



Building an Innovation Organization: Seven Patterns to Achieve Success

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Innovation. It is a buzzword of the times, cited as one of the pressing priorities of our industry. The League of American Orchestras has issued a "call to action," stating that "it is time to accelerate the recognition that orchestras must embrace innovation if they are to continue offering exciting musical experiences that are vital to American life." Opera America's 2011 Conference "will explore the potential for innovation and ingenuity in the business of opera and the art form." And one of the goals of the American Association of Museums' Center for the Future of Museums is to "foster innovation."

Where Good Ideas Come From: The Natural History of Innovation, a provocative new book by Steven Johnson, provides a sweeping survey of natural and human ingenuity, and identifies seven patterns that are vital to creating an environment where innovation can emerge and thrive. In this issue of *Arts Insights*, we will look at Johnson's seven patterns and explore what arts and culture leaders and organizations may learn and adopt from them.

1. Explore the Adjacent Possible

Imagine a room with four doors. Each door leads to a new room that you have not been in yet. And each of those new rooms has three doors, which, in turn, lead to more new rooms that you could not reach from where you started. This is how the adjacent possible unfolds. Think of it as your organization's "shadow future, hovering on the edges of the present...a map of all the ways in which the present can reinvent itself."

In the 1870s, a French obstetrician envisioned an incubator for human newborns, inspired by an exhibit of chicken incubators at the Paris Zoo, one of many illustrations of innovation through exploration of the adjacent possible. Johnson writes that, "the trick is to figure out ways to explore the edges of possibility that surround you."

For arts and culture organizations, this suggests that innovation does not necessarily mean something new or revolutionary. It may mean changing one thing about an existing program (i.e. the performance start time, the format of the teacher's guide for an educational program, the timing or delivery of a particular fundraising effort) and seeing where that exploration of the adjacent possible then leads you.

2. Building Liquid Networks

Good ideas need to flow. Life on earth began as carbon atoms, bumping into other elements in the primordial soup, formed linkages. A liquid network is like that primordial soup: a place where myriad ideas can come together, ideas from different people with varied backgrounds, areas of expertise, and points of view.

Johnson refers to a study, conducted in the early 1990s by McGill University researcher Kevin Dunbar, that demonstrated that the most significant ideas in four prominent molecular biology laboratories surfaced during lab meetings where researchers would gather to informally talk about their work. This perhaps flies in the face of our image of the solitary scientist making a great discovery while alone in the lab looking through a microscope into a Petri dish. Instead, innovation came as people talked to each other, when they interacted in the liquid network of fellow scientists who could help them re-think problems, consider alternative solutions, and recognize assumptions, and who could bring new ideas and perspectives to the table.

This leads to two simple ideas for encouraging the liquid network in your organization: 1) Make time in your staff and board meetings for communication, collaboration, and sharing ideas—not simply reporting, but also learning.

2) Make a few changes to your physical space to encourage the exchange of ideas. Some organizations put whiteboards up in common spaces, by the coffee pot, in hallways, and outside the restrooms, where people can capture inspiration as it comes to them, scribble down an idea or pose a question, and others can respond.

3. Nurture the Slow Hunt

The "snap judgments of intuition are rarities in the history of world-changing ideas," Johnson writes. "Most hunches that turn into important innovations unfold over much longer time frames." As one example, the experiment that proved that plants created oxygen evolved from a hunch that 18th century scientist Joseph Priestly had been nurturing for 20 years, from when he had trapped spiders in glass jars as a kid.

Johnson advises that "part of the secret of hunch cultivation is simple: write everything down." Keep a notebook with ideas, things that you've seen work in other arts and culture organizations, quotes, questions, dreams, and hopes, and then create a simple index to help you track these. This pays tribute to the Enlightenment tradition of the "commonplace book" to "lay up a fund of knowledge, from which we may at all times select what is useful."

4. Encourage Serendipity

In Johnson's recounting of how French mathematician and physicist Henri Poincare made one of his early important discoveries, Poincare labored at his desk with no success but achieved breakthroughs as he changed his routine: drinking coffee at night and subsequently not sleeping, going on a geological expedition, walking on a bluff. "When he sits at his desk, innovation seems to grind to a halt. On foot, his ideas 'rose in crowds." Johnson argues convincingly that innovation flourishes when ideas can, by chance, run into and hook up with other ideas.

As creative individuals leading organizations in challenging times, we need to seek out opportunities for our minds to make new connections, by reading, by going to exhibits, lectures, and performances outside of our own cultural disciplines, by getting out into the fresh air. This may require, for some of us, a reframing of how we feel our time needs to be spent to advance our organizations. In organizations, try creating a "hunch database" open to everyone in the organization where people can comment or expand on ideas. They can then "serendipitously" connect those ideas to their own over time and perhaps even vote on their colleagues" suggestions. This allows for an iterative learning and growing process that builds momentum over time.

5. Allow for Error

"The history of being spectacularly right has a shadow history lurking behind it—a much longer history of being spectacularly wrong again and again," tells Johnson. "And not just wrong, but messy. A shockingly large number of transformative ideas in the annals of science can be attributed to contaminated laboratory environments." Among these are Alexander Fleming's discovery of penicillin and Louis Daguerre's of the daguerreotype, the precursor of modern photography.

Error forces us to question familiar assumptions and compels us to explore new ideas and ways of doing things. In the words of Benjamin Franklin, "Perhaps the history of the errors of mankind, all things considered, is more valuable and interesting than that of their discoveries. Truth is more uniform and narrow; it constantly exists, and does not seem to require so much an active energy, as a passive aptitude of soul in order to encounter it. But error is endlessly diversified."

For arts and culture organizations, the key take-away is that we shouldn't dismiss error. We need to create organizational cultures where mistakes can be openly talked about, joked about, assessed, and turned into opportunities for learning. And, paradoxically, if error can lead to insight and innovation, then striving for perfection may make new ideas less likely to come forth. This has implications for the way we do our work, from how much we try to control or manage what happens at staff or board meetings to how tightly we construct our organization's quality control systems. Striving for total quality management may result in a sterile or stagnant environment.

6. Practice Exaptation

In evolutionary biology, exaptation (yes, that's a word!) occurs when an organism develops an attribute for a particular use, which later shifts to a completely different use. One good example is bird feathers that were initially for temperature regulation and evolved to be used for flight. Gutenberg practiced exaptation when he took the

technology for a screw press used to make wine and adapted it to make his printing press. He didn't make something up from scratch—he borrowed something from a completely different industry and adapted it to meet his needs.

In a study of over 750 entrepreneurs, cited by Johnson, Stanford Business School's Martin Ruef found that "the most creative individuals...consistently had broad social networks that extended outside their organizations and included people from diverse areas of expertise."

For leaders of arts and culture organizations looking to encourage new ideas in themselves and their organizations, then, this implies making connections outside of the normal sphere. Here you are more likely to encounter novel solutions that can be adapted to advance your institution's goals and broaden its appeal. Within organizations, encourage cross-department work teams and include artists, volunteers, and community stakeholders on those teams. For leaders, consider attending a professional development seminar outside your functional or artistic discipline or networking with nonprofit leaders from the human services, environmental, and other service organizations.

7. Be a Platform

Think of Darwin's theory of natural selection as a platform upon which so many other fields rest, from genetics to evolutionary psychology. Or how Edgar Allan Poe, Wilkie Collins, and Arthur Conan Doyle are the platform from which the modern murder mystery evolved. Platforms are a place where ideas can be borrowed, recycled, and reinvented to create something new.

In nature, beavers may be thought of as "ecosystem engineers," creating a woodland platform by gnawing through the bark of trees and killing them. Woodpeckers then drill holes in those dead trees, and eventually songbirds nest in those holes. This is an environment where resources are shared and reused, each animal playing its role in creating a vibrant natural world.

Ask yourself how your cultural organization can serve as a platform for innovation and creativity. Support young composers, choreographers, writers, and painters perhaps. Commission a new work. Find ways for audiences to be involved in the creative process as proposed in a recent report by the NEA on arts participation, such as "providing artistic content and instruction online and through other media" and developing "opportunities for audiences to 'enhance' arts experiences" through forums that encourage conversation and build context. Mentor an emerging organization or a manager new to the field. Partner with other organizations to bring art forms together in fresh and innovative ways. Bring arts leaders together with other community leaders to talk about how cultural institutions can help in addressing other social, educational, or economic needs in your community.

Above All, Be Open and Connected

Through the seven patterns above, Steven Johnson reveals that good ideas want to "connect, fuse, recombine," that they need a place where they can "mingle and swap," and that ideas "rise in crowds." As arts and culture leaders, coping with the imperative for innovation, this implies generosity; a mentality of abundance, rather than scarcity; and a commitment to create an environment of openness and connectedness, both within our organizations and within the larger community context.

As a metaphor, consider the coral reef, with its complex and interdependent food chain, a colorful environment of extraordinary and dazzling diversity and a habitat (or platform) for millions of species. "What makes the coral reef so inventive is not the struggle between the organisms, but the way they have learned to collaborate...the reef has unlocked so many doors of the adjacent possible because of the way it shares." Openness, connectedness, and collaboration make innovation possible.

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