

Why Fish Out of Water Are (Sometimes) Great Innovators

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Ed Catmull knew nothing about Hollywood movie making when he left the New York Institute of Technology to run a fledgling computer animation group at Lucasfilm. The year was 1979; as he recalls in his [2014 biography](#), “The idea of incorporating high technology into Hollywood filmmaking wasn’t just a low priority; it wasn’t even on the radar.” He naively ran his tiny part of Lucasfilm the only way he knew how: as if it were an academic research lab. He insisted on a non-hierarchical management structure, shared his group’s breakthroughs in scientific papers and at conferences, and gave his PhD-trained employees ample freedom – and in the process, created what became a revolutionary way of guiding creative efforts. Known as the Pixar “brain trust,” Catmull’s approach not only produced 1995’s *Toy Story* and a subsequent string of hit movies, it also changed Hollywood forever.

Catmull was a fish out of water: a person with deep roots in a particular realm (computer graphics research) who was suddenly plopped into a setting where his worldview and habits were foreign, odd, even heretical. We label such people [amphibious entrepreneurs](#), from the Greek *amphi*, meaning both, and *bios*, meaning life. Our research documents how these inhabitants of dual domains can catalyze large-scale changes in society.

Examples of amphibious entrepreneurship are found in domains as distant as rock music and social-impact investing. Growing up in Mexico, Carlos Santana was steeped in salsa, cumbia, mambo, and other Latin/Caribbean musical styles. His family then moved to San Francisco, where Santana graduated from high school in 1965 – a time when San Francisco was a

laboratory of rock experimentation. Santana, a guitar player, began gigging with a group he called the Santana Blues Band. His roots in Latin music bore fruit in both the composition of his band, which included Latin percussionists playing timbales and congas, and the songs that the band wrote and covered. As Santana [once explained](#), he almost could not help learning “how to cross pollinate Tito Puente with B.B. King.” This odd mixture of musical styles spawned an entirely new genre – Latin Rock – with hundreds of millions of fans worldwide.

The case of Jacqueline Novogratz illustrates how an amphibious entrepreneur has altered the landscape of third-world development. An international relations major with a strong religious commitment to easing the plight of the world’s poor, she found herself nearing graduation from the University of Virginia without any job prospects. A campus recruiter from Chase Manhattan bank interviewed her on a whim. When asked, “Tell me why you want to be a banker,” Novogratz told the truth: “I don’t want to be a banker. I want to change the world.” The recruiter somehow convinced her that international banking would allow her to do just that. For the next three years, she traversed the third world, analyzing debt write-offs during the week while connecting on weekends with people living in abject poverty.

Novogratz then left the bank and applied her training in the tools of banking and finance to supporting microfinance organizations that made loans to women entrepreneurs in Africa. After stints at the United Nations and World Bank and a return to Stanford for an MBA, she was ready to start a new type of philanthropic organization: Acumen Fund, which attracts donations from individuals, foundations, and corporations, then invests them in enterprises that serve the poorest of the poor. Acumen provides management advice along with funding, helping third-world enterprises achieve profitability within seven years. One of Acumen’s early investments was in the Aravind Eye Hospital in India, which has become a pioneer in the provision of eye surgery

throughout India. Novogratz' oxymoronic vision – a nonprofit venture fund, designed to serve the global poor – has changed the worlds of philanthropy and foreign aid, as well as parts of the financial community.

Not all amphibious entrepreneurs make it big. Victoria Hale, for example, tried valiantly to launch a non-profit pharmaceutical company to develop drugs for so-called orphan diseases, which affect fewer than 200,000 people worldwide (most of whom live in poverty). The company, IOWH, saw some modest successes but did not survive as an independent entity. Elements of Dr. Hale's innovative hybrid firm were eventually absorbed back into the commercial interests of the pharmaceutical industry and the philanthropic interests of a successful NGO.

These cases illustrate how amphibious entrepreneurship works. Individuals from one sphere of activity transfer ideas, practices, and values into new contexts, where they are “fish out of water.” Their motivation is to solve a problem: how to create an animated feature film digitally, how to integrate disparate musical styles, how to ameliorate third-world poverty, or how to develop drugs for populations that cannot afford to pay for them. Their pragmatic efforts to solve the problem draw on approaches and techniques that were instinctive to them yet radically different from the *modus operandi* of the new domain. By bridging worlds that were formerly separate, amphibious entrepreneurs connect distant parts of our fragmented world in new ways, often with powerful transformative effects.

For more information on amphibious entrepreneurs, see our 2012 article in Strategic Entrepreneurship Journal, “Amphibious Entrepreneurs and the Emergence of Organizational Forms,” and our 2019 chapter in the Oxford Handbook on Entrepreneurship and Collaboration, “Amphibious Entrepreneurs and the Origins of Invention.”