

Neuroscientist **Gregory Berns** describes three hurdles that the most innovative thinkers must overcome to bring their ideas into the world.

Iconoclasts: Great Minds Think Different

Interview by Stephen Watt

How do you define the term 'iconoclast'?

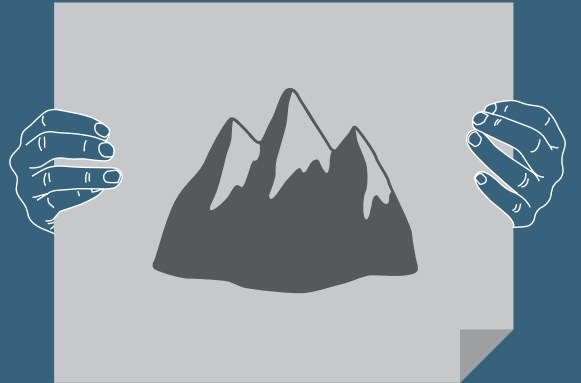
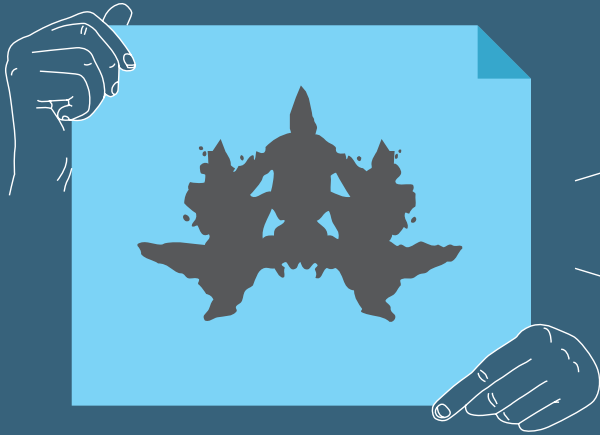
Iconoclasts are people who manage to achieve things that others say can't be done. In doing so, they overcome mental barriers that stop most of us cold. My definition implies that these people are different from the rest of us, and they are, but more precisely, their brains are different.

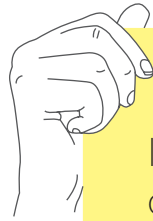
Until **Walt Disney** came along, cartoons were only used as advertisements between movies. His great insight was to recognize that cartoons could actually be the main form of entertainment. This insight, which came to him as he was working in animated advertising, was the key to his success, more than any other personal asset or quality he possessed. By all accounts, Disney was a difficult person to work with, but on the strength of this inspiration, he was able to convince people to invest in his enterprise. His investors were initially his family, and by relying on their support, he was able to build an empire from the ground up.

Ray Kroc turned **McDonald's** into the most successful fast-food operation in the world. There is one particular example from his story that interests me. McDonald's is not an organization known for innovation in general: the entire business model is based on recreating the same environment in each location. Kroc's innovation came in the marketing realm. In the late 1960s, he started marketing

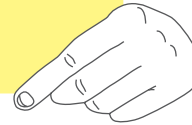
to children by creating the character of **Ronald McDonald**. That was a stroke of genius in terms of a social understanding of the customer. Until that point, no one had marketed to children because the conventional wisdom was, 'Why bother? They don't have any money'. In essence, Kroc's response was, 'That may be true, but their parents do'. He created a connection to that particular audience through a clown, and he correctly predicted that by getting the kids to want to go to a restaurant, they would convince their parents to take them there. His insight involved social intelligence and how to connect to people in a completely novel way.

Like other investors who bill themselves as 'contrarians', **David Dreman** (founder and CEO of **Dreman Value Management**) has built his portfolio – and indeed his reputation – on the idea of going against popular opinion on Wall Street. This is an extremely difficult thing to do, because people on Wall Street are subject to strong social forces, and tend toward conformity and chasing fads. Look at the mess the markets are in right now: it's the result of herd behaviour, and of the belief that certain investments are good because everyone else is pursuing them. Dreman's example is significant because he has been able to fight the urge to do what every other investor is doing, and instead, to invest in things that are out of favour. This is one of **Warren Buffett's** strengths as well. Both men





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have somehow managed to keep their ‘fear of being different’ in control, and to reap the rewards. They may experience the fear of social disapproval, but they certainly don’t let it inhibit their actions.

Iconoclasts acknowledge the fact that creation is also an act of destruction: that to create something new, you have to tear down conventional ways of thinking. Whether you want to be an iconoclast or not, it is crucial for success in any field to understand how the iconoclastic mind works.

You believe that the human brain has three natural roadblocks that stand in the way of truly innovative thinking. How do iconoclasts overcome these obstacles?

The first roadblock is perception, which is also the most important factor for coming up with new ideas. Perception is the process by which the brain takes inputs from the senses – typically through the eyes – and converts them into mental images that we become conscious of. Unfortunately, the brain takes plenty of shortcuts along the way. To understand how it does this, consider the bandwidth of the optic nerve – the main conduit of information from the eyes into the brain. Its information flow has been measured, and it only adds up to about 10 megabytes per second – about the speed of a cable modem. Anyone who has used a cable modem and tried to watch video over the Internet quickly realizes there are compromises in terms of information flow: images tend to be pixelated and jerky. Even though our brains are being fed information at the same rate through our eyes, this is not how we see the world, because the brain is constantly making predictions and interpretations about what it sees. The problem is that these predictions are based largely on past experience: our brains make their best guess as to what they are seeing based on what we have experienced up to that point.

The issue of how the brain creates perceptions from raw visual inputs is of critical importance to being an iconoclast. The iconoclast doesn’t literally see things differently than other people; more precisely, he *perceives* things differently. Breakthroughs tend to

come from a perception system that is confronted with something that it doesn’t know how to interpret. Great innovators challenge our flawed perception by taking themselves out of their normal circumstances. By exploring new environments and interacting with new people, they essentially prevent their brains from relying on previous experiences too much, both in terms of perception and imagination.

Iconoclasts’ key insights tend to be triggered by visual images, so the key to seeing like an iconoclast is to look at things that you have never seen before. Sometimes a simple change of environment is enough to jog your perceptual system out of its familiar categories. This may be one reason why restaurants figure so prominently as sites of perceptual breakthroughs. New acquaintances can also be a source of new perceptions, because other people frequently lend their opinion of what they see, and these ideas may be enough to destabilize our familiar patterns of perception. In short, by forcing our visual system to see things in different ways, we can increase the odds of new insights.

The second mental roadblock that iconoclasts overcome has to do with the human fear response. We know quite a bit about how the fear system works and what triggers it. This system is largely unconscious or subconscious, and it is triggered by very primitive aversions relating to survival. The one that is most important in inhibiting innovation is the fear of failure, and in particular, the fear of looking stupid. Our brains are very social – we evolved in social environments – and because of that, we are deeply hardwired to care what other people think about us. You can imagine that 100,000 years ago, it was very important for our ancestors to belong to a community, both for the sake of survival and reproduction. Fast-forward to today, and our brains are exquisitely tuned to what other people are thinking about us. The fear of being humiliated, of looking stupid in front of your peers, or of being shunned from the group is an incredibly powerful impediment to doing something differently. It is fascinating how much social influence and messaging get mixed in with our own judgements and opinions. By

definition, if you're doing something differently, you're doing something outside of what everyone else does, and that is a situation we are all made to fear and avoid.

The third barrier that iconoclasts overcome involves social skills, and again, these come into play because our brains are built for social environments. If you conquer the first two impediments – perception and fear – and actually arrive at an idea that is truly novel, you are then faced with the task of finding ways to convince other people of its merits. Persuading others requires a fair deal of social intelligence, since most people will react with aversion to anything that is different.

Iconoclasts have been historically responsible for some of the great advances in culture and technology. Why aren't there more of them around?

The truly-successful iconoclast has the ability to come up with an innovative idea, overcome fear of social rejection and sell the idea to other people. It is a rare person who can do all three of these things, which is why genuine iconoclasts are so unusual. Innovation is a risky pursuit: the odds of failure are high, and for this reason, evolution has made true iconoclasm a fairly rare occurrence. Most of the biggest risk-takers have been weeded out over the centuries. Such people have not been entirely eliminated, however, since they may – when successful – occasionally provide a great benefit to society as a whole. On a society-wide level, there is still a small advantage to taking a risk and possibly coming out a winner. The technical term for what occurs is an 'evolutionarily-stable equilibrium': evolution finds the right mix of conformists and iconoclasts. There will always be a few people willing to take a risk because the odds are that someone will succeed.

Where do new ideas actually come from?

What we have found is that when people imagine new ideas, they use the same parts of their brain as in perception. Imagination, then, is like perception running in reverse. Imagination is therefore subject to all the same problems that perception is: the brain will imagine things in ways that are most familiar to it, in ways it has experienced in the past. The challenge is getting around the brain's limitations.

There are several different routes to forcing the brain out of its lazy mode of perception, but the theme linking these methods depends on the element of surprise. The brain must be provided with something that it has never before processed to force it out of predictable perceptions. When confronted with places never seen before, the brain must create new categories. It is in this process that the brain jumbles around old ideas with new images to create new syntheses.

You have said that Picasso was an iconoclast, while Van Gogh was not. Please explain.

Two aspects of social intelligence figure prominently in success or failure: familiarity and reputation. The two go hand in hand, and Picasso was a master at both. He became familiar to the art world through his massive productivity: while Van Gogh produced about

900 paintings in his lifetime, Picasso produced over 13,000 paintings and 300 sculptures, making him the most prolific artist ever. And everyone loved Picasso; people were drawn to him because of his charisma. Van Gogh, on the other hand, while equally brilliant in his art, repelled people. The whole 'ear incident' was provoked by an argument with **Paul Gauguin** – the recipient of Van Gogh's 'gift'. Where Picasso smoothly-navigated multiple social circles, Van Gogh struggled to maintain connections with even those closest to him. Picasso possessed a rare combination of social skills that allowed him to function both as what **Malcolm Gladwell** has called a 'connector' and as a persuader. Successful iconoclasts connect with other people and, in the process, they shrink their worlds.

How can an organization encourage a culture of non-conformity?

The most important thing is to create an environment in which people are allowed to express their opinions without fear of being ridiculed. Organizations achieve such an environment to varying degrees, but in most of them, the tendency toward conformity and 'group think' is strong. People with truly-original ideas are often afraid to express them, so it's the role of a manager to create an environment in which such ideas are encouraged, and in which people feel comfortable exercising their creativity.

As you have explained, it's not enough to have a brilliant idea – you have to know what to do with it. How can iconoclasts win widespread support for their unconventional ideas?

They can use one of two tactics. If they're lucky, they have the requisite social skills. To a large extent, these skills appear to be hotwired in us: some people are just born with the 'gift of the gab' and are able to connect easily with others. If you have a brilliant new idea but lack social skills, you may try different techniques and exercises to overcome your social inhibitions. More feasibly, you may try to team up with someone who does have the necessary skills to sell your idea and make it a reality. **Bill Gates** and **Steve Balmer** of **Microsoft** are the ideal example of a team of iconoclasts, combining someone who has a great idea with someone who has strong powers of social persuasion.

As individuals, how can we unleash our own power to think differently?

The most beneficial thing you can do is to get yourself out of your usual environment. It is rare for people to come up with brilliant new ideas while they are sitting in their office or interacting with the same people every day. Time and again, we see that being in a novel circumstance – whether it be travelling abroad or meeting new people – is by far the best way to get your brain out of its predictive mode and tap into your inherent creativity. **R**



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