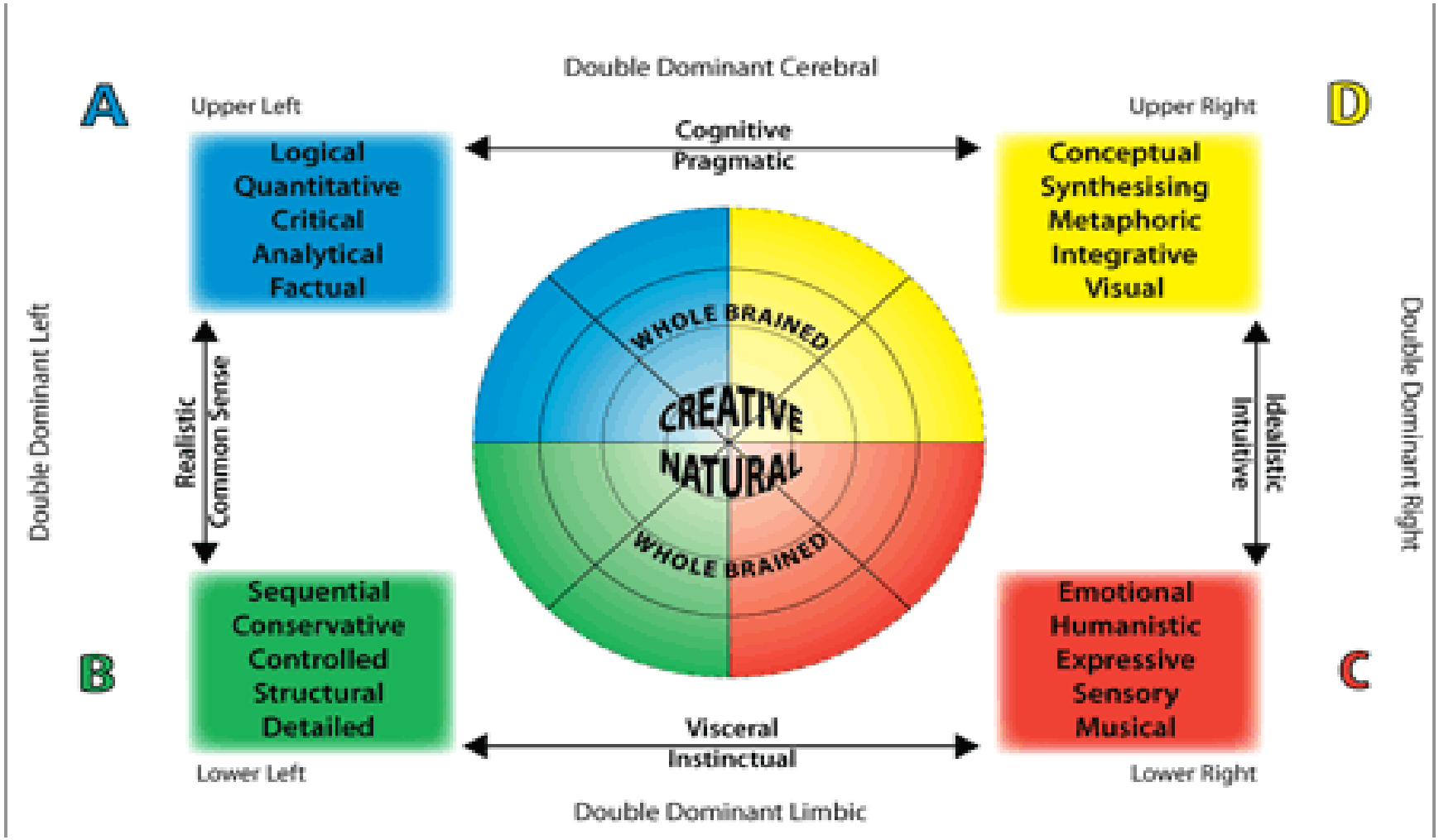
Can We Learn

We can argue that although we might not be able to learn how to turn ourselves into creative people, we can learn how to think about business creatively.

The Role of the Brain



The Whole Brain: Universal Thinking Styles



Three Components of Creativity

- Domain Relevant Skills
- Creative Processes
- Intrinsic Task Motivation

See; Amabile, Philips & Collins,

Creativity

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Without creativity there would be no progress, and we would be forever repeating the same patterns”

(Edward de Bono).

De Bono's creative

1. Generating knowledge and awareness
   - Reading, learning, researching, finding out about the world in general and the area in which you wish to operate
2. Incubation
   - Time for reflection
3. Idea generation
   - Using your own knowledge and creative thinking techniques e.g. brainstorming, to create ideas
4. Evaluation and Implementation
   - Choosing your idea and making it work!

Edward De Bono: ‘Six’ Thinking Hats (1985)

- Archives, Reports, Media, Articles, Books, Biographies, Images, Audio & Digital Media

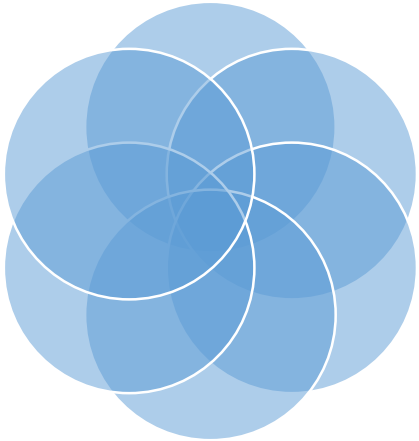
- Does my Direction Feel Right? Could I be Looking in the Wrong Place? Asking the Wrong Questions?

- What Can I do Different? Is there Anything More to Look at? What are the Weaknesses?

- Why is it Worth it? For Whom is it of Interest? Why Can it Be Done? Because it Can……

- Alternative Ways? New Methods or Tools? New Stance? New View of Your Original Stance?

- What Has Been Done? What is Still to do? How to Proceed?



So What is Creativity?

be anything…. While we often associate the term with artistic endeavour – writing, painting, making music. We can be creative in business life as well.

- “Creativity is… the ability or quality displayed when solving hitherto unsolved problems, when developing original and novel solutions to problems others have solved differently, or when developing original and novel… products” (Parkhurst, 1999).

does this tell us about creativity?

tell us that:

- Creativity can be about developing new products

BUT

- It can also be about developing new solutions.

Ideas Can Start with Solving Problems

- Solving “Points of Pain”:
  - To Notice Inefficiency, Inconveniences, & Other Forms of “Points of Pain” & Use these to Build New Business Opportunities

Solutions?

- What do we mean by solutions?
- In this context, it could mean
  - new processes to help us do something better
  - new ways of using existing products
  - new services to supply to new or existing customers etc.
- <u>New ways of thinking about things!</u>

Idea Generation

- Your Task: Generate as many ideas for a new product or service to improve student experience at HW as you can in 5 minutes

What changes would you like to introduce ?
What takes too long ?
What is wasted ?
What is too complicated ?
Where are the bottlenecks ?
In what ways are you inefficient ?
What gives you stress ?
What in your job do you least like doing ?
What would you like to organize better ?

- So… If Creativity is Solving Problems… What Is An Innovation?

To Innovate….

- According to the New Oxford Dictionary (2004, p. 942), innovation means to be able to: “Make changes in something established, especially by introducing new methods, ideas, or products”.
- According to the UK government, “innovation is the process by which new ideas are successfully exploited to create economic, social and environmental value” (BIS 2014, p.7).
- In the mid-twentieth century, economist Joseph Schumpeter (1950) pioneered the categorisation of innovation as the creation of something ‘new’ that creates and adds value for those who interact with, or consume, it. Something ‘new’ can also mean the updating of something which already exists in order to take advantage of a specific segment or a newly-identified or emerging market.

Schumpeter's Innovator

- Schumpeter (1934) distinguished inventions from innovations and identified 'Five Types of Innovation'

Schumpeter's Types of Innovation	A New Process	A New Market	A New Supply Chain	A New Business/Industry	A New Product
	• New method of production	• Opening a new market	• A new source of supply	• A new type of organisation	• A new product or improvement
Examples of Innovation	Ford Cars Manufacturing and Assembly Lines	Analogue to Digital	International Air Travel	The Internet	The Mobile Phone

Disruptive and Sustaining Innovations

- Christensen (1997), identified two types of innovations: *disruptive* innovations and *sustaining* innovations.
- The former*, disruptive* innovations involve a new value proposition by which new markets are created.
  - In such instances, individuals or business organisations seize upon basic inventions and transform them into economic innovations, thereby disequilibrating and altering the existing market structure, then waiting until the process eventually settles down before the next wave of innovation begins.
- In contrast, the latter, *sustaining* innovations are best thought of as improvements to existing products, processes or markets.

What is innovation?

“When an enterprise produces a good or service or uses a method or input that is new to it, it makes a technical change. The first company to make a given technical change is an innovator. Its action is innovation.”

Schmookler (1966)

“Innovation by definition must be successful in the market. “The test of innovation, after all, lies not in its novelty, its scientific content, or its cleverness. It lies in its success in the marketplace.”

Drucker (1993)

It is the creativity of an entrepreneur that results in invention [creation of new knowledge] and innovation [application of knowledge] to create new products, services or processes.

Department for Business, Innovation and Skills

"Innovation is the process by which new ideas are successfully exploited to create economic, social and environmental value."

(BIS, 2014)

What is Innovation?

- Degree of Newness:
  - Radical Innovation
  - Incremental Innovation

Table I
Incremental improvement versus radical innovation

Characteristics	Incremental improvement	Radical innovation
1. Approach	Collectivism, group efforts, system approach	Rugged individualism, individual ideas and efforts
2. Advantage	Works well in slow-growth areas	Better suited to fast-growth areas
3. Change	Gradual and constant	Abrupt and volatile
4. Effect	Long-term and long-lasting	Short-term but dramatic
5. Effort orientation	People	Technology
6. Evaluation criteria	Process and efforts for better results	Results for profits
7. Involvement	Everybody	Select few "champions"
8. Mode	Maintenance and improvement	Scrap and rebuild
9. Pace	Small steps	Big steps
10. Practical requirement	Requires little investment but great effort to maintain it	Requires large investment but little effort to maintain it
11. Spark	Conventional know-how and state of the art	Technological breakthroughs, new inventions, new theories
12. Time frame	Continuous and non-radical	Intermittent and non-incremental

Source: Based on Imai (1991, p. 24)

Examples of Innovation

- Glass (3500 BC)
- Modern Public Library (1850-1945 depending on country)
- Electronic calculator (1961)
- Mobile phones (1973)
- World Wide Web / Internet (1989)
- Email (1993)

What is A New Innovation?

- What do you define as **new**?
- Can mean different things to different people
- New to the world (10%)
- New to the firms (20%)
- Additions to existing products/process (26%)
- Improvement and revisions to existing products/process (26%)
- Repositioning (with different purposes) (7%)
  - New to the market (geography + segments)
  - New to the season
- Cost reduction (11%)

(See; Booz, Allen & Hamilton, 1982; Griffin, 1997)

Creative New meaning with New Innovation

Revolutionise Existing Concepts

Open versus Closed Innovation

Closed Innovation Principles	Open Innovation Principles
Most of the smart people in our field work for us	Not all the smart people work for us, so owe must find and tap into the knowledge and expertise of bright individuals outside our company
To profit from R&D, we must discover, develop and ship ourselves	External R&D can create significant value; internal R&D is needed to claim some portion of that value
If we discover it, we will get it to market first	We don't have to originate the research in order to profit from it
If we are the 1st to commercialise we will win	Building a better business model is better than getting to market first
If we create the most and the best ideas in the industry, we will win	If we make the best use of internal and external ideas, we will win
We should control our intellectual property (IP) so that our competitors don't profit from our ideas	We should profit from others' use of our IP, and we should buy others' IP whenever it advances our own business model

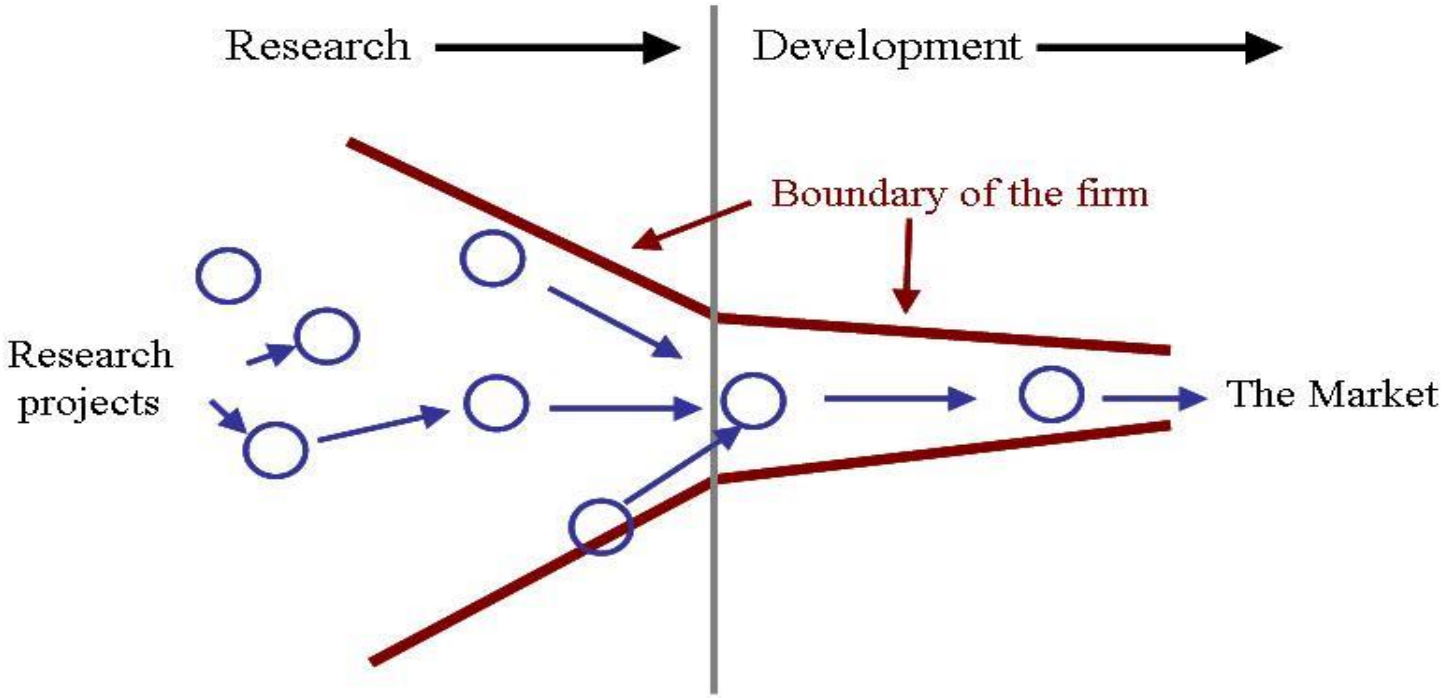
Open versus Closed Innovation

Under the concept of innovation that prevailed during most of the 20th century, companies attained competitive advantage by funding large research laboratories that developed technologies that formed the basis of new products that commanded high profit margins that then could be ploughed back into research.

The closed innovation paradigm has eroded due to the following factors:

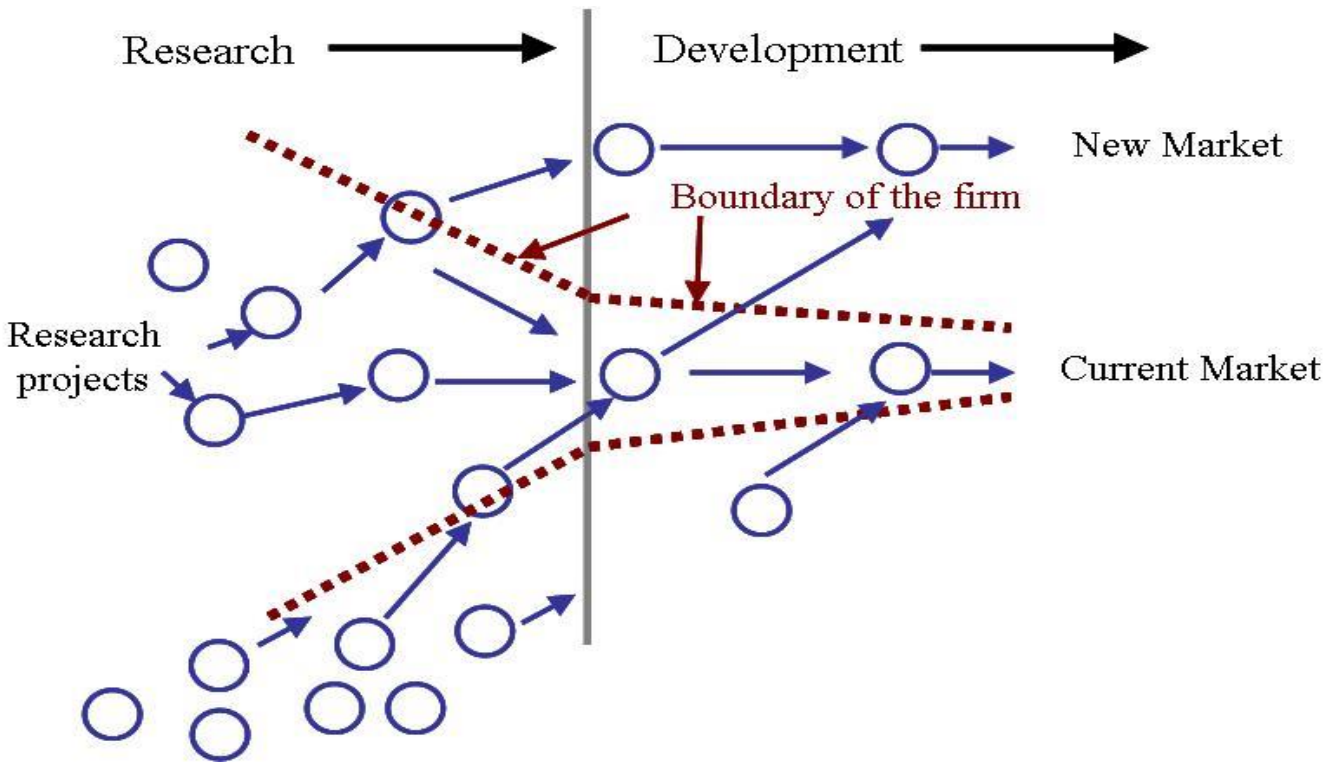
- Increased mobility of skilled workers
- Expansion of venture capital
- External options for unused technologies
- Increased availability of highly-capable outsourcing partners

Closed Innovation



(Chesbrough, 2003)

Open Innovation



(Chesbrough, 2003)

Not all Innovations are Successful…

Neither are All Fashion Trends

Really!?!?

- Innovation = Invention + Commercialization
- Are all Innovations Opportunities?

Opposing Views…

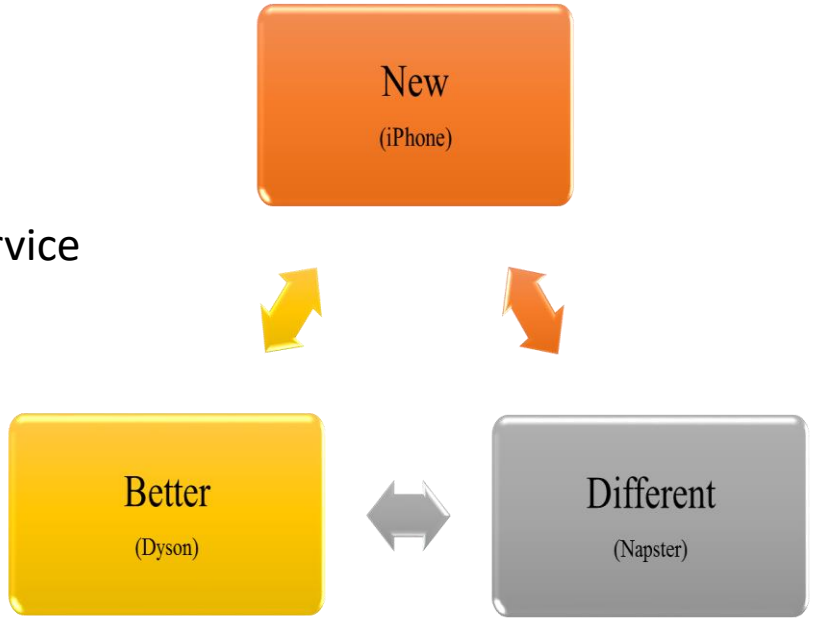
therefore see that there is a difference between the commonly held definitions of “Creativity and Opportunity” and the definitions used in a business context.

- We may think that creativity is related to artistic or cerebral activity and opportunity is a matter of chance.
- Business management theory suggests that in a commercial context, creativity can be learned or developed and that it need not relate to complete novelty; opportunity can be created or developed.

What’s an Opportunity?

opportunity has the qualities of being attractive, desirable and timely and is anchored in a product or service which creates value for buyer or end user”

- A new or improved product
- A new service
- A new means of production
- A new way of distributing the product or service
- An improved service
- New combinations
- Or a hybrid of the above



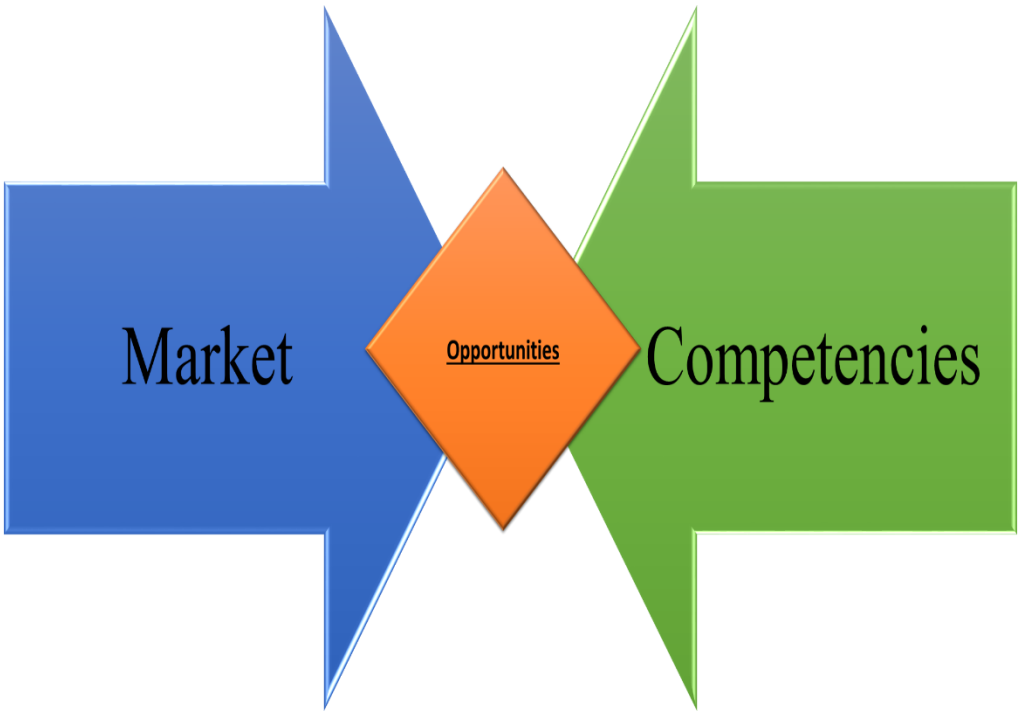
Recognising an Opportunity

- Opportunities are not like raindrops – they do not fall at our feet.
- Well, not usually! From time to time something might just happen which allows an entrepreneur to move forward.
- However, if we wait for an opportunity to turn up, we will probably never succeed.
- As creative business people we *seek* or *develop* opportunities.

So…

- Do Ideas = Opportunities?
- Do Problems = Opportunities?
- Reality - An Idea is Only an Opportunity when It:
  - Adds Value to Consumer
  - It Solves a Problem
  - It Can Make Some Money (Communicate Some Value to Other Stakeholders)
  - It is a Good “Fit” with the Entrepreneurial Team
- Timmons& Spinelli (2007)

Factors Influencing the Creation/Discovery of Opportunities



- Prior knowledge
- Education
- Work experience
- Enculturation
- Family & Friends
- Other personal events or other means

Drucker's Opportunity Scan

1. The unexpected - can we react to change?
2. Incongruity – can we cope with the difference between what we thought would happen and what actually happened? This could create an opportunity.
3. Inadequacy in underlying processes – can exiting processes and procedures be improved?
4. Changes in our industry or our market – can we respond positively?

- External

1. Changes in demographics – age, income, health, etc.
2. Changes in perception, mood, meaning - can we react to changes in fashion, culture, attitudes.
3. New knowledge – science and industry affect our products and processes.

Creative Invention Vs Innovative Opportunity

STRUGGLER	
STAGNATOR	

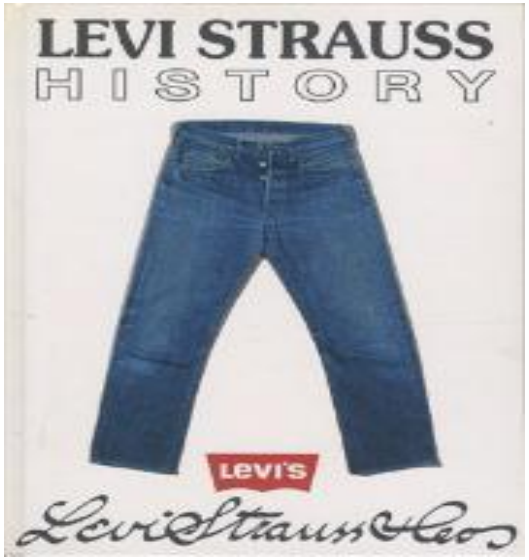
Creativity and Commerce

think of creativity in terms of ways of thinking which support commercial opportunities, whether in developing new processes, services or products.

Example: Rise of Levi's

- Problem:
  - Working Clothes for Mining Workers do Not Last

- Solution:
  - First Pair of Jeans



Ideas Start With Solving Problems

- Remember… Ideas Start With Solving Problems
- Any Problems are Big Opportunities.
- No Problems, No Solutions, & No Reasons for Firms to Exist.
- No One Pays You to Solve a Non-exist Problem (*Vinod Khosla,* Sun Microsystems)

Solving Problems”

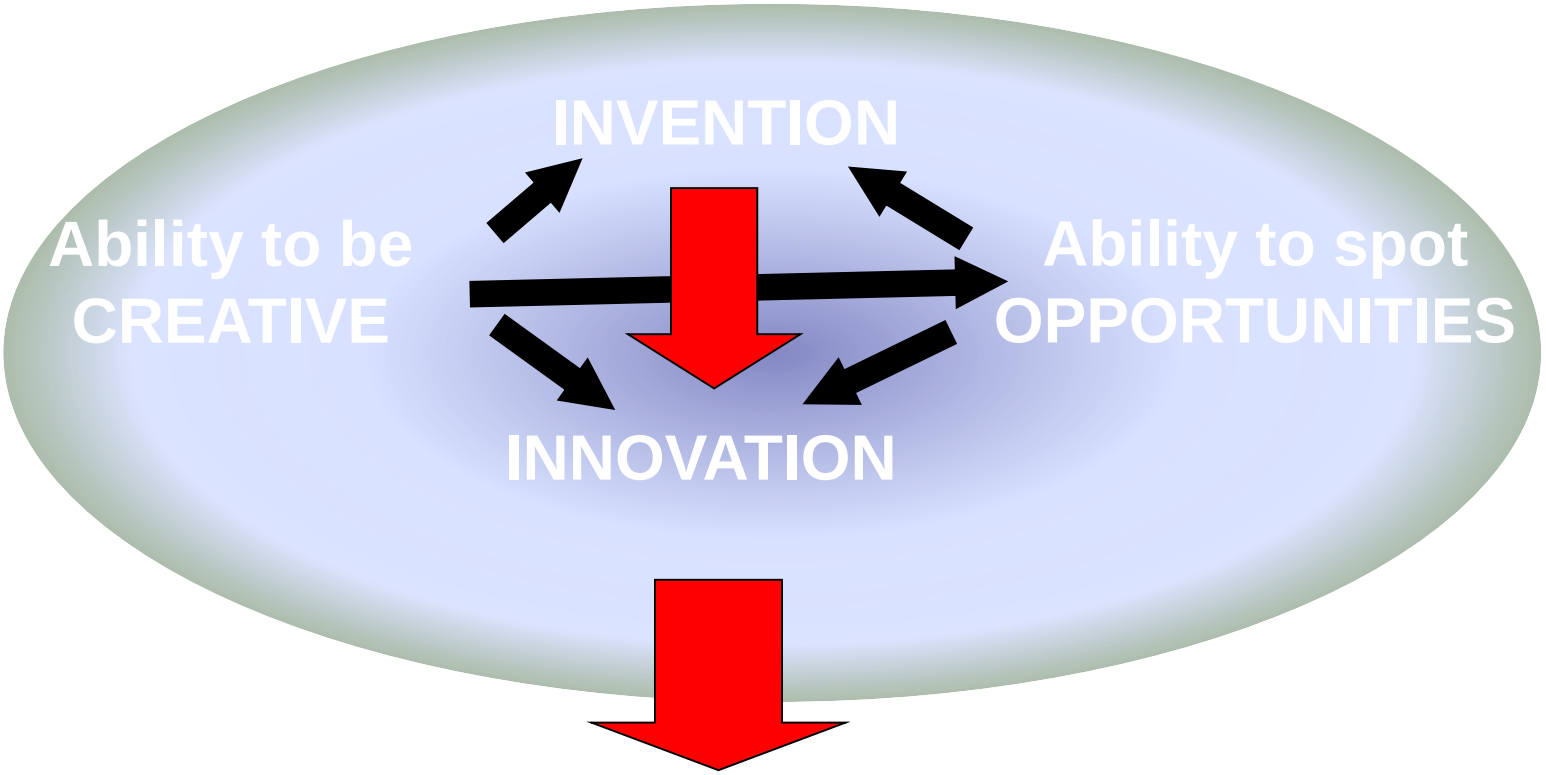
with this use of the word “problem”…

- The normal use of this word might suggest that there is something wrong
- In a business context, we might use the word simply to represent something which makes the customer’s activities less efficient/enjoyable/simple
- So, a “problem” might be something quite trivial, everyday or simple – however, by providing a cost effective solution, we please our customer and make money
- Examples
  - Velcro – a simple alternative to the shoelace.
  - A keyring that beeps – you can find your keys anywhere in the room
  - Goretex – water resistant jackets.

Attributes of Creative Thinking

- Flexibility – willing to look at an issue from many angles, not set in our ways.
- Originality – attempts to find non-typical responses to problems.
- Non-judgemental – not rejecting a potential solution without giving it appropriate consideration

Creativity, Invention, Opportunity & Entrepreneurship

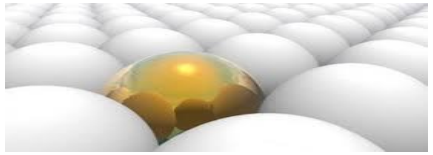


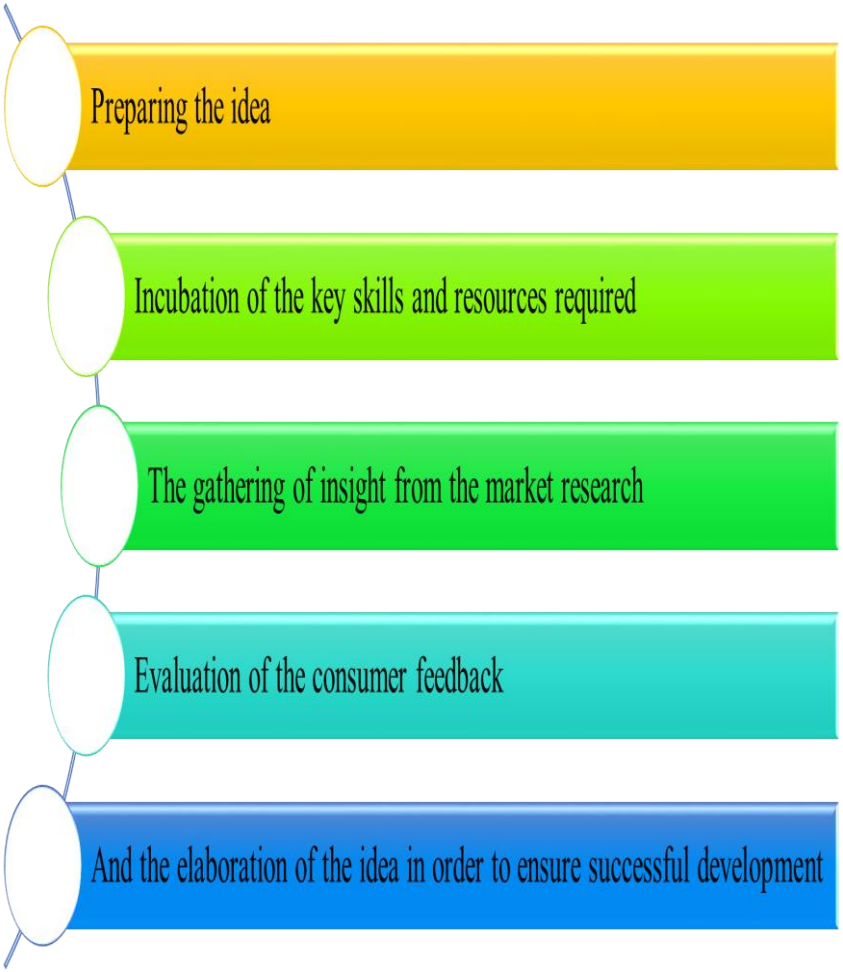
Creating Creativity

- They approach a problem systematically

Stages in Creative Thought

- Preparation
- Incubation
- Insight
- Evaluation
- Elaboration





What Stops Business Creativity?

prevent or slow the development of new ideas:

- Fear – change is always frightening.
- Risk – am I risking my established business?
- Convention – we've always done it this way.
- Self-doubt – if it's that good, surely somebody else would have made it by now?
- Fear of failure

Readings

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