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Innovation Management

What is Innovation? The Psychology of Distinctive Thinking

CQ Dossier | Evidence-based Innovation Management

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CQ Net is the evidence-based management (EBM) team learning platform. Learn strategies & interventions that have been supported by scientific research. This CQ Dossier is part of the Evidence-Based Management Learning Team "How to utilize individual differences to boost your employees' and organization's capacity for innovation?".

Executive summary

We live in an era of "disruption" – new, mold-breaking technologies and modes of doing business are the norm, rather than the exception. Technology is evolving at an unprecedent pace, and bold industry leaders are constantly inventing new ways of communicating, collaborating, and doing meaningful work. In this business context, cultivating a team of innovative thinkers is more vital than ever. As a manager, you need to understand the psychological principles behind challenging, practical innovation, so that you can hire for it and create a culture that cultivates it. We live in an era of "disruption" – new, mold-breaking technologies and modes of doing business are the norm, rather than the exception. Technology is evolving at an unprecedent pace, and bold industry leaders are constantly inventing new ways of communicating, collaborating, and doing meaningful work. In this business context, cultivating a team of innovative thinkers is more vital than ever. As a manager, you need to understand the psychological principles behind challenging, practical innovation, so that you can hire for it and create a culture that cultivates it.

If you aim to make your organization a vibrant, innovative, and productive place, you need to know the difference between thinking that is merely original and true innovation that is useful, implementable, and likely to have a large impact on your field (Amabile, 1983). Fortunately, a wealth of psychological research is available on this subject. Creativity- and problem-solving researchers have worked for decades to define and distill exactly what innovative thinking consists of, and what makes it distinct from less useful expressions of creativity. This dossier will review the existing psychological research on how innovative thinking is defined, and how it impacts success in an organizational context.

Innovation is defined as being borne from unique thinking

An Innovation is defined, first and foremost, as being borne from unique thinking (Randel & Jaussi, 2017). Highly creative individuals engage in a large volume of divergent thinking – in other words, they generate ideas and reactions that are unlike those of the average person (An, Song, & Carr, 2016). Their thought processes diverge from the well-

beaten path. By generating ideas that are odd or rare, divergent thinkers "open up" conversations, and encourage those around them to consider strategies and technologies that were not on the table previously.

To illustrate this, consider one of the most infamous measures of divergent thinking that exists: the "uses-for-a-brick" test (also known as the Alternative Uses test, by Guildford, 1975). In this test, participants are asked to list as many possible ways to use a brick as they can think of, in a span of a few minutes. The average person will initially list very common, self-evident uses for a brick – building a house and weighing down papers, for example. A divergent thinker will tend to come up with options that are far more strange and rare from the outset of the task – using it to weigh down crime evidence thrown into a lake, for example.

The reactions and suggestions of a unique, divergent thinker can initially come across as odd, in appropriate, or even useless (Best, Arora, Porter, & Doherty, 2015). Indeed, some highly creative thinking is useless – it may be impossible to implement, impractical, off-topic, or nonsensical at times. Accordingly, the uniqueness of a person's thoughts is not the only benchmark by which their innovation potential ought to be measured. The usefulness of creative ideas must be considered as well.

In order to be innovative an idea has to be useful

Most psychologists who study the science of creativity hold that true innovation must be both unique and useful. In order to be truly innovative, a distinctive idea must be feasible, capable of solving a problem, or valuable to other people in some way (Runco & Jaeger, 2012). Within an organization, harnessing useful creativity is key to building a culture of innovation. A "throw-anything-at-the-wall-and-see-what-sticks" approach may lead to the generation of numerous ideas, many of them unusual, but it may not result in any viable solutions or lasting disruptions being found.

How should the usefulness of an idea be evaluated? There is a degree of subjectivity to this process. First, the usefulness of an idea is highly dependent on the context (Carazza, 2016). Do you work in an industry where risky, bold moves are encouraged, and failure can be afforded? If so, relatively odd, challenging ideas may be useful. However, if you work in a field or an organization that is deeply risk-averse, where large

changes can come at a massive cost, then you will need to place greater restrictions on what you consider to be an acceptably creative idea.

Useful creativity often solves an existing problem – perhaps by introducing a clear solution or reworking the way business is done. However, a truly innovative solution may redefine the problem, or cast it in an entirely new light (Csikszentmihalyi & Sawyer, 2014). The way out of a problem scenario may be completely distinct from what anyone on your team had previously anticipated. Highly innovative proposals can lead to a lasting organizational change, and shift how everyone on a team views their work and goals. Thus, the final component of defining innovation is its capacity to be productive.

The final component of innovation is its capacity to be productive

A Within and organization, creative & useful thinking can lead to a renaissance of productivity. Innovative thinking is exciting and can be challenging, which can boost motivation and output for employees who work near where the innovation is taking place. The productive potential of innovative thinking goes farther than that, however – innovation often breeds further innovation in other people, by reframing how people see a problem and identifying new possibilities. If your organization is experiencing a period of high innovation, you are likely to see greater generation of ideas (high generativity), and the identification of more and more problems to practically solve (problem finding).

Innovation can lead to a greater generation of ideas

In an innovative work environment, individuals generate more ideas than usual, and a greater percentage of ideas are unique and useful. Creativity can be somewhat infectious, according to some psychological research; furthermore, thinking in a divergent way is a skill that can be learned through proximity to creative others (Oldham & Cummings, 1996). This is especially the case when new ideas are useful – random creativity is less inspiring than practical innovation. The "infectiousness" of innovation

can occur on an individual and an organizational level – a highly creative employee can encourage others to be more innovative in their midst, but a culture of creativity can also be fostered from the top-down, to boost the innovation across an entire team (Amabile et al, 1996).

Problem finding is a key skill of innovative thinkers

Meaningful innovation is not reactive, it is proactive. While a creative solution to an existing industry problem can be impactful and valuable, it may still be engaging with the problem as it has been typically defined and perceived. Innovative thinkers reframe problems in new ways – a communication problem may be seen, in their eyes, as a technological problem, or a pain point may be seen as an opportunity. Innovative thinkers are often adept at "problem finding" – seeing a need or an area of improvement that has not even been identified as a "problem" yet by others (Hocking & Vernon, 2017).

Finding problems before they erupt can lead to the creation of new technologies

Prior to the development of grocery-delivery services like Peapod and Instacart, the average person (including the average person in the grocery industry) would not have seen the process of going to a store and buying groceries as featuring an "problem". However, by contrasting how groceries are bought with how take-out food is ordered, a clear problem (and a space for innovation) could be found, and a new industry was born. The age-old process of hailing a cab was not seen as a "problem" by many; however, once clear inefficiencies in the process were noticed and a "problem" was found, the ground was laid for the development of Uber and Lyft. By finding problems before they erupt, and by seeing inefficiencies as pressing concerns that must be addressed, an innovative thinker can change how an organization is run, shift how business is done, and lead to the creation of new, paradigm-shifting technologies.

Key take-aways

- Innovative thinking must be both unique and useful
- Unique thinking is defined by its divergence from the norm
- The usefulness of a creative idea hinges on the needs of an organization, and its comfort with risk
- Innovation can inspire team members to generate new ideas and deliver greater output
- Extremely innovative individuals can locate problems that others have not yet recognized, and deliver solutions that shift paradigms

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