

Handouts on Creativity and Innovation

What is creativity?

Creativity is the bringing into being of something which did not exist before, either as a product, a process or a thought.

You would be demonstrating creativity if you:

- Invent something which has never existed before
- Invent something which exists elsewhere but you are not aware of
- Invent a new process for doing something
- Reapply an existing process or product into a new or different market
- Develop a new way of looking at something (bringing a new idea into existence)
- Change the way someone else looks at something

In fact, we are all creative every day because we are constantly changing the ideas which we hold about the world about us. Creativity does not have to be about developing something new to the world, it is more to do with developing something new to ourselves. **When we change ourselves, the world changes with us**, both in the way that the world is affected by our changed actions and in the changed way that we experience the world.

Creativity can be used to make products, processes and services better and it can be used to create them in the first place. It is expected that increasing your creativity will help you, your organization and your customers become happier through improvements in your quality and quantity of output.

What is creative thinking?

Creative thinking is the process which we use when we come up with a new idea. It is the merging of ideas which have not been merged before. Brainstorming is one form of creative thinking: it works by merging someone else's ideas with your own to create a new one. You are using the ideas of others as a stimulus for your own.

This creative thinking process can be **accidental** or **deliberate**.

Without using special techniques creative thinking does still occur, but usually in the **accidental** way; like a chance happening making you think about something in a different way and you then discovering a beneficial change. Other changes

happen slowly through pure use of intelligence and logical progression. Using this accidental or logical progression process, it often takes a long time for products to develop and improve. In an accelerating and competitive world this is obviously disadvantageous.

Using special techniques, **deliberate** creative thinking can be used to develop new ideas. These techniques force the mergance of a wide range of ideas to spark off new thoughts and processes. Brainstorming is one of these special techniques, but traditionally it starts with unoriginal ideas.

Developments of products occur much more rapidly using these deliberate techniques than by accident. Many people known for being creative use these techniques, but are not aware they are doing so because they have not been formally trained in them. If you use these deliberate techniques during advanced brainstorming sessions then you too will be more creative.

With practice, **ongoing** creative thinking (the continuous investigation, questioning and analysis that develops through education, training and self-awareness) occurs all the time. Ongoing creativity maximizes both accidental and deliberate creative thinking. Ongoing creativity takes time and deliberate practice to become skillful at, but it's surprising how quickly it becomes an attitude, not a technique.

The first step to take is to learn the creative thinking techniques so that you can deliberately use them to come up with new ideas. You will then be at an immediate advantage over those who don't know how to use them. You should then practise the techniques to increase your skill at ongoing creative thinking. (After a while you may even find it unnecessary to use specific techniques because you may be having too many ideas anyway.)

[What Is Creativity? Cultural Icons on What Ideation Is and How It Works](#)

by [Maria Popova](#)

Bradbury, Eames, Angelou, Gladwell, Einstein, Byrne, Duchamp, Close, Sendak, and more.

“Creativity” is one of those grab-bag terms, like “happiness” and “love,” that can mean so many things it runs the risk of meaning nothing at all. And yet some of history’s greatest minds have attempted to capture, explain, describe, itemize, and dissect the nature of creativity. After similar omnibi of cultural icons’ most



beautiful and articulate definitions [of art](#), [of science](#), and [of love](#), here comes one of creativity.

For **Ray Bradbury**, creativity was [the art of muting the rational mind](#):

The intellect is a great danger to creativity ... because you begin to rationalize and make up reasons for things, instead of staying with your own basic truth — who you are, what you are, what you want to be. I've had a sign over my typewriter for over 25 years now, which reads “Don't think!” You must never think at the typewriter — you must feel. Your intellect is always buried in that feeling anyway. ... The worst thing you do when you think is lie — you can make up reasons that are not true for the things that you did, and what you're trying to do as a creative person is surprise yourself — find out who you really are, and try not to lie, try to tell the truth all the time. And the only way to do this is by being very active and very emotional, and get it out of yourself — making things that you hate and things that you love, you write about these then, intensely.

Long before he became [the artist we know and love](#), a young **Maurice Sendak** full of self-doubt wrote in a letter to his editor, the remarkable [Ursula Nordstrom](#):

Knowledge is the driving force that puts creative passion to work.

[In writing back](#), Nordstrom responded with her signature blend of wisdom and assurance:

That is the creative artist — a penalty of the creative artist — wanting to make order out of chaos.



Portrait by Lisa Congdon for our *Reconstructionists* project. [Click image for details.](#)

Bill Moyers is [credited](#) with having offered a sort of mirror-image definition that does away with order and seeks, instead, magical chaos:

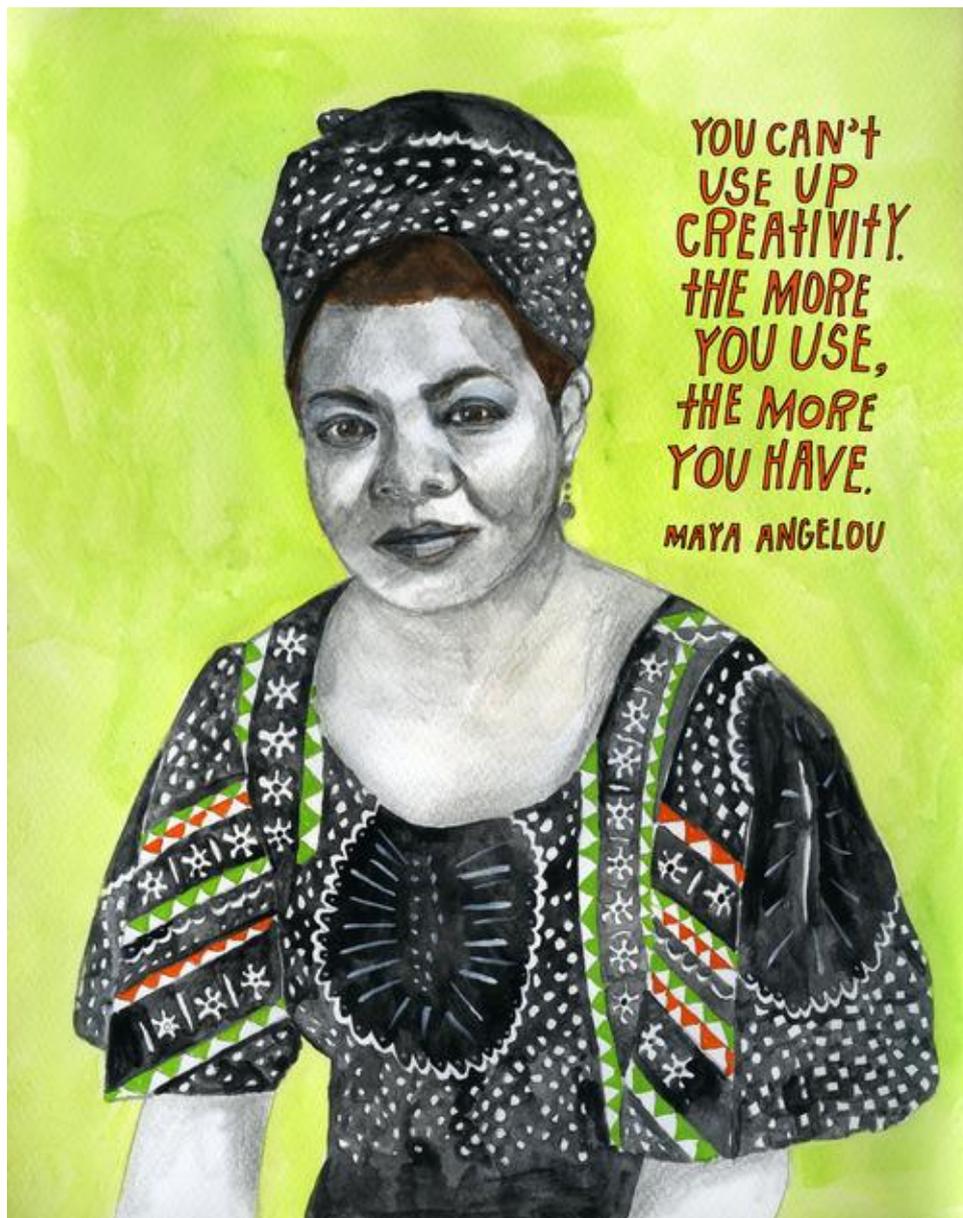
Creativity is piercing the mundane to find the marvelous.

For **Albert Einstein**, its defining characteristic was what he called [“combinatory play.”](#) In a letter to a French mathematician, included in Einstein’s [Ideas and Opinions](#) ([public library](#)), he writes:

The words or the language, as they are written or spoken, do not seem to play any role in my mechanism of thought. The psychical entities which seem to serve as

elements in thought are certain signs and more or less clear images which can be “voluntarily” reproduced and combined.

There is, of course, a certain connection between those elements and relevant logical concepts. It is also clear that the desire to arrive finally at logically connected concepts is the emotional basis of this rather vague play with the above-mentioned elements. But taken from a psychological viewpoint, this combinatory play seems to be the essential feature in productive thought — before there is any connection with logical construction in words or other kinds of signs which can be communicated to others.



Portrait by Lisa Congdon for our Reconstructionists project. [Click image for details.](#)

For **Maya Angelou**, a [modern-day sage](#) of the finest kind, the mystery and miracle of creativity is in its self-regenerating nature. In the excellent collection [Conversations with Maya Angelou \(public library\)](#), which also gave us her [poignant exchange with Bill Moyers](#), Angelou says:

Creativity or talent, like electricity, is something I don't understand but something I'm able to harness and use. While electricity remains a mystery, I know I can plug into it and light up a cathedral or a synagogue or an operating room and use it to help save a life. Or I can use it to electrocute someone. Like electricity, creativity makes no judgment. I can use it productively or destructively. The important thing is to use it. You can't use up creativity. The more you use it, the more you have.

Tom Bissell, writing in [Magic Hours: Essays on Creators and Creation](#), also celebrates this magical quality of creativity:

To create anything ... is to believe, if only momentarily, you are capable of magic. ... That magic ... is sometimes perilous, sometimes infectious, sometimes fragile, sometimes failed, sometimes infuriating, sometimes triumphant, and sometimes tragic.

But there might be something more precise and less mystical about the creative process. In [Uncommon Genius: How Great Ideas Are Born \(public library\)](#), the fantastic collection of interviews with MacArthur "genius" grantees by **Denise Shekerjian**, she recapitulates her findings:

The trick to creativity, if there is a single useful thing to say about it, is to identify your own peculiar talent and then to settle down to work with it for a good long time.

Shekerjian interviews the late **Stephen Jay Gould**, arguably [the best science writer of all time](#), who describes his own approach to creativity as [the art of making connections](#), which Shekerjian synthesizes:

Gould's special talent, that rare gift for seeing the connections between seemingly unrelated things, zinged to the heart of the matter. Without meaning to, he had zeroed in on the most popular of the manifold definitions of creativity: the idea of connecting two unrelated things in an efficient way. The surprise we experience at such a linkage brings us up short and causes us to think, Now that's creative.

This notion, of course, is not new. In his timelessly insightful 1939 treatise [A Technique for Producing Ideas \(public library\)](#), outlining the [five stages of ideation](#), **James Webb Young** asserts:

An idea is nothing more nor less than a new combination of old elements [and] the capacity to bring old elements into new combinations depends largely on the ability

to see relationships. The habit of mind which leads to a search for relationships between facts becomes of the highest importance in the production of ideas.

Three years later, in 1942, **Rosamund Harding** added another dimension of stressing the importance of cross-disciplinary combinations in wonderful out-of-print tome [*An Anatomy of Inspiration*](#):

Originality depends on new and striking combinations of ideas. It is obvious therefore that the more a man knows the greater scope he has for arriving at striking combinations. And not only the more he knows about his own subject but *the more he knows beyond it of other subjects*. It is a fact that has not yet been sufficiently stressed that those persons who have risen to eminence in arts, letters or sciences have frequently possessed considerable knowledge of subjects outside their own sphere of activity.

Seven decades later, **Phil Beadle** echoes this concept in his wonderful blueprint field guide to creativity, [*Dancing About Architecture: A Little Book of Creativity*](#) (*public library*):

It is the ability to spot the potential in the product of connecting things that don't ordinarily go together that marks out the person who is truly creative.

Steve Jobs [famously articulated this notion](#) and took it a step further, emphasizing the importance of building a rich personal library of experiences and ideas *to* connect:

Creativity is just connecting things. When you ask creative people how they did something, they feel a little guilty because they didn't really do it, they just saw something. It seemed obvious to them after a while. That's because they were able to connect experiences they've had and synthesize new things. And the reason they were able to do that was that they've had more experiences or they have thought more about their experiences than other people. Unfortunately, that's too rare a commodity. A lot of people in our industry haven't had very diverse experiences. So they don't have enough dots to connect, and they end up with very linear solutions without a broad perspective on the problem. The broader one's understanding of the human experience, the better design we will have.

Musician **Amanda Palmer** puts this even more poetically in her [meditation on dot-connecting and creativity](#):

We can only connect the dots that we collect, which makes everything you write about you. ... Your connections are the thread that you weave into the cloth that becomes the story that only you can tell.

Beloved graphic designer **Paula Scher** has a different metaphor for the same concept. In Debbie Millman's [*How to Think Like a Great Graphic Designer*](#) ([UK](#); [public library](#)), Scher [likens creativity to a slot machine](#):

There's a certain amount of intuitive thinking that goes into everything. It's so hard to describe how things happen intuitively. I can describe it as a computer and a slot machine. I have a pile of stuff in my brain, a pile of stuff from all the books I've read and all the movies I've seen. Every piece of artwork I've ever looked at. Every conversation that's inspired me, every piece of street art I've seen along the way. Anything I've purchased, rejected, loved, hated. It's all in there. It's all on one side of the brain.

And on the other side of the brain is a specific brief that comes from my understanding of the project and says, okay, this solution is made up of A, B, C, and D. And if you pull the handle on the slot machine, they sort of run around in a circle, and what you hope is that those three cherries line up, and the cash comes out.

But **Arthur Koestler**, in his seminal 1964 anatomy of creativity, [*The Act Of Creation*](#) ([public library](#)), argues that besides connection, the creative act necessitates contrast, or what he termed ["bisociation"](#):

The pattern underlying [the creative act] is the perceiving of a situation or idea in two self-consistent but habitually incompatible frames of references. The event, in which the two intersect, is made to vibrate simultaneously on two different wavelengths, as it were. While this unusual situation lasts, [the event] is not merely linked to one associative context, but bisociated with two.

I have coined the term 'bisociation' in order to make a distinction between the routine skills of thinking on a single 'plane,' as it were, and the creative act, which ... always operates on more than one plane. The former can be called single-minded, the latter double-minded, transitory state of unstable equilibrium where the balance of both emotion and thought is disturbed.

He differentiated between cognitive habit, or merely associative thought, and originality, or bisociative ideation, thusly:

HABIT

Association within the confines of a given matrix

Guidance by pre-conscious or extra-conscious processes.

Dynamic equilibrium

Rigid or flexible variations on a theme

Repetitiveness

conservative

ORIGINALITY

Bisociation of interdependent matrices

Guidance by sub-conscious processes normally under restraint

activation of regenerative potentials

super-flexibility

novelty

destructive-constructive

Twenty years later, creative icon and original Mad Man **George Lois** echoed Koestler in his influential tome [*The Art of Advertising: George Lois on Mass Communication*](#) ([public library](#)):

Creativity can solve almost any problem. The creative act, the defeat of habit by originality, overcomes everything.

For **Gretchen Rubin**, however, habit isn't the enemy of creativity but its engine. In [*Manage Your Day-to-Day: Build Your Routine, Find Your Focus, and Sharpen Your Creative Mind*](#), she writes:

Anthony Trollope, the nineteenth-century writer who managed to be a prolific novelist while also revolutionizing the British postal system, observed, "A small daily task, if it be really daily, will beat the labours of a spasmodic Hercules." Over the long run, the unglamorous habit of frequency fosters both productivity and creativity.

[...]

You're much more likely to spot surprising relationships and to see fresh connections among ideas, if your mind is constantly humming with issues related to your work. ... By contrast, working sporadically makes it hard to keep your focus. It's easy to become blocked, confused, or distracted, or to forget what you were aiming to accomplish.

[...]

Creativity arises from a constant churn of ideas, and one of the easiest ways to encourage that fertile froth is to keep your mind engaged with your project. When you work regularly, inspiration strikes regularly.

In 1926, English social psychologist and London School of Economics co-founder **Graham Wallas** penned *The Art of Thought*, laying out his theory for how creativity works. Its gist, preserved in the altogether indispensable [*The Creativity Question*](#) ([public library](#)), identifies the four stages of the creative process — [preparation](#), [incubation](#), [illumination](#), and [verification](#) — and their essential interplay:

In the daily stream of thought these four different stages constantly overlap each other as we explore different problems. An economist reading a Blue Book, a physiologist watching an experiment, or a business man going through his morning's letters, may at the same time be "incubating" on a problem which he proposed to himself a few days ago, be accumulating knowledge in "preparation" for a second problem, and be "verifying" his conclusions on a third problem. Even in exploring the same problem, the mind may be unconsciously incubating on one aspect of it, while it is consciously employed in preparing for or verifying another aspect. And it must always be remembered that much very important thinking, done for instance by a poet exploring his own memories, or by a man trying to see clearly his emotional relation to his country or his party, resembles musical composition in that the stages leading to success are not very easily fitted into a "problem and solution" scheme. Yet, even when success in thought means the creation of something felt to be beautiful and true rather than the solution of a

prescribed problem, the four stages of Preparation, Incubation, Illumination, and the Verification of the final result can generally be distinguished from each other.

But **Malcolm Gladwell**, in [reflecting](#) on the legacy of legendary economist Albert O. Hirschman in his review of [*Worldly Philosopher: The Odyssey of Albert O. Hirschman*](#), doesn't think the creative process is so deliberate:

Creativity always comes as a surprise to us; therefore we can never count on it and we dare not believe in it until it has happened. In other words, we would not consciously engage upon tasks whose success clearly requires that creativity be forthcoming. Hence, the only way in which we can bring our creative resources fully into play is by misjudging the nature of the task, by presenting it to ourselves as more routine, simple, undemanding of genuine creativity than it will turn out to be.

But **David Byrne** is skeptical of this romantic notion that creativity is a purely subconscious muse that dances to its own mystical drum. In [*How Music Works*](#) ([public library](#)), one of [the best music books of 2012](#), he writes:

I had an extremely slow-dawning insight about creation. That insight is that context largely determines what is written, painted, sculpted, sung, or performed. That doesn't sound like much of an insight, but it's actually the opposite of conventional wisdom, which maintains that creation emerges out of some interior emotion, from an upwelling of passion or feeling, and that the creative urge will brook no accommodation, that it simply must find an outlet to be heard, read, or seen. The accepted narrative suggests that a classical composer gets a strange look in his or her eye and begins furiously scribbling a fully realized composition that couldn't exist in any other form. Or that the rock-and-roll singer is driven by desires and demons, and out bursts this amazing, perfectly shaped song that had to be three minutes and twelve seconds — nothing more, nothing less. This is the romantic notion of how creative work comes to be, but I think the path of creation is almost 180° from this model. I believe that we unconsciously and instinctively make work to fit preexisting formats.

Of course, passion can still be present. Just because the form that one's work will take is predetermined and opportunistic (meaning one makes something because the opportunity is there), it doesn't mean that creation must be cold, mechanical, and heartless. Dark and emotional materials usually find a way in, and the tailoring process — form being tailored to fit a given context — is largely unconscious, instinctive. We usually don't even notice it. Opportunity and availability are often the mother of invention.

For **John Cleese**, creativity is neither a conscious plan of attack nor an unconscious mystery, but a mode of being. In his superb [1991 talk on the five factors of creativity](#), he asserts in his characteristic manner of laconic wisdom:

Creativity is not a talent. It is a way of operating.

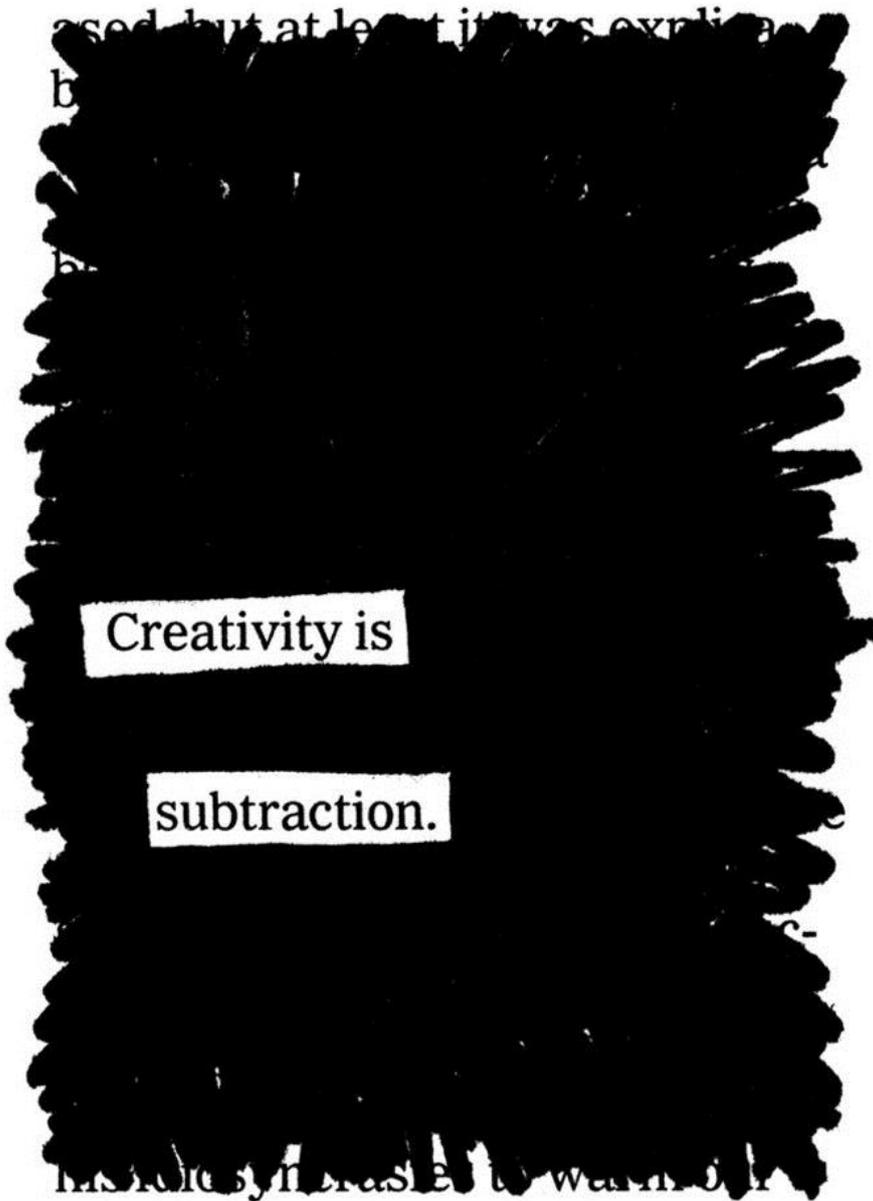
In [Inside the Painter's Studio](#) ([public library](#)), celebrated artist **Chuck Close** is even more exacting in his take on this “way of operating,” [equating creativity with work ethic](#):

Inspiration is for amateurs — the rest of us just show up and get to work.

In his short 1957 paper [The Creative Act](#), French surrealist icon **Marcel Duchamp** considers the work of creativity a participatory project involving both creator and spectator:

The creative act is not performed by the artist alone; the spectator brings the work in contact with the external world by deciphering and interpreting its inner qualifications and thus adds his contribution to the creative act. This becomes even more obvious when posterity gives a final verdict and sometimes rehabilitates forgotten artists.

Meanwhile, artist [Austin Kleon](#), author of the wonderful [Steal Like an Artist](#), celebrates the negative space of the creative act in his [Newspaper Blackout](#) masterpiece:



But perhaps, after all, we should heed [Charles Eames's admonition](#):

Recent years have shown a growing preoccupation with the circumstances surrounding the creative act and a search for the ingredients that promote creativity. This preoccupation in itself suggests that we are in a special kind of trouble — and indeed we are.

What is CREATIVITY? What is INNOVATION? How do you define an IDEA?

Often the terms 'creativity' and 'innovation' are used interchangeably. Rightly or wrongly, the two words are treated by many as synonyms. But do they espouse the same concepts? Is there a difference between the two? What about 'ideas', which is often used in connection to creativity and innovation? A proper understanding of these three terms is crucial before we attempt to embrace and practice innovation.

IDEAS COME FROM A NEW WAY OF THINKING, A NEW WAY OF DOING THINGS

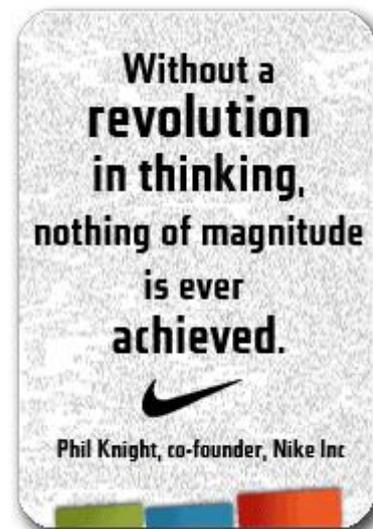
It all begins with an idea. An idea is the starting point of creativity and innovation. Without ideas there can never be anything creative or innovative. Just like without cells there can be no living things. Ideas are the building blocks of creativity and innovation. An idea is like a seed waiting to be planted, waiting to grow and mature into something beautiful. An idea has to be new and fresh. An old idea is like a dead seed, lifeless and unproductive.

CREATIVITY IS THE PROCESS OF GATHERING AND GENERATING NEW IDEAS.

Creativity may be defined as 'idea generation'. Being creative is to be able to generate or to come up with ideas. Or even to gather ideas. The new idea can be simple or it can be complex. When a child thinks of an idea, even if it is a naughty one, he is being creative. Similarly, when a scientist seizes on an idea, he is exercising creativity. Creativity is hence a process, or a thinking process to be exact. Creativity comes from the word 'create'. What is 'created' or 'generated' is the idea.

INNOVATION IS CREATIVITY IMPLEMENTED.

Innovation, on the other hand, can be described as 'creativity implemented'. Innovation is putting the idea into practice. While creativity is a thinking process, innovation is a productive process. Innovation adds value to the idea, which otherwise remains as a mere idea. If the idea is likened to a seed, then innovation is the plant that results from planting and nurturing the seed.





Credit: Sergey Nivens/Shutterstock

"Creativity" and "innovation" are two words that constantly get thrown around in brainstorming sessions, corporate meetings and company mission statements. There's no question that these values are highly prized in the fast-paced modern workplace, but do leaders who use the terms truly know the difference between them?

[Shawn Hunter](#), author of "Out Think: How Innovative Leaders Drive Exceptional Outcomes," (Wiley, 2013) defines creativity as the capability or act of conceiving something original or unusual, while innovation is the implementation or creation of something new that has realized value to others. Business leaders frequently interchange creativity and innovation, without understanding what separates the two.

"Creativity isn't necessarily innovation," Hunter told Business News Daily. "If you have a brainstorm meeting and dream up dozens of new ideas then you have displayed creativity, but there is no innovation until something gets implemented."

Hunter noted that many leaders focus more emphasis on generating creativity on demand, instead of simply building innovative products, processes and interactions. **[MORE: [Innovation in the Workplace: How to Harness It](#)]**

"Innovation isn't a mysterious black box," he said. "It can be simple small tweaks to existing processes, products or interactions. And by focusing on the process [of innovation], and not the heroically creative individual, we can build innovation at scale."

In other words, process is replicable and scalable; a creative individual is not. Once leaders understand the difference between creativity and innovation, they can work on inspiring both among their team members — and building a [culture](#) that supports these values.

"While leaders can foster innovation, the organization as a whole must also support innovation through the makeup of its culture and the way it designs its processes," Hunter said. "Sometimes the best way to spark innovation is by

allowing activity within the organization that deviates from the norm but that may lead to positive outcomes."

Hunter cited the birth of Starbucks' now-popular Frappuccino drink as an example of how leaders giving their employees some room for deviation allows creativity to blossom into innovation. In the early 1990s, the staff at a Santa Monica, California, Starbucks invented a new drink and asked an executive to propose the product to headquarters, where it was ultimately rejected. Later, the same store invented another drink (the Frappuccino), and the executive asked the staff to quietly make and sell the drink to local customers. It quickly became a hit, and the management group implemented the successful idea companywide once its value was proved.

"The Frappuccino turned out to be one of Starbucks' most popular and profitable drinks," Hunter said. "And, according to [Starbucks' then-vice president of sales and operations] Howard Behar, it happened because someone was allowed, and even encouraged, to experiment with a new product that deviated from the company's core product line."

Originally published on [Business News Daily](#)

Daniel Goleman: Creativity and Innovation: What's the Difference?

[January 7, 2015](#) [Emotional intelligence](#)

The terms “creativity” and “innovation” are often used interchangeably. But how similar – or different – are they? I spoke with my colleague, [Teresa Amabile](#), an expert on workplace innovation, for my [Leadership: A Master Class](#) video series. Here’s her take on the connection between these commonly used terms – and what it means for business.

It all starts with creativity

According to Teresa, creativity is essentially responsible for all of human progress. That’s a phenomenal force. Perhaps that’s why some people tend to think that it’s very mysterious. But they shouldn’t.

The [research](#) over the past 50 or 60 years illuminates how creativity happens. Basically, creativity is the production of anything. It could be an idea, a tangible product, or a performance. What’s developed should also be different from what’s been done before in some way. [Creativity in the workplace](#) should also be appropriate to some goal or meaning.

Now, it's difficult in some domains to talk about usefulness. For example, what does appropriateness mean in the visual arts? There, appropriateness means it expresses some meaning that the artist intended. But in business, creativity has to "work" in some way. It has to make a contribution to some valuable end.

The Misunderstood Connection of Business and Creativity

The connection between creativity and business success is very important, yet it's often overlooked. Business people tend to think of what they do as being very organized and strategic. Of course it should be, but [businesses cannot succeed](#), especially under modern competitive conditions, without innovation. ***And innovation depends on creativity.*** Creativity is the front end of a process that ideally will result in innovation.

Creativity is coming up with new and useful ideas. Innovation is the successful implementation of those ideas. One interesting connection between creativity and innovation: you can have quite a lot of creativity in a business organization without having much innovation at the other end. This occurs when people aren't very motivated, or [proper systems aren't in place](#). Such [workplaces have difficulty](#) hearing the creative ideas, developing them, letting them grow, and figuring out how to implement them successfully.

In other words, you can't have innovation without a healthy mix of creativity on the front end, and solid systems in place to foster that ingenuity.

What do businesses need today? A new way of thinking that opens a door they didn't even know existed. A way of thinking that seeks a solution to an intractable problem through unorthodox methods or elements that would normally be ignored by logical thinking. They need ***Lateral Thinking***.

[Dr. Edward de Bono](#) divides thinking into two methods. He calls one "vertical thinking," which uses the processes of logic--the traditional, historical method. He calls the other "lateral thinking," which involves disrupting an apparent thinking sequence and arriving at the solution from another angle.

Developing breakthrough ideas does not have to be the result of luck or a shotgun effort. Dr. de Bono's proven ***Lateral Thinking*** methods provide a deliberate, systematic process that will result in innovative thinking.

Creative thinking is not a talent; it's a skill that can be learned. It empowers people

by adding strength to their natural abilities, which improves creativity and innovation, which leads to increased productivity and profit. Today, better quality and better service are essential, but they are not enough. Creativity and innovation are the only engines that will drive lasting, global success.

Lateral Thinking Techniques

Alternatives: How to use concepts as a breeding ground for new ideas. Sometimes we do not look beyond the obvious alternatives.

Focus: When and how to change the focus of your thinking. You will learn the discipline of defining your focus and sticking to it.

Challenge: Breaking free from the limits of traditional thinking. With challenges, we act as though the present way of doing things is not necessarily the best.

Random Entry: Using unconnected input to open up new lines of thinking.

Provocation and Movement: Generating provocative statements and using them to build new ideas.

Harvesting: Capturing your creative output. At the end of a creative-thinking session, we normally only take note of the specific ideas that seem practical and have obvious value.

Treatment of Ideas: How to develop ideas and shape them to fit an organization or situation.

LATERAL THINKING SKILLS

Innovation distinguishes between a leader and a follower.

Creativity is just connecting things. When you ask creative people how they did something, they feel a little guilty because they didn't really do it, they just saw something. It seemed obvious to them after a while. That's because they were able to connect experiences they've had and synthesise new things.

Steve Jobs

Lateral thinking, is the ability to think creatively, or "outside the box" as it is sometimes referred to in business, to use your inspiration and imagination to solve problems by looking at them from unexpected perspectives. Lateral thinking involves discarding the obvious, leaving behind traditional modes of thought, and throwing away preconceptions.

It's very **important in careers such as [advertising](#), [marketing](#), the [media](#) and [art and design](#)** where you may get questions in the selection process along the lines of "Write down one hundred ways to use a brick/paperclip", but it can also be of value in the jobhunting process itself.

Lateral thinking in the jobhunting process

A number of graduates have tried the old and hackneyed methods of trying to gain the selector's attention, such as enclosing a tea bag with their application, so that the selector could take a break to have a cup of tea before reading it. Others have send their CV to newspapers in a magazine format, but below are a couple of truly original approaches:



A graduate had been trying to get into [investment banking](#), but without success and had exhausted all the normal routes. As a last resort, he had 100 postcard-sized CVs printed. He then went round the "Square Mile" in the City, where all the main financial organisations in London are located and proceeded to place one of these CVs under the windscreen of every Rolls Royce and top of the range BMW and Mercedes he came across. Next day, he had several 'phone calls offering him interviews from the senior executives whom the cars belonged to. Note that we are not advocating this approach: one graduate jobseeker put up 200 poster sized CVs around Hull and ended up being fined for bill posting!

A student wanted to become a trainee [journalist](#) on her local newspaper. She decided to carefully analyse the content of the paper and compared it with similar local papers. She conducted a small survey of readers' opinions on the paper by interviewing passers-by in the city centre. Using this information, she drew up a list of possible changes to the paper, wrote a sample article to show what she had in mind and sent these to the editor. The editor invited her in to discuss her

suggestions - they had a long discussion and the next vacancy that arose was offered to her without competition.

One New York graduate who wished to work in a top **advertising agency** Googled the names of the creative directors of these agencies and then spent just six dollars on a set of Google ads that were triggered when the directors searched for their own names. The adverts said "Hey, (creative directors name), Googling yourself is a lot of fun. Hiring me is fun, too" Of the five directors he targeted, four gave him an interview and two offered him a job

www.youtube.com/watch?v=7FRwCs99DWg

The chocolate bar CV. A job hunter made his CV as the wrapper for a chocolate bar. It turned out to be very popular with recruiters! www.cnbc.com/id/100482311

For more examples of lateral thinking in jobhunting see our [Creative Careers Search page](#)

and our [Riddles test](#)

Lateral Thinking Quiz

The following questions will test your ability to think laterally. If you get more than 50% of these right you're certainly strong on your lateral thinking skills (or maybe you're just good at quizzes!)

1. A graduate applying for pilot training with a major airline was asked what he would do if, after a long-haul flight to Sydney, he met the captain wearing a dress in the hotel bar. What would you do?

Creative thinking is not a talent, it is a skill that can be learnt.

Edward de Bono

Intelligence is something we are born with. Thinking is a skill that must be learned.

Edward de Bono

If they give you ruled paper, write the other way.

Juan Ramón Jiménez

If people aren't calling you crazy, you aren't thinking big enough.

Richard Branson

Jackie Stewart, three times
World Champion Formula
One racing driver had

2. A man built a rectangular house, each side having a southern view. He spotted a bear. What colour was the bear?
3. If you were alone in a deserted house at night, and there was an oil lamp, a candle and firewood and you only have one match, which would you light first?
4. What can you put in a wooden box that would make it lighter? The more of them you put in the lighter it becomes, yet the box stays empty.
5. Which side of a cat contains the most hair?
6. The 60th and 62nd British Prime Ministers of the UK had the same mother and father, but were not brothers. How do you account for this?
7. How many birthdays does a typical woman have?

undiagnosed dyslexia and was unable to complete his school education. He said: *"When you've got dyslexia and you find something you're good at, you put more into it than anyone else; you can't think the way of the clever folk, so you're always thinking out of the box."*

"The fear of making a mistake, of risking an error, or of being told you are wrong is constantly with us. And that's a shame. Making mistakes is not the same thing as being creative, but if you are not willing to make mistakes, then it is impossible to be truly creative. If your state of mind is coming from a place of fear and risk avoidance, then you will always settle for the safe solutions—the solutions already applied many times before.

Failing is fine, necessary in fact. But avoiding experimentation or risk—especially out of fear of what others may think—is something that will gnaw at your gut more than any ephemeral failure. A failure is in the past. It's done and over. In fact, it doesn't exist. But worrying about "what might be if..." or "what might have been if I had..." are

8. Why can't a man living in Canterbury be buried west of the River Stour?
9. Is it legal for a man to marry his widow's sister?
10. If you drove a coach leaving Canterbury with 35 passengers, dropped off 6 and picked up 2 at Faversham, picked up 9 more at Sittingbourne, dropped off 3 at Chatham, and then drove on to arrive in London 40 minutes later, what colour are the driver's eyes?
11. A woman lives on the tenth floor of a block of flats. Every morning she takes the lift down to the ground floor and goes to work. In the evening, she gets into the lift, and, if there is someone else in the lift she goes back to her floor directly. Otherwise, she goes to the eighth floor and walks up two flights of stairs to her flat. How do you explain this?
12. A window cleaner is cleaning the windows on the 25th floor of a skyscraper, when he slips and falls. He is not wearing a safety harness and nothing slows his fall, yet he suffered no injuries. Explain.
13. The band of stars across the night sky is called the "..... Way"?
14. Yogurt is made from fermented
15. What do cows drink?

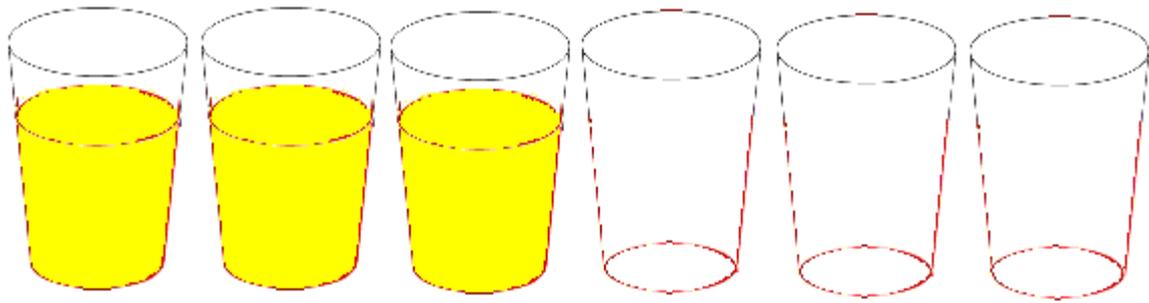
pieces of baggage you carry around daily. They're heavy, and they'll kill your creative spirit. Take chances and stretch yourself. You're only here on this planet once, and for a very short time at that. Why not just see how gifted you are?"

Daniel Garr - [Presentation Zen](#)

I once visited a major pharmaceutical company to discuss their graduate recruitment for marketing. They told me that one of the key attributes they looked for was **Helicopter Ability**: the ability to soar above a problem and to see all aspects of it, to stand back and see the bigger picture, the wood rather than the trees. Creativity involves being able to think outside the box to find solutions to unpredictable problems. This needs logic and analysis, but also the ability to see the big-

16. The Zorganian Republic has some very strange customs. Couples only wish to have female children as only females can inherit the family's wealth, so if they have a male child they keep having more children until they have a girl. If they have a girl, they stop having children. What is the ratio of girls to boys in Zorgania?
17. How many hands does the clock of the tower of Big Ben have?
18. John's mother has 3 children, one is named April, one is named May. What is the third one named?
19. You are running in a race. You overtake the second person. What position are you in?
20. In the same race, if you overtake the last person, then you are in what position?
21. Using just ONE straight cut, how can you cut a rectangular cake into two equal parts when a rectangular piece has already been removed from it?
22. A man and his son were in a car crash. The father was killed and the son was taken to hospital with serious injuries. The examining doctor exclaims: "But, this is my son!". How can this be?
23. You have to choose between three rooms.
The first is full of raging fires
The second is full of tigers that haven't eaten in 3 years.
The third is full of assassins with loaded machine guns.
Which room should you choose?
24. Three of the glasses below are filled with orange juice and the other three are empty. By moving just one glass, can you arrange the glasses so that the full and empty glasses alternate?

picture and this involves a creative mind.



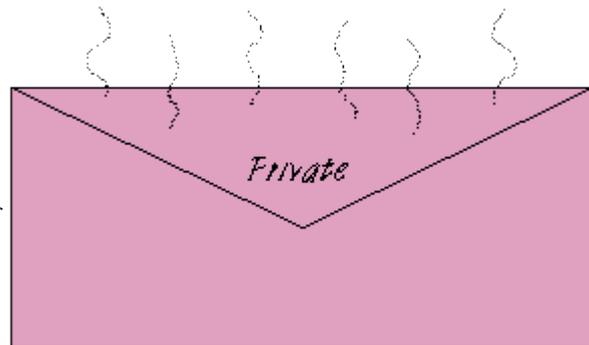
25. Name three consecutive days in English without using the words Tuesday, Thursday, or Saturday
26. What's unusual about this paragraph? Just how quickly you can find out what is so funny about it. It looks fairly ordinary and plain that you might think nothing is wrong with it. In fact, nothing is wrong with it! It is highly

- • •
- • •
- • •

curious though. Study it and think about it, but you still may not find anything odd. But if you work at it a bit, you could just find out.

27. Join all the 9 dots on the right using four straight lines or less, without lifting your pen and without tracing the same line more than once. Do copy this onto paper if you wish to make it easier.

One student, desperate to get into [advertising](#), had been rejected by the main London agencies, so he decided to try a different approach. He bought some pink envelopes and a small bottle of expensive perfume. He placed his CV in the envelopes and wrote "Private" on the outside. He liberally sprinkled the envelopes with scent and posted them to the senior agency partner in several of the biggest agencies. When it arrived, nobody dared to open the letters and the graduate was offered several interviews - presumably for his daring. Note that, we don't recommend this approach!



Answers:

Most of the above are what we call "Insight puzzles".
Research by [Schooler and Melcher \(University of California\)](#) found that **people who wrote down the puzzles and tried to solve them on**

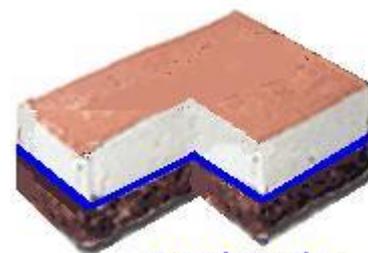
1. Offer to buy her a drink! The captain was of course a woman. Many [airlines](#) are now hot on equal opportunities and a candidate who had difficulty envisaging that an airline captain might be female would not go very far!
2. White. Only at the North Pole can all four walls be facing South.
3. The match!
4. Holes
5. The outside
6. Churchill was Prime Minister twice, from 1940 to 45 and from 1951 to 55.
7. One
8. Because he is still alive .
9. No - because he's dead.
10. The colour of your eyes.
11. The woman is of small stature and couldn't reach the upper lift buttons.
12. He was cleaning the inside of the windows.
13. Milky Way
14. Milk
15. Water. After the previous two questions, did you answer milk?
16. About 1 to 1. Any birth will always have a 50% chance of being male or female.
17. Eight: there are four faces to the clock of the tower of Big Ben (now officially called Elizabeth Tower). See the picture to the right.
18. John
19. If you overtake the second person then you become second.
20. You can't overtake the last person in a race!
21. Cut it horizontally half way up (i.e. parallel to the top) . See right.

Alternative answer provided by a reader of this page: the above answer is not the only correct answer, in fact, there are infinitely many correct answers. One of these correct answers is this: find the center of the cut portion of the cake (which is the point of intersection of the two diagonals) and also the center of the original cake (which, again, is the point of intersection of the two diagonals). Now a straight vertical cut along the centers will cut the remaining cake into two equal parts. This solution is perhaps better than the

paper were on average 30% less likely to come up with the right solution than those who didn't write it down and just solved them in their heads.

Writing down the puzzles invokes the use of the left side of our brain which deals with verbal and logical (algorithmic) reasoning, rather than the right side which deals with visual and creative (heuristic) thinking.

These puzzles tend to require creative rather than logical reasoning to solve them, so we need to use right brain thinking.



Cut along the blue line!

one above for the following reason: quite often the upper part of a cake is not the same as the lower part, as they contain different ingredients. For example, the upper part may have frosting, unlike the lower part. My solution above 'guarantees' not only equal volumes, but also equal ingredients.

22. The doctor was his mother. Going full circle, this is very similar to the first question.

23. The second room. Tigers that haven't eaten in three years are dead!

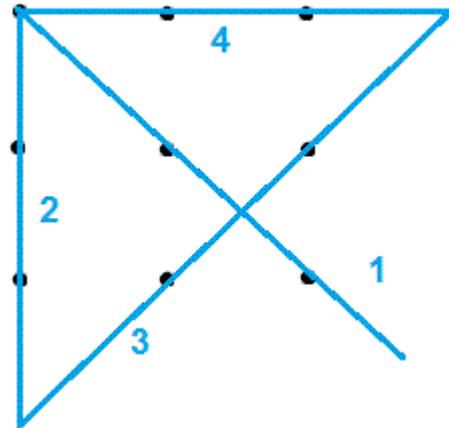
24. Pour the juice from the second glass into the fifth.

25. Yesterday, today, and tomorrow.

26. The letter e doesn't appear once in the paragraph.

27. Here is one possible solution. Of course you have to go beyond the boundaries of the square of dots to solve this.

Out of interest this particular puzzle is where the expression "*to think outside the box*" originally came from.

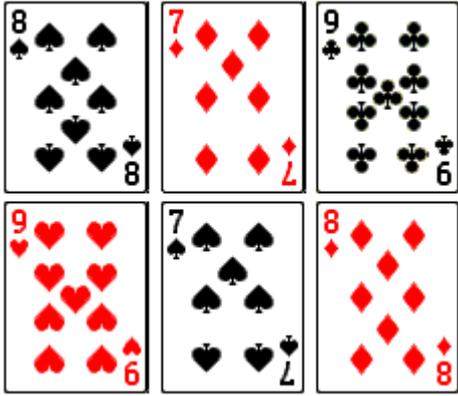


Score

- **Over 23.** You are a true lateral thinking Guru. Edward De Bono would be proud of you. Or maybe you are the man himself.
- **20 to 23.** Very good.
- **Under 12** - watch The Matrix, The Simpsons and Dr Who a few more times!

The final test!

Pick one of the following cards:



Innovation distinguishes between a leader and a follower

Steve Jobs (founder of Apple)

Genius is one percent inspiration and ninety-nine percent perspiration.”

Edison

The great composers did not set to work because they were inspired but became inspired because they were working.

Ari Kiev

An essential aspect of creativity is not being afraid to fail.

Edwin Land

Imagination is more important than knowledge. For while knowledge defines all we currently know and understand, imagination points to all we might yet discover and create.

When you have chosen your card, focus carefully on it and keep it clearly in your mind for 15 seconds.

Once you have done this scroll down to the bottom of the page.

Albert Einstein

Inventions don't come in Eureka moments: they are the consequence of experts absorbing themselves for so long in their field that they become pregnant with creative energy: deep immersion in an area of expertise.

[Bounce, by Michael Syed](#)

Here are some web sites which will allow you to take lateral thinking further.

- Now try our [Second lateral thinking test](#)
- [Riddles: lateral thinking again!](#)
- [Logic puzzle](#)
- [Lateral Logical Mathematical Test](#)
- For some more logic problems see our [Case Interviews page](#)
- [Timed verbal logical reasoning test](#)
- [Creative Careers Search Page](#) - how to network effectively.
- [Institute of Practitioners in Advertising Diagonal Thinking Self-assessment Tool](#)
- [IPA Copywriting Test](#)
- [The most difficult application forms](#)
- [Can creativity be taught?](#)
- **Edward De Bono:** the "inventor" of lateral thinking
www.edwdebono.com/debono/lateral.htm