

THE PATH OF INNOVATION

BEC+

BUSINESS
ENGLISH
COACHING

WHAT IS INNOVATION?

Innovation has become a key word in today's business world. Innovation involves many aspects of business environments. As we will see, it is much more than just launching a new product or service. Innovation is a way of thinking, a culture, even a new way of navigating business and corporate environments.

We will begin with the dictionary definition of innovation. The Merriam-Webster Dictionary defines innovation as: **“a new idea, device, or method; the act or process of introducing new ideas, devices, or methods”**. This is a general definition. It shows the most basic meaning of innovation: to introduce something new. However, in business, this term means much more. In business, innovation not only refers to introducing something new, but also something better in some way. Thus, innovation in business can be defined as the act of introducing something new (an idea, device, or method) that makes what already exists (a service, a product, a company) work in a better way (for example, by making it either faster or cheaper).

For a more technical, business-centered definition of innovation, we will look at the online dictionary BusinessDictionary.com, which defines it as **“the process of translating an idea or invention into a good or service that creates value or for which customers will pay”**.¹ In the broader definition, an innovation was anything new. In this, more business-specific definition, we find that an innovation is something new that creates value. This is the key difference. Creating value is the most important factor in business innovation. This can be done by improving on an existing service / product / process, or by coming up with something completely new that solves an existing problem or situation. This is also the difference, as we will see further on, between what we could call **“traditional innovation”**, and what is today being called **“disruptive innovation”**.

For now, let us comment the rest of the definition given by BusinessDictionary.com. First off, in order **“to be called an innovation, an idea must be replicable at an economical cost”**.² One of the main examples used to prove this point in the innovation literature is that of the first mainframe computers: they were a huge innovation, a big step forward, but were highly expensive and uncomfortably bulky, and not very easily replicated. The real breakthrough in the computer business came with the Personal Computer, the PC, which was much smaller and lighter, cheaper, and not too difficult to replicate, as we can see from the proliferation of personal computers in the last three decades. **“User friendly”** is also, as we will see, a key aspect of innovation.

On a broader tone, the businessdictionary.com definition goes on to explain that the term **“innovation”** includes **“all processes by which new ideas are generated and converted into useful products”**.³ that is, it may also be used to name the process that a new idea has to undertake in order to become a real, operational product or service. However, **“in a social context, innovation helps create new methods for alliance creation, joint venturing, flexible work hours, and creation of buyers' purchasing power”**.⁴ that is, finding new ways of working, new business and commercial relationships, better relationships that benefit everyone included: collaboration is another key word in the innovation glossary.

1. <http://www.businessdictionary.com/definition/innovation.html>

2. Id.

3. Id.

4. Id.

THE FOLLOWING ARE THE TWO MAIN TYPES OF INNOVATION, GIVEN BY THE BUSINESSDICTIONARY.COM:

- *Evolutionary innovations (continuous or dynamic evolutionary innovation) that are brought about by many incremental advances in technology or processes.*

Evolutionary innovations are the type that improve on existing products or services, bringing better quality to products /services that are already known to have a market niche with a need for them. The succession of always new and improved laptops and desktops is an example of evolutionary innovations. So is, for instance, innovation on successive car models from a same reference. Evolutionary innovations like to play it safe: the market is there, the need is there, the product is selling, the reasoning is that if they sell “new and improved” product, it will automatically sell, because there is an established environment to sell the product through.

Another category of evolutionary innovation is internal: innovations in production, financial management or workforce that allow companies to reduce expenses while offering the same quality of product they always have. Companies are on a constant search for this sort of innovation: one that allows for better revenue as time goes by. This is based on the idea that a business has to keep growing in order to be successful, if it gets stuck, if it stops innovating internally, it no longer can be seen as a viable business option. Businesses have to grow.

Evolutionary innovations are the type that improve on existing products or services, bringing better quality to products / services that are already known to have a market niche with a need for them.

- *Revolutionary innovations (also called discontinuous innovations) which are often disruptive and new.*⁵

The second type of innovation is called revolutionary or disruptive innovation. In order for an innovation to be disruptive, it must open new markets. Disruptive innovation is the type of innovation that makes either a new product that solves a previously unseen need, or the improvement of an existing product in such a way that it opens a whole new market target, a new category of customers. As The Economist puts it in their article “What Disruptive Innovation Means”, companies produce disruptive innovations “partly by harnessing new technologies but also by developing new business models and exploiting old technologies in new ways”.⁶

Evolutionary and Revolutionary innovations relate to each other in many ways. First off, many products / services with a well established market share started out as revolutionary innovations. Again, the personal computer is the paradigmatic case. When it first started out, it was a disruptive innovation. It changed the way everyday people viewed data processing and information sharing, and it did this by harnessing the existing technology to make it more accessible (in price as well as simplicity of use) and appealing to the common consumer. Today, however, personal computers are no longer a disruptive innovation. Their “disruptive era” has passed. Today, the personal computer industry continues to innovate constantly, and even though every once in a while comes a new computer-related product that completely disrupts the market (Laptop, iPod, Tablets) most of the innovation done in the computer business is of the evolutionary kind: they build on what they already have to produce better computers, but the basic idea behind the computer remains the same. This is the fate of all disruptive innovations: once they start exploiting a new and previously unseen market share, other companies start to want a piece of the pie. These “imitators” are no longer disruptive innovators, but evolutionary innovators.

5. Id.

6. <http://www.economist.com/blogs/economist-explains/2015/01/economist-explains-15>

Another way in which these two relate to each other is their mutual dependence. This is not to say that they need each other, but that sometimes one type of innovation gives another type of innovation a boost. Evolutionary innovations of the internal category, for example, are prone to be catapulted by revolutionary innovations that come from a different market. New technologies that replace human workforce at a given task are an example of this sort of innovation: the task is done more efficiently by the machine and the workforce can be either reduced or repurposed for another, more productive task. The new innovation, disruptive in its own market, allowed for a company from another market to advance its constant evolutionary innovation. Another example: a revolutionary financial software that completely disrupts the financial software market, will arrive at any other company as a tool for advancing evolutionary innovation (making processes faster and therefore more profitable).

However, Evolutionary and Revolutionary innovations tend to cancel each other out. The relationship between these two types of innovation is the subject of one of the most famous books on the subject: **The Innovator's Dilemma** by Clayton Christensen. Christensen also distinguishes two types of innovations, but he names them **"sustaining innovation"** versus **"disruptive innovation"**.⁷ Sustaining innovation, according to Christensen, pertains to the old model of doing business, where a company that had a defined market share continued to improve on their existing products in order to give their high-end, demanding customers new and better products that the company could sell for a higher price. This type of innovation meant making better products in order to sell at higher prices and make a better profit. In these cases, the innovation process is usually applied to existing products, and it focuses on perfecting and improving, rather than creating.

Disruptive innovations, however, are at the other end of the spectrum: they open new markets by making new and cheaper products that can be accessed by a wider range of customers or by a previously untargeted market segment.

Disruptive innovations, however, are at the other end of the spectrum: they open new markets by making new and cheaper products that can be accessed by a wider range of customers or by a previously untargeted market segment. In the aforementioned article on disruptive innovations, The Economist tells us that **"disruptive innovations usually find their first customers at the bottom of the market: as unproved, often unpolished, products, they cannot command a high price."**⁸ The bigger, more traditional competitors (named **"incumbants"** by Christensen), often do not pay much attention to the newcomers (**"entrants"** in the Christensen terminology), thinking they don't pose a threat to their business. However, disruptive innovations that stick can actually end up **"reshaping entire industries"**⁹; as The Economist puts it. Examples are Skype and the long-distance calls industry, iTunes and the record store industry, Uber and the taxi service industry. The most disruptive innovation of recent years, however, has been the internet itself, which has served as a platform for highly disruptive innovations in many industries. The examples mentioned (iTunes, Skype, Uber) were all possible due to the existence of internet, and, more specifically, thanks to high-speed broadband connections. As The Economist puts it, **"There is good reason to think that the pace of change will increase, as computer power increases and more things are attached to the internet, expanding its disruptive influence into new realms."**¹⁰

The Economist article on disruptive innovation goes on to highlight a few interesting facts about the subject. It suggests, for example, that it is in part due to disruptive innovation that **"the average job tenure for the CEO of a Fortune 500 company has halved from ten years in 2000 to less than five years today."**¹¹ Finally, the article mentions innovations from important companies that, if well harnessed, could lead to great disruptions: Google's autonomous vehicles could disrupt the car industry, Amazon's delivery drones could reinvent the delivery and shipping industry, and 3D printing could disrupt manufacturing industries.

Google's autonomous vehicles could disrupt the car industry, Amazon's delivery drones could reinvent the delivery and shipping industry, and 3D printing could disrupt manufacturing industries.

7. <http://www.claytonchristensen.com/key-concepts/>

8. <http://www.economist.com/blogs/economist-explains/2015/01/economist-explains-15/>

9. Id.

10. Id.

11. <http://www.economist.com/blogs/economist-explains/2015/01/economist-explains-15/>

So, what is the innovator's dilemma? The dilemma presents itself mainly to large, established companies that are already practicing sustaining innovation. The old model (according to Christensen) suggests that companies should keep improving on their products to make them better in order to sell them at higher prices to their most demanding and sophisticated customers. The idea or goal is to have the best product of their kind. This, according to the old model, will allow them to achieve the greatest profitability. **"However, by doing so, companies unwittingly open the door to 'disruptive innovations' at the bottom of the market."**¹² So the dilemma is: should companies go on pursuing these sustaining innovations, or, instead, make lower quality products that appeal to a lower end, less sophisticated but often more numerous range of consumers?

To understand why this dilemma is not easy to solve, we must first understand the characteristics of typical disruptive businesses. Christensen lays them out as follows: **"lower gross margins, smaller target markets, and simpler products and services."**¹³ The first two is where the innovator's dilemma plays out: should companies sacrifice part of their large profits and established market share in order to appeal to a smaller target market which, additionally, will return lower gross margins, only because it might turn out to be a disruptive innovation? Many companies have solved this dilemma by instituting different quality categories for their products. That is to say, keeping the high-end, high-profit share of the market, while also manufacturing lower quality, cheaper products that appeal to the low end of the market. The music instrument industry, for example, has done exactly this: such famous brands of instruments as Fender guitars or Zildjian cymbals manufacture lines of products in almost all points of the quality/price range. Many companies in the computer industry have also undergone a similar strategy, going as far as allowing buyers to **"customize"** the quality of their product (allowing them to choose, e.g., the size of their hard drive or the resolution and size of their screen), in order to make it match their specific needs. Thus, in today's disruptive innovation culture, **"the best"**, as applied to products, has become an ambiguous, inoperative concept. Again, the computer industry demonstrates this: not all computer buyers need **"the best"** that the computer industry can offer. Not all buyers need the fastest processor, or the largest hard-drive, or the biggest screen. Many just need a practical device to carry around and to work, mainly, on text documents. Thus, for these type of customers the **"best"** choice is not the most advanced and expensive one, as the old model would have suggested.

Disruptive innovations do not come about on their own, however. That is, for an innovation to become disruptive in its market, going from idea to prototype is not enough. Although disruptive innovations have indeed reshaped many industries, in order for them to work there must be something else, something more than just a new product. What innovations need to become disruptive is an innovation ecosystem. Frederick Allen's article on Forbes.com, **"Why Great Innovations Fail: It's All in the Ecosystem,"** explains this phenomenon. His first example involves a Michelin innovation that initially seemed like a completely disruptive product: **"In the 1990s Michelin developed a revolutionary new kind of tire with sensors and an internal hard wheel that could run almost perfectly for 125 miles after a puncture."**¹⁴ When a tire was punctured, a light would go off on the dashboard notifying the driver, who could then drive as much as 125 before he had to change it. **"This would make customers' lives much easier and much safer, and make lots of money for the company,"**¹⁵ says Allen. Michelin made an alliance with Goodyear to increase the market share for the new tire. They also allied with Mercedes to put the tires on their new cars. However, by 2007 the product had been abandoned and removed from the market, as an unexpected, but utter failure.

How could this happen? Allen's answer is that the company forgot to confront the ecosystem the new product would have to rely on: **"It had overlooked the garages that repair punctured tires and hadn't gotten them on board. Those garages needed expensive new equipment they had neither money nor space for, and they had to have that equipment long before it would get heavy use. They saw no reason to acquire it. And Michelin didn't see that one coming."**¹⁶

Many companies have solved this dilemma by instituting different quality categories for their products. That is to say, keeping the high-end, high-profit share of the market, while also manufacturing lower quality, cheaper products that appeal to the low end of the market.

12. <http://www.claytonchristensen.com/key-concepts/>

13. <http://www.claytonchristensen.com/key-concepts/>

14. <http://www.forbes.com/sites/frederickallen/2012/03/05/why-great-innovations-fail-its-their-ecosystem/>

15. Id.

16. Id.

Allen goes on to show other examples drawn from Ron Adner's book *The Wide Lens: A New Strategy for Innovation*. Another paradigmatic case is Sony's 2006 Reader for e-books. It would have been a greatly disruptive innovation (as Amazon's Kindle system later was), had it taken into account the ecosystem it had to work in. They launched the e-book Reader without building an appealing online e-book store, and without worrying about digital rights management or about giving authors and publishers attractive deals for their sales. Then, a year later, Amazon's Kindle finally brought about the e-book revolution by paying attention to all the details Sony missed. Their product (the Kindle Reader) wasn't exactly innovative, and it was considered to be inferior in quality to Sony's Reader. Plus, it worked with a closed platform that only allowed the user to load Amazon content. It was, overall, a weaker product than Sony's. However, Amazon engineered a whole ecosystem in which they offered attractive deals to publishers, price-friendly products to users, and an overall sales system that was as appealing as it was effective.

One of the main reasons, according to Adner's book, that Apple has been one of the key players of disruptive innovation today is because they always take the ecosystem into account. Even though the iPod was launched well after the first MP3 players, it was more disruptive, not only because of its simplicity in design and use, **"but also because Jobs waited until broadband technologies were ready to support the music data transfers it would rely on,"**¹⁷ says Allen. He went on to create the iTunes Music Store, and later opened the platform for PC users, enlarging the ecosystem. They then introduced the iPhone and the iPad, forming a whole personal information ecosystem for users, later enhancing it with cloud storage technology. This powerful ecosystem gave Apple leverage to impose its own rules on to both the music industry and the mobile industry.

It would have been a greatly disruptive innovation (as Amazon's Kindle system later was), had it taken into account the ecosystem it had to work in.

Without an ecosystem to support innovations, they may go by unnoticed and unwanted.

As we can see, the **"innovation ecosystem"** is as important to the innovation process as the product or service itself. Without an ecosystem to support innovations, they may go by unnoticed and unwanted. So what are the characteristics of a successful innovation ecosystem? This question has many answers, depending on what perspective is being used to approach the topic and what one exactly means by **"ecosystem"**. In Allen's and Adler's use of the word, as seen above, the word **"ecosystem"** refers mainly to what we may call the **"commercial ecosystem"** of innovation. That is: the ecosystem needed to successfully sell the new product to the public. In order to view and exploit this commercial ecosystem, there must be a profound understanding of all the elements and players in the industry, as well as in the market. A question then arises: can this **"profound understanding"** of a commercial ecosystem be gained by only taking into account the commercial and financial factors of the equation?

Victor W. Hwang, a Silicon Valley entrepreneur and venture capitalist who owns T2 Venture Capital, a firm that helps build startups and innovation ecosystems, would answer no: without taking into account the human factor, innovations will most likely fail. In a series of Forbes.com articles, Hwang analyzes the **"ecosystem"** phenomenon and shares his insight on the subject. On one of his articles, **"The Next Big Business Buzzword: Ecosystem?"**, Hwang looks into the use and meaning of the word. He starts by noting the increasing use of the word in business contexts. By using online metrics platforms such as Google Ngram and Google Trends, Hwang shows the increasing frequency in which terms like **"business ecosystem"** and **"innovation ecosystem"** have been used in the last three decades. However, as with most popular concepts and words, people usually have different meanings in their minds when they hear or use the term **"ecosystem"**.

One of the main reasons, according to Adner's book, that Apple has been one of the key players of disruptive innovation today is because they always take the ecosystem into account.

...without taking into account the human factor, innovations will most likely fail.

17. <http://www.forbes.com/sites/frederickallen/2012/03/05/why-great-innovations-fail-its-their-ecosystem/>

Hwang begins by commenting on the origin of the word: it comes from the field of Biology, and is used to **“describe a community of organisms interacting in their environment.”**¹⁸ Translated to business, Hwang sums it up: **“in a business ecosystem, the relationships between things matter.”**¹⁹ Specifically, in innovation ecosystems, relationships between humans matter. Two people sitting in a coffee shop today may or may not start a successful company or innovation: it all depends on how they relate to each other, how they interact: **“Do they like each other? Do they inspire each other? Do they trust each other enough to take a chance together? The world might turn on those answers.”**²⁰

Hwang reclaims a specific notion of **“ecosystem”** that he fears might be lost by the use of apparently interchangeable synonyms. He notes that ecosystem is usually replaced by **“cluster”** or **“network”** or **“organization”**, as if they all meant the same. **“But this is terrible —says Hwang— because they are missing the key difference. The terms ‘cluster’ or ‘network’ or ‘organization’ are rather static. They describe the mere presence of assets in a system, like blocks on a wall chart.”**²¹

An ecosystem, however, **“is about the dynamic interactions between things”**²² It is about people and the way they interact, they way they **“meet, talk, trust, share collaborate, team, experiment and grow together.”**²³ In order for an ecosystem to thrive, people need to develop specific patterns of behavior that support the flow of ideas, the expression of talent, and the movement of capital throughout a given system. The increasing frequency in which the term ecosystem is being used says something important about the way people in innovative cultures think of economic value. **“It says that individuals matter. That their actions can transform industries, even the entire world. That little things can make a big difference”**.²⁴

In another article, Hwang states that the most important aspect of these **“little things that make a big difference,”** is love.²⁵ In traditional models of business and economic growth, the word love seems completely out of context. They are models based upon **“precise control, zero-sum competition, and the rational primacy of cold-hearted spreadsheets”**²⁶ as Hwang says. But the new, innovative way of doing business looks out for more than that. It looks out for the human element of the equation: the irrational, compassionate and creative element. This is what Hwang means to say when he states that love is the key word in innovation ecosystems: that they care about more than just the numbers. It is necessary, in order to have a creative environment, to make this shift in our appreciation of business.

Hwang defines love as **“a manifestation of the faith we grant to others when we cooperate.”**²⁷ Love, says Hwang, drives innovation because it is the element that makes people stretch beyond their comfort zones, what makes people come together and trust each other and sacrifice hours of their lives to work for a vision greater than themselves. It is not an altruist state of being, mind you, but a way of working that Hwang summarizes in the phrase: **“We cooperate in order to compete.”**²⁸ According to Hwang, many science and human science fields have converged on this view of the human race, stating that it is precisely the way we **“cooperate in order to compete”** that which makes us the unique and successful species we are. The traditional, zero-sum competition model strives to leave one man (or company) standing. In this traditional model, the closer companies are to this ideal state, the more successful that company will be considered. Cooperative competition, on the other hand, has a different measure for success: what has to thrive is the whole ecosystem.

An ecosystem, however, “is about the dynamic interactions between things”. It is about people and the way they interact, they way they “meet, talk, trust, share collaborate, team, experiment and grow together.”

Hwang presents a diagram in order to show the role of love in business innovation.

THE LIFE CYCLE OF ENTERPRISE FORMATION

HOW WE ORGANIZE TO SOLVE PROBLEMS AT SCALE =
HOW WE COOPERATE IN ORDER TO COMPLETE-

DIAGRAM IN THE NEXT PAGE

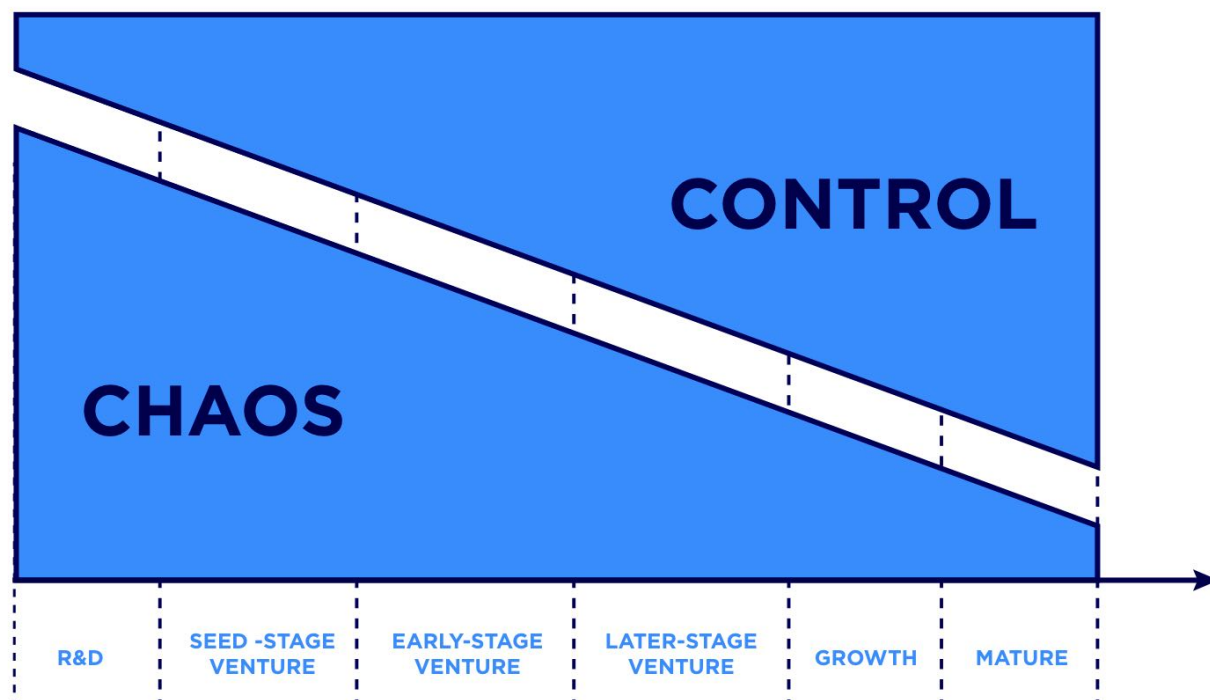
18 - 24 <http://www.forbes.com/sites/victorhwang/2014/04/16/the-next-big-business-buzzword-ecosystem/>

25 - 28. <http://www.forbes.com/sites/victorhwang/2012/12/28/the-key-to-growing-innovation-ecosystems-is-the-most-abundant-resource-in-the-world-love/>

Hwang presents a diagram in order to show the role of love in business innovation.

THE LIFE CYCLE OF ENTERPRISE FORMATION

HOW WE ORGANIZE TO SOLVE PROBLEMS AT SCALE =
HOW WE COOPERATE IN ORDER TO COMPLETE



PRE-PRODUCT
PRE-REVENUES
PRE-COMPANY
POSITIVE SUM COOPERATION
ECOSYSTEM (RAINFOREST)
IRRATIONAL LOVE

POST-PRODUCT
POST-REVENUES
POST-COMPANY FORMATION
ZERO-SUM COPETITION
NEO-CLASSICAL ECONOMICS
RATIONAL PROFIT

This is how Hwang explains it: **“This diagram provides a spectrum for thinking about how human nature and business intersect. Innovation derives from how efficiently people can traverse the span from left-to-right, from chaos to control, and then do it again and again.”**²⁹ The key phrase here is do it again and again: almost every company ever started went through the complete process described in Hwang’s graph. They started out small and with huge challenges, which called for high levels of sacrifice and inventive, creative, usually cooperative solutions for arising problems. However, the traditional model invited companies to stay on the left side, once they had reached it. Who would want to go from **“control”** back to **“chaos”**? However, this is what innovative ecosystems are constantly doing. Innovative companies refuse to get too comfortable in the right side of the graph, and are constantly looking for ways to go back and repeat the process, knowing full well that in this repetition is where the greatest chances for innovation lie. And innovation, in today’s world, is increasingly becoming one of the key terms for business success. On the left side is where innovation begins, it is where people do things for more than economic profit: they do things because they believe in their project vision, they believe in making a change. It is also where most cooperation takes place. Cooperation is essential in going from the left side of the graph to the right side:

All along this value chain from left-to-right, people help each other out, like a chain of citizens passing along buckets of water to put out a neighbor’s fire. We see this behavior a lot in Silicon Valley and other entrepreneurial ecosystems. On the left side of the chain—where new things start—people help out more. Because if they didn’t, nothing would happen. The transaction costs would be too high.

Traditional economic and business models focus almost exclusively on the right side of the graph. The new, innovation-driven model allows ample room for the left side of the graph to be constantly active within the business environment. As the above quote says, this is the zone **“where new things start”**, and it requires collaboration and sacrifices in order for things to work, or even to happen in the first place. And, in order for collaboration and sacrifice to take place, there has to be something more than just traditional rational economic incentives. People have to believe in something, they have to love an idea, in order to sacrifice their time and effort for it, even if compensation is sub-optimal. Hwang invites us to **“think of Steve Jobs, who credited his underpaid, loyal team at NeXT for the rebirth of the**

Apple operating system.”³⁰ They believed in, where in love with, this new product they were about to put out into the world. That love made them stay and work when things got difficult and working conditions became less attractive.

In a speech given at the Global Innovation Summit in Silicon Valley, Hwang says **“What is clear today is that the cold, mechanistic, rationalistic models that economists have used to describe our world—and to prescribe cures for its ills—are not sufficient. Many of us already feel this intuitively, but it is now time to pronounce it out loud. Things like culture matter. Community matters. Trust matters. Dreams matter.”**³¹ And the reason why these things (the **“fuzzy things”**, as Hwang calls them further on in his speech) matter is because they help overcome barriers and thus allow **“the raw materials of innovation and economic growth—ideas, talent, capital”**, to flow more freely and productively in business environments: **“like nutrients in an interconnected root network”**³², says Hwang. He compares innovation ecosystems to rainforests, first reminding us that human society is also, by nature, a biological system. He then goes on to state that **“highly productive human networks resemble natural rainforests in this way—it is not just the presence of basic ingredients; it is the recipe of serendipitous tinkering that causes the bounty”**³³ However, he says, barriers between people always exist, and without this new view of the business world, they will continue to hinder the free flow of ideas, talent, and capital.

People have to believe in something, they have to love an idea, in order to sacrifice their time and effort for it, even if compensation is sub-optimal. Hwang invites us to “think of Steve Jobs, who credited his underpaid, loyal team at NeXT for the rebirth of the Apple operating system.”

...barriers between people always exist, and without this new view of the business world, they will continue to hinder the free flow of ideas, talent, and capital.

29. <http://www.forbes.com/sites/victorhwang/2012/12/28/the-key-to-growing-innovation-ecosystems-is-the-most-abundant-resource-in-the-world-love/>

30. Id.

31. <http://www.forbes.com/sites/victorhwang/2012/07/10/whats-the-big-deal-about-innovation-ecosystems/2/>

32. Id.

33. Id.

In his New York Times bestseller book on meditation, journalist and anchorman Dan Harris explores this new view of corporate environments. In the chapter on compassion meditation, Harris mentions certain scientific studies that have tested meditators in general and specifically compassion meditation. He mentions, for example, a laboratory at the University of Wisconsin-Madison, which is called the Center for Investigating Healthy Minds. When talking about research on compassion meditation and its effects on different areas of human society, Harris tells us: **“Compassion research was part of a larger shift in emphasis for modern psychology.”**³⁴ In its early stages, and until fairly recently, psychology research has focused primarily on **“cataloguing human pathology and cruelty, but now the positive emotions such as happiness, kindness, and generosity were getting their due”** This new area of research, while providing a whole new view of human nature, has brought to the forefront of scientific discussion a **“long-overlooked branch of Darwinian thinking”**³⁵ The traditional Darwinian paradigm was summarized in the famous phrase **“survival of the fittest”**. In a way, consciously or not, the traditional, zero-sum competition model of business worked with this paradigm. The new paradigm, also provided by Darwinian thinking, states that **“tribes who cooperated and sacrificed for one another were more likely to ‘be victorious over other tribes.’ Apparently nature rewarded both the fittest—and the kindest.”**³⁶

This view of the evolution of man can be found in a less famous work by Darwin, *The Descent of Man* (1871), in which he specifically targets his analysis to the evolution of man, versus his other most famous work, *On the Origins of Species* (1859), which focuses on the evolution of living species in general. In *The Descent of Man*, Darwin reminds us that tribes in which characteristics such as sympathy, cooperation and fidelity are highly valued, are more likely to succeed over other tribes. The chapter in which the famous biologist mentions this is called **“On the Development of the Intellectual and Moral Faculties”**. Darwin argues that moral faculties, as much as (or even more than) intellectual faculties, were a key factor in the fight for survival of human groups or tribes. Darwin writes:

*Selfish and contentious people will not cohere, and without coherence nothing can be effected. A tribe rich in the above qualities [sympathy, fidelity, and courage] would spread and be victorious over other tribes: but in the course of time it would, judging from all past history, be in its turn overcome by some other tribe still more highly endowed. Thus the social and moral qualities would tend slowly to advance and be diffused throughout the world.*³⁷

34. Harris, Dan. *10% Happier*. (2014) Yellow Kite Books: London. Pg. 185

35. Id.

36. Id.

37. <http://darwin-online.org.uk/content/frameset?itemID=F937.1&viewtype=text&pageseq=1>

38. Harris, Dan. *10% Happier*. (2014) Yellow Kite Books: London. Pg. 172

Thus, the recent focus of innovation ecosystems on topics such as compassion and cooperation, would be (according to Darwin) a step forward in the natural social evolution of the human species, increasing even more our chances of survival. As we saw, Dan Harris says that, according to this theory, nature rewards both the fittest and the kindest. In cold Darwinian terms, we may go even further and say that, in the application of evolutionary theory to the human race, the kindest are the fittest.

This new view of corporate governance is also reflected in the report Dan Harris gives in his book about meditation in corporate organizations worldwide. The chapter of his book in which he explores this is called **“The New Caffeine”**, and is written as a journalistic report on how and why meditation has entered the corporate and organizational world. Many have adopted meditation as a key element in boosting creativity, employee efficiency and general productivity. Multitasking is now old school corporate attitude: the new, meditation-guided attitude is awareness and mindfulness. Harris mentions research studies that show that multitasking is not something humans can actually do, and that it dramatically hinders work efficiency. The term comes from computer sciences: computers can multitask, humans cannot. What humans actually do when they try **“multitasking”** is lowering their attention abilities and their productivity. Quoting Janice Marturano, from the PR department at General Mills, Harris writes: **“It’s neuroscience that would say that our capacity to multitask is virtually nonexistent. Multitasking is a computer-derived term. We have one processor. We can’t do it.”** And later: **“Because when you’re moving from this project to this project, your mind flits back to the original project, and it can’t pick it up where it left off. So it has to take a few steps back and the ramp up again, and that’s where the productivity loss is.”**³⁸

Multitasking is now old school corporate attitude: the new, meditation-guided attitude is awareness and mindfulness.

the best ideas arrive when people allow themselves to get comfortable with ambiguity. “This is why people have aha moments in the shower.”

The new paradigm calls for focusing on the goal at hand: if you are in a meeting, be in the meeting; if you are working on a project, work only on that project for solid blocks of time. Marturano also suggests taking “purposeful breaks” (moments in which employees take a small break just to “be in the moment”) throughout the day, as a means of resetting their mental awareness and thus boost their working productivity. Further still, breaks are key to creative problem solving. Harris mentions studies that show that **“the best way to engineer an epiphany was to work hard, focus, research, and think about the problem—and then let go. Do something else.”**³⁹ That is, do something not related to the problem, something that relaxes. This counterintuitive suggestion actually allows the unconscious mind to go to work in search of solutions. Harris says, based on his research, that the best ideas arrive when people allow themselves to get comfortable with ambiguity. **“This is why people have aha moments in the shower.”**⁴⁰

General Mills (home to such brands as Cheerios and Betty Crocker) is not the only major organization that is including meditation as a structural part of their corporate culture. According to Harris, it has become something of a corporate trend: Aetna, Procter & Gamble, Google, and Target are all an enthusiastic part of this new trend. Target even has, at its headquarters, a weekly program called **“Meditating Merchants”**, which holds over 500 members from the company’s workforce. Other organizations such as the U.S. Forest Service and the U.S. Marines have also embraced meditation. Meditation is not only helping to lower employee stress levels, it also enhances productivity and helps people make better decisions under stress (this is one of the main reasons the U.S. Marine Corps is enforcing meditation on its soldiers: to help them to make better decisions in combat-related, stressful situations).

Silicon Valley, always on the cutting edge of technology as well as corporate governance, has long since included meditation practices in business environments. As a Wired Magazine article on the subject states: **“Across the Valley, quiet contemplation is seen as the new caffeine, the fuel that allegedly unlocks productivity and creative bursts. Classes in meditation and mindfulness—paying close, nonjudgmental attention—have become staples at many of the region’s most prominent companies.”**⁴¹ This article is from 2013, so it is not at all a recent development. According to the article, other tech companies such as Twitter, Facebook and LinkedIn have also weaved mindfulness-related practices (meditation, mindful breaks, etc.) into their work environments.

However, meditation is just one of the many aspects that make Silicon Valley the innovation champion of today’s corporate world. Hwang, who looks from within the Valley, says: **“in Silicon Valley, we see a living, breathing system that emerges when a trust-based, collaborative community reduces countless transaction costs in the innovation process. These costs are what would otherwise cause entrepreneurs and innovators to die deaths of a million cuts, as they do in most other places.”**⁴² Today, information and communication technologies allow for a wider collaboration space, not constrained by geographical boundaries. But the ability to throw down the physical barriers that divide human societies is just the beginning, and, alone, it does not offer much in the way of significant change within corporate cultures. Innovation also **“needs freedom from the informal social constraints caused by distrust, fear, miscommunication, and distance.”**⁴³

The extra element needed in order for the new communication technologies to reach their full human, social, and economic potential, is a culture of compassion and collaboration. Hwang calls for **“‘post-modern economics’ that move beyond the old, harsh dichotomies of thinking that have gotten us where we are—rational versus irrational, control versus chaos, predictable versus unpredictable”**.⁴⁴ Just as architecture, visual art, music and literature have moved away from the rigid two way street of modern mentality, Hwang argues that economics studies and business practices should also move on into a richer, more complex view of the world: one that allows for a greater humanity within corporate environments.

Having said all this, it is important to bear in mind that building a culture of innovation, constructing and fostering an innovation ecosystem, is a task for many hands. No matter how much we encourage innovation in our immediate circle of influence (our office, our department, our company), a real innovation ecosystem involves the coming together of many factors, many people from different places in the value chain. Sadly, it is mostly beyond our immediate control: most of the factors involved fall outside our area of influence.

Silicon Valley, always on the cutting edge of technology as well as corporate governance, has long since included meditation practices in business environments.

39. Harris, Dan. 10% Happier. (2014) Yellow Kite Books: London. Pg. 174

40. Id.

41. <http://www.wired.com/2013/06/meditation-mindfulness-silicon-valley/all/>

42. <http://www.forbes.com/sites/victorhwang/2012/07/10/whats-the-big-deal-about-innovation-ecosystems/2/>

43. Id.

44. Id.

However, this does not mean that we shouldn't do our best to manage and multiply what is in our control. What is in our control is fostering innovative and creative thinking within our workspace. Even if you are at a position of minimal influence within the company hierarchy, you can make creative thinking part of your personal work ethic.

Creativity theorists such as Mihaly Csikszentmihalyi, argue that true creativity involves more than creative actions or innovative creations: personal creativity is not enough. According to Csikszentmihalyi, in order for a person to be creative or for a product to be considered as innovative, there has to be three elements in play: 1) the domain; 2) the field; and, 3) personal creativity.⁴⁵ Csikszentmihalyi defines the domain as: **"a set of symbolic rules and procedures. Mathematics is a domain (...). Domains are in turn nested in what we usually call culture, or the symbolic knowledge shared by a particular society, or by humanity as a whole".**⁴⁶

The field is the human factor within the domain: it **"includes all the individuals who act as gatekeepers to the domain"**⁴⁷ They are the experts, the academics, the curators. They are in charge of selecting **"what new works of art deserve to be recognized, preserved, and remembered"**⁴⁸ Applying this type of analysis to the nature of commercial innovation ecosystems, customers (or consumers, or users) would be one of the most important subgroups of the field. They are the ones who ultimately decide if a particular innovation can be, in fact, turned into an attractive business model. If they buy the product in sufficient amount, it is go. However, there are also other factors that must be taken into account. The previously mentioned case of the Michelin tires did not take into account the repair garages that would have to fix the punctured tires. These garages were also part of the field. Their reasoning process for accepting or declining an innovation is based upon commercial viability. For the repair garages, the high costs of acquiring the new tire repair technology (and the time it would take for it to be in full use, returning on the investment) completely outweighed the benefits it offered them as businesses.

Even if you are at a position of minimal influence within the company hierarchy, you can make creative thinking part of your personal work ethic.

However, meditation is just one of the many aspects that make Silicon Valley the innovation champion of today's corporate world. Hwang, who looks from within the Valley, says: **"in Silicon Valley, we see a living, breathing system that emerges when a trust-based, collaborative community reduces countless transaction costs in the innovation process. These costs are what would otherwise cause entrepreneurs and innovators to die deaths of a million cuts, as they do in most other places."** Today, information and communication technologies allow for a wider collaboration space, not constrained by geographical boundaries. But the ability to throw down the physical barriers that divide human societies is just the beginning, and, alone, it does not offer much in the way of significant change within corporate cultures. Innovation also **"needs freedom from the informal social constraints caused by distrust, fear, miscommunication, and distance."**

The extra element needed in order for the new communication technologies to reach their full human, social, and economic potential, is a culture of compassion and collaboration. Hwang calls for **"'post-modern economics' that move beyond the old, harsh dichotomies of thinking that have gotten us where we are—rational versus irrational, control versus chaos, predictable versus unpredictable"**. Just as architecture, visual art, music and literature have moved away from the rigid two way street of modern mentality, Hwang argues that economics studies and business practices should also move on into a richer, more complex view of the world: one that allows for a greater humanity within corporate environments.

Having said all this, it is important to bear in mind that building a culture of innovation, constructing and fostering an innovation ecosystem, is a task for many hands. No matter how much we encourage innovation in our immediate circle of influence (our office, our department, our company), a real innovation ecosystem involves the coming together of many factors, many people from different places in the value chain. Sadly, it is mostly beyond our immediate control: most of the factors involved fall outside our area of influence.

The third, finally, is personal creativity, or, as Csikszentmihalyi puts it more simply: **"the individual person"**⁴⁹ Here is how he defines it: **"Creativity occurs when a person, using the symbols of a given domain such as music, engineering, business, or mathematics, has a new idea or sees a new pattern, and when this novelty is selected by the appropriate field for inclusion in the relevant domain"**⁵⁰

45. Csikszentmihalyi, Mihaly. *Creativity: Flow and the Psychology of Discovery and Invention*. (2007). HarperCollins: E-book Edition.

46. Ibid. P. 27

47. Ibid. P. 28

48. Id.

49. Id.

50. Id.

That is, in order for an invention to be creative, or innovative, it has to be accepted by the **“field managers”** as a valid innovation for the given domain. Still: even though two thirds of the creativity equation are out of the creative individual’s control, the one third that is in our control is the most important factor, the central element upon which the other two depend. By fostering personal creativity and creative thinking, we are strengthening the most important part of the process of creativity. We are putting our grain of sand to the ideal of a strong innovation ecosystem.

This is good, this means we already have in our hands the most important creative thinking tools: ourselves. And, more specifically, our brains. One of the goals of Csikszentmihalyi’s book on creativity is to show that anyone, under the right condition, can be creative. As we saw in the Motivation content document of this course, there is no such thing as a **“language gene”**. Equally, Csikszentmihalyi argues that there is no such thing as a **“creativity gene”** or trait. From a neuroanatomical point of view, there is no significant difference between Einstein’s brain, for example, and ours. **“In principle, because of the similarity in cerebral hardware, most people could share the same knowledge and perform mental operations at similar levels”**⁵¹. That is, under the right conditions, everyone can be creative.

This is good, this means we already have in our hands the most important creative thinking tools: ourselves. And, more specifically, our brains. One of the goals of Csikszentmihalyi’s book on creativity is to show that anyone, under the right condition, can be creative. As we saw in the Motivation content document of this course, there is no such thing as a **“language gene”**. Equally, Csikszentmihalyi argues that there is no such thing as a **“creativity gene”** or trait. From a neuroanatomical point of view, there is no significant difference between Einstein’s brain, for example, and ours. **“In principle, because of the similarity in cerebral hardware, most people could share the same knowledge and perform mental operations at similar levels”**. That is, under the right conditions, everyone can be creative.

Even if you are at a position of minimal influence within the company hierarchy, you can make creative thinking part of your personal work ethic.

One final word on creativity. Even though in many cases it is true that the field experts are the ones to give a new product the status of **“innovation”**, in some cases, the exact opposite is true. Such is the case argued by Michael Michalko in his creative thinking book **Thinkertoys: A Handbook of Creative-Thinking Techniques**. He quotes many cases in history in which the experts in a given field could not predict the true value of a given innovation. The airplane, the telephone, the train, courier mail: these were all inventions that were thought of, by the experts in the field, as either impossible or useless and commercially unviable. Michalko goes so far as to say: **“Sometimes it seems that the test of a truly brilliant idea is whether or not the ‘experts’ discount it.”**⁵² These happens because **“the more expert you become in your field, the more difficult it is to create innovative ideas—or even obvious ones.”**⁵³ So even if the opinion of some subgroups of the field is important, many times it is not a good predictor of an innovation’s success. This is the case for many disruptive innovations as we studied them in this document: innovations that, going unnoticed at first by the field experts, ended up completely changing their respective industries.

This is why the exercises given in this course for innovation focus on creative as well as analytical (or critical) thinking. Being able to analyze a given domain and thinking critically about it is paramount to being creative and innovative. Analysis is one of the best tools for innovations. We will have essay questions that help us analyze different commercial and business realities, bringing us one step closer to innovation. We will also have creative thinking game, that forces your subconscious to go to work, to think outside the box, to create. Analyze and create: this is the formula for personal innovation and creativity. These are the muscles we’ll be training in this section.

By fostering personal creativity and creative thinking, we are strengthening the most important part of the process of creativity. We are putting our grain of sand to the ideal of a strong innovation ecosystem.

51. Ibid. P. 344.

52. Michalko, Michael. Thinkertoys: A Handbook of Creative-Thinking Techniques. (2006). Ten Speed Press: E-book Edition. P. 190.

53. Id.

INNOVATION CASE STUDY: BEC+

BEC is, in many ways, an innovator and a promoter of innovation. Our operating key term is: “disruptive innovation”. Our new program, Business English Coaching, is an innovative approach to Second Language Learning (SLL). We want to disrupt, shake and shock the SLL market. Our approach was designed by education and design thinking experts, specially tailored for the specific needs of our clients.

BEC is, in many ways, an innovator and a promoter of innovation. Our operating key term is: “**disruptive innovation**”. Our new program, Business English Coaching, is an innovative approach to Second Language Learning (SLL). We want to disrupt, shake and shock the SLL market. Our approach was designed by education and design thinking experts, specially tailored for the specific needs of our clients.

We not only strive to have a better business for our customers and our employees, we go one step further, taking a look into the future and trying to bring it closer to our present. How do we look into the future? BEC is actually a leader in the interpretation and translation field. Even though we have branched out to other fields such as written translation and second language education, one of our main areas of business is simultaneous translation. Our work in interpretation and translation has taken us across the globe and brought us closer to people from around the world who visit our country. This constant, cosmopolitan exchange has allowed us to be in permanent contact with what is being done in the most innovative environments around the globe. Thus, we come back with experiences and ideas that we know other parts of the world are ready for. There is much space for innovation in South America, we just have to learn how to inhabit that space productively.

This is how we at BEC are making our way through our own innovation process in the domain of language education:

ESP: English for Specific Purposes uses English learning to focus on other areas of knowledge or expertise. Our new BEC Plus courses are an example of this type of English learning. We teach motivation, presentation skills, visual thinking and problem-solving skills, negotiation skills. English is not the end in itself, but the medium, a tool we are using to teach other topics. This also allows us to be Innovator Promoters in our country, as our BEC+ courses strive to plant the seed of an innovative culture in the companies we work with. As we have seen, one of the key components of successful business innovation is its culture and ecosystem. Through our BEC+ courses, we actively engage in constructing a network between our clients and us: an innovation ecosystem that can expand and grow by itself.

We not only strive to have a better business for our customers and our employees, we go one step further, taking a look into the future and trying to bring it closer to our present.

COACHING: We focus on a coaching approach. A coaching approach means that we empower our students, giving them the tools to learn and grow intellectually and professionally by themselves, instead of getting all their new knowledge handed down by the instructor. In today's world this type of instruction is not only beneficial, it is mandatory. In the information era, the role of the instructor has changed significantly. The instructor is no longer the vessel of knowledge, the fountain of new information. Today, everybody has access to facts and information on basically any subject. Thus, the instructor's role is now different: s/he facilitates a learning process, research techniques, and the ability to select valuable information and interpret it creatively and critically. This is what the new concept of coaching is all about: embracing the fact that the instructor is no longer the go-to person for specific information, but rather the person constantly reminding his students that they can take their future and their education into their own hands.

NEED-TO-KNOW PRAGMATISM: We teach only what our clients really need to know. Since our main goal is not to teach other languages, our approach to learning a second language is significantly different from traditional approaches. One way it is different is that grammar, for example, is taught only on a strictly need-to-know basis. That is, we only look to grammar when its absence is clearly hindering communication and understanding. However, this is rarely the case: traditional, mainstream education in SLL has always seen grammar as the entrance-point to a new language. However, there is no conclusive evidence that beginning by learning grammar rules is the most effective method for acquiring a new language. Grammar is, basically, a language analysis tool. It is highly useful for linguists, etymologists and language philosophers. It is not useful, nor necessary, in any other setting. It is a common misconception that we need to know grammar rules in order to learn a new language. A good metaphor is that of a driver. A driver does not need to know every detail of how the engine works, or how the materials of the tires and of the street interact, allowing him to advance and steer. This systematic knowledge of the inner workings of a car may be useful in sporadic situations in which the car breaks down, for example. But, for all mayor purposes, all a driver needs to know is how to drive the car. Our TV may be another example: we do not need to know how the internal system of our television screen works in order to operate and use it. Exactly the same goes for language learning: children don't use grammar when learning to speak, they just learn by speaking. Many of us go our whole lives using our First Language without ever knowing the inner

workings of its grammatical structure. This does not prevent us at all from using it well when speaking, and even when writing.

This new approach, however, is not all our creation. We have based it upon the teachings of a whole new, cutting edge community of polyglots on the internet that are showing, in actual practice, how ineffective traditional language learning is. Their approach and tools have been one of the sources of inspiration for our BEC Plus course. We will see more about these polyglots and their methods in the vocabulary and innovation resource document.

CREATIVITY: We foster creativity in our company, as well as in those who we work with. Creativity and innovation are the key concepts in BEC. Our Business English Coaching program is one of our main steps towards the generation creativity and innovation. We foster creativity by providing our clients with a series of cutting edge tools (creative thinking tools, visual thinking tools, presentations tools, negotiation tools) that promote creative and critical thinking in the organizations we partner with. We see English as a tool, but not just a communication tool: it is a tool that can boost productivity and innovation, and its analytical power can be harnessed to the benefit of your business.

We empower individuals through the power of effective communication.

ONLINE RESOURCES:

<http://www.merriam-webster.com/dictionary/innovation>

<http://www.businessdictionary.com/definition/innovation.html>

<http://www.economist.com/blogs/economist-explains/2015/01/economist-explains-15>

<http://www.claytonchristensen.com/key-concepts/>

<http://www.forbes.com/sites/frederickallen/2012/03/05/why-great-innovations-fail-its-their-ecosystem/>

<http://www.forbes.com/sites/victorhwang/2014/04/16/the-next-big-business-buzzword-ecosystem/>

<http://www.forbes.com/sites/victorhwang/2012/12/28/the-key-to-growing-innovation-ecosystems-is-the-most-abundant-resource-in-the-world-love/>

<http://www.forbes.com/sites/victorhwang/2012/07/10/whats-the-big-deal-about-innovation-ecosystems/2/>

<http://darwin-online.org.uk/content/frameset?itemID=F937.1&viewtype=text&pageseq=1>

<http://www.wired.com/2013/06/meditation-mindfulness-silicon-valley/all/>