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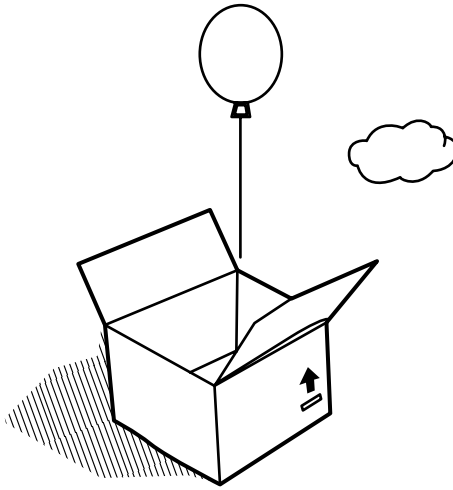
978-0-521-76507-7 - Models of Opportunity: How entrepreneurs design firms to achieve the unexpected

Gerard George and Adam J. Bock

Excerpt

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Six insights to achieve the unexpected



Entrepreneurship is changing. Much of what we know about opportunities and venture management is changing as well. Opportunities dismissed as implausible or even impossible have become reality; in some cases commonplace and indispensable. Thousands, perhaps millions of entrepreneurs strive every day to achieve the unexpected by transforming implausible ideas into viable companies. What distinguishes the phenomenal from the futile?

Consider the following implausible ideas:

- Serving 200 million wireless customers with no infrastructure
- testing drug safety on beating heart cells grown in a petri dish
- sorting the world's information using heuristics based on academic paper citation models
- educating low-income, urban American children at publicly funded boarding schools

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- providing free videoconferencing worldwide
- stopping spam email by identifying reliable senders rather than fake content
- creating a \$40 artificial knee
- auctioning anything at anytime for anyone.

Some of these opportunities, once unimaginable, have now become mundane: eBay, Facebook, Google, and Skype being the most obvious. The \$40 'JaipurKnee' project originally developed by students at Stanford University is being fitted to patients in India, bringing hope to leg amputee patients worldwide. The others are active, well-known businesses, if perhaps described in unfamiliar ways. You might not have recognized Bharti Airtel (the Indian mobile services company), Return Path (the safe sender email firm), The SEED Foundation (creator of the only urban, public boarding schools in the United States), or Cellular Dynamics (the stem cell company). Most of us would have dismissed these ideas as strange or impossible – yet, some enterprising individuals see the world differently. Transforming implausible ideas into plausible opportunities presents a fundamentally new form, or perhaps even art, of entrepreneurship.

SHRINKING WORLD, EXPANDING OPPORTUNITIES

The global economy has become a cliché. Outsourcing, transnational distribution, and the interconnectivity of financial markets are familiar elements of the “smaller world” theme. High-profile entrepreneurship leads blog and newspaper headlines, especially in topical areas of renewable energy, internet infrastructure, and mobile communications sectors. But the vast majority of nascent entrepreneurship remains mostly ignored. Entrepreneurial activity, at the identification and enactment stage in local contexts, is where smaller world effects have the greatest impact. Every entrepreneurship story, great or small, starts somewhere. We need to update our

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understanding of where, how, and why entrepreneurial stories are written. But first, we have to appreciate the drivers that have made these stories possible.

The unprecedented, global, exponential, and accelerating increase in access to information is unmistakable, creating new managerial challenges.¹ More entrepreneurs have access to more opportunities; the true scale of global entrepreneurial activity is just beginning to emerge.² The Kauffmann Foundation, an American non-profit organization that champions the research and practice of entrepreneurship, estimates that roughly 4 percent of the US population participates in entrepreneurial activity each year. This is consistent with government estimates indicating 10–15 million active entrepreneurs in the United States. And while much has been made of the rise of *consumer* markets in emerging economies in Asia, it is the explosion in entrepreneurial activity that should really capture our attention.

If entrepreneurial activity is only half as prevalent in India and China, the base population of entrepreneurs easily exceeds 50 million individuals. Other estimates, however, suggest that the rapid development of low-income populations in these countries is leading to *higher* rates of entrepreneurial activity. The world's entrepreneurial community may soon exceed 100 million, or even 200 million individuals.³ While these entrepreneurs lack some of the advantages enjoyed in relatively resource-rich economies like the United States, much less hotspots like Silicon Valley, the democratization of information resources and international networks strongly suggests that gaps in resource access will contract rather than expand. In other words, the coming decades will see a phenomenon never previously possible: a ten- or hundred-fold increase in the number of active, capable entrepreneurs in the global economy.⁴

While the scope and scale of potential opportunity has expanded, the geography of exploiting those opportunities has dramatically contracted. For the last few decades, Western businesses off-shored low-cost manufacturing to rapidly achieve scale economies

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and facilitate geographically dispersed product distribution. But the new world of opportunities includes instantaneous access to global markets: anyone anywhere can upload an application to the iTunes™ App Store to reach users worldwide. The “small world” effect goes far beyond logistics and distribution. It includes the potential for access to every type of human, physical, and intellectual property resource, often with nearly zero marginal cost for coordination.

Similarly, venturing mechanisms available to entrepreneurs have dramatically expanded. Sophisticated financing, legal, and operational structures have emerged to fund and grow ventures across industries and geographies. Consider the case of entrepreneur Cory Cullinan, who gave up a stable and rewarding music educator job to become Doctor Noize, the creator of an edutainment world inhabited by musical creatures. His award-winning album, *The Ballad of Phineas McBoof* led to a financing partnership with Hong Kong-based developer Outblaze and its multimedia production company Dream Cortex.⁵ Cory provides the creative firepower while Dave Kim of Outblaze provides the operational oversight to coordinate designers, engineers, and developers in three countries. Doctor Noize has a SiriusKids™ #1 hit song (“Bananas”), also successfully released as an mobile app via the iTunes App Store. The second album will be released this fall, along with a second children’s book. Doctor Noize has been commissioned to write a symphony with California’s North State Symphony.⁶ Geographical, organizational, and structural barriers to complex models of entrepreneurial action are rapidly disappearing.

Although much entrepreneurship is driven by economic need, entrepreneurs have more, and more unusual options for adopting or even creating new roles in opportunity development. Successful entrepreneurs employ a complex portfolio of skills and talents to identify and exploit opportunities. In the past, tacit knowledge specialization restricted activity to entrepreneurs’ base of experience or education. In a world enabled by instantly accessible networks, entrepreneurs may leverage a variety of roles, identities, and

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organizational structuring options to create highly idiosyncratic personal journeys that facilitate, and are facilitated by, a commercial opportunity. The popular media prefers to focus on the solo entrepreneur struggling against faceless, monolithic corporate giants, but this is only one narrative entrepreneurs exploit to further creative endeavors. Return Path CEO Matt Blumberg is quick to point out that most great start-ups have more than one founder, and Return Path is no exception. As we'll discuss later, entrepreneurs achieve the unexpected by creating coherent narratives. But these narratives sometimes blur or obscure the complexity of entrepreneurial action. Return Path's narrative derives from the experience of multiple founders, including company president George Bilbrey and CFO Jack Sinclair, as well as corporate transactions such as acquisitions, divestitures, and financing events.

Some entrepreneurs reach beyond the private sector to coordinate resources and structures with non-commercial entities such as universities, governments, and charities. At the University of Wisconsin-Madison, Professor Miron Livny runs Project Condor, which provides a high-throughput computing platform to a variety of customers including universities, governments, and Fortune 500 companies. The figure shown below maps most of the pools of computers available on the Condor system.⁷ The graphic provides an excellent example of how entrepreneurs have both enabled and benefited from a smaller, interconnected world. The reach of this small *organization*, which could easily be mistaken for a software company, has global impact, but operates entirely within the University as a funded research project. This model of opportunity didn't become physically operable until ten years ago and was highly implausible when it was started 20 years ago. Much before that, it wasn't even conceivable.

Many entrepreneurial ventures are now "born global."⁸ Even when multinational distribution and sales costs are non-trivial, establishing global operations has become possible, expected, or necessary in some sectors. Rather than traditional expansion models in which

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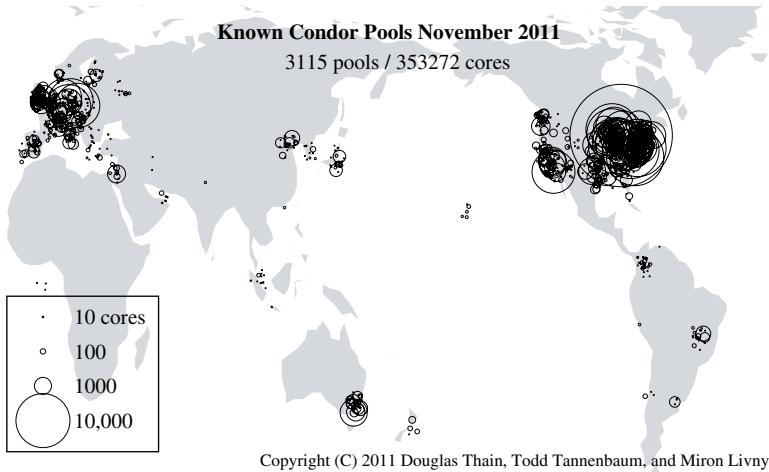
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FIGURE Condor high-throughput computing pools⁹

firms grow locally, regionally, and nationally before extending into international markets, “born global” ventures develop international presence parallel to or even in advance of home country presence. We tend to think of “multinational firms” as large, familiar corporations. But it is entrepreneurial firms that lead the way in creating truly transnational organizations whose headquarters location is largely one of convenience, facilitated by inexpensive telecommunications, reliable information technology systems, and transparent regulations and legal structures.

Equally important, entrepreneurs can realize global impact, fueled by online social networks and global news sourcing and distribution, often in real time, across a variety of information platforms. In the past, entrepreneurs needed to leverage the legitimacy of established organizations and build on perfectly consistent internal systems to reshape industries.¹⁰ But in the late 1990s and 2000s, extraordinary entrepreneurs and firms authored entirely new industries by expanding the boundaries of what seemed plausible. Within 36 months of its founding in 2003, Skype was responsible for more than 25 *billion* minutes of international voice communications, representing 4.4 percent of the global voice communications market.

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36 months later, that share had tripled to 13 percent. In 2011 the company recorded an instance of 30 million *simultaneous* users, as if nearly the entire population of Canada were all using the same communication system at the same time.¹¹

Just as the origins and journeys of entrepreneurs have changed, so too entrepreneurial exits have taken on entirely new meaning. We now distinguish between firm exits, personal exits, technology exits, and financial exits. In the IPO-rich decade of the 1990s, entrepreneurial exit was synonymous with shareholder exit, when funders monetized their investments, usually through acquisition or IPO.¹² But for most entrepreneurs, the monetization exit is not equivalent to personal exit. Many entrepreneurs experience multiple exits as specific roles conclude. Professor Franco Cerrina was one of the three scientific founders of Nimblegen, a life science company that developed novel DNA testing technology. He first phased out of active technology development at the company to return to a full-time university position. He later ended his executive advisory role, and finally cashed out his shareholder interest when the company was acquired by Roche in 2007.¹³ Entrepreneurial journeys have become increasingly complex, fascinating, strange, and wonderful.¹⁴

REVISITING ENTREPRENEURSHIP

The authors of this book are both scholars and practitioners of entrepreneurship. We have realized that some entrepreneurial journeys simply don't fit within traditional management rules and theories. Our mental models about entrepreneurs need updating. While the mainstream media focuses on seemingly new incarnations of Andrew Carnegie, Steve Jobs, Ingvar Kamprad, or Jamsetji Tata, most dramas are unfolding on entirely different stages. The vast majority of novel commercial activity will arise in entirely new contexts, driven by a cohort of entrepreneurs who perceive the world very differently than twentieth-century industrialists. The commercial exploitation of exciting opportunities is evolving to new criteria, and

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changing those criteria in the process. The popular conceptualization of entrepreneurship as personal wealth-creation via the means of company-building doesn't explain a growing cadre of entrepreneurs tackling unusual, important, and implausible opportunities. Entrepreneurship is no longer just about making money; it is much more about making opportunities *real*.

Entrepreneurship textbooks and business school courses often focus on opportunity assessment, fit with environment, competitive advantage, financing, and growth.¹⁵ These are, to be sure, important and relevant aspects of venturing and firm growth. But our experience, observations, and research suggest that this perspective has become narrow and outdated. Entrepreneurs may use these traditional managerial methods as tools, but they do so within a richer, kaleidoscopic confluence of possibilities. Endearing flaws, coherence, and narrative may seem like unlikely organizational qualities, but when firms enact implausible opportunities, the tools they use may seem implausible as well.

Now is the time to study the changing nature of opportunities and entrepreneurship itself. There will always be a place for investigating drivers of growth, profitability, and economic impact. But right now and for the next few decades perhaps, there are even more interesting questions to ask. The answers to these questions will affect hundreds of millions of people involved in this new world of entrepreneurial activity. How do entrepreneurs shape the very opportunities they exploit? How are their entrepreneurial journeys shaped by the novel challenges they face? How do entrepreneurs design organizations when the tenets of organizational design lag rapidly changing technological and social capabilities?

We present a new framework for thinking about entrepreneurs. Not as heroes, though they may be heroic. Not as managers, though they must apply managerial skills. Not as risk-takers, innovators, or explorers, though many fulfill these roles as well. *We see entrepreneurs as authors writing organizational stories as they happen.* Entrepreneurs design organizations to realize opportunities and

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build bridges to span opportunity gaps. But ultimately the most unexpected and fantastic results emerge when entrepreneurs narrate their own story even as they make it real.

This book does not attempt to answer who *is* or *becomes* an entrepreneur. Instead we observe and recount changes in how entrepreneurs address opportunities under significant uncertainty. This is, perhaps, an imperfect research process, in that we cannot build our story on firmly established first principles. An analogy may help explain our intent. We might like to know exactly what protons, neutrons, and quarks really are, but we can still investigate the broader properties of cabbages, kings, and start-ups while we wait. For simplicity, we therefore return to one of the earliest definitions of entrepreneurship as a basis for discussion. More than a century of research on management and entrepreneurship hasn't established a better foundation for thinking about entrepreneurship than the iconic work of Joseph Schumpeter, the Austrian economist and finance minister. One hundred years ago Schumpeter argued that entrepreneurs invest time and other resources to create "new combinations" in a process he coined "creative destruction."¹⁶ This then, is the foundation of the entrepreneurial process, which we define broadly as *realizing new opportunities through the design of organization*.

This doesn't imply that solo business owners are not entrepreneurs – there is organization present when even one person trades. But this does exclude, carefully and directly, the *inventor* who, for whatever reason, is not involved in how that innovation is ever used. This is an important distinction between *opportunity* and *innovation*. For example, while Thomas Edison's experiments led to a viable light bulb, his efforts to link the innovation to centralized electrical energy production and infrastructure were equally important. The light bulb was the *innovation*; residential and commercial electrical lighting was the *opportunity*.

Our framework also excludes organizations, large and small, pursuing profits or other goals associated with exploiting *existing* opportunities.

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Defining an “opportunity” presents similar challenges. Again, while we do not presume to resolve the scholarly debate, we want to clarify how we will discuss opportunities in this book. One perspective argues that opportunities are static mechanisms for generating profits. Within that paradigm, an effectively infinite set of opportunities exists *in potential*. Some have been exploited; some will be exploited; and some will remain forever unrealized.¹⁷ When the right person at the right moment has the right insight, a specific opportunity becomes accessible.

An alternate framework for thinking about entrepreneurship argues that opportunities do not exist in a sort of ethereal waiting room. It is the exploitation activities of the entrepreneur that define and make the opportunity real.¹⁸ This distinction may seem subtle, but it is important to the approach we take in this book. We believe that opportunities are not just identified by alert observation, or even primarily accessed via prior knowledge. *The active, dynamic, and iterative activity of the entrepreneur reveals and then shapes the opportunity, even as the entrepreneur is shaped by that very process.*

With these foundations in mind, our research has helped reveal three important characteristics of the process by which entrepreneurs enact and exploit opportunities:

First, realizing an opportunity is not a linear, step-wise, or optimizing process. Broad trends and key factors may be statistically or anecdotally linked to success or failure, but it is not possible to predict with certainty whether opportunities, especially *interesting* opportunities, can or will be successfully commercialized.

Second, opportunities are plastic, not rigid. The nature and realization of any opportunity is at least partly contingent on circumstances and initial conditions, and probably specific to the individual who identifies it, but opportunities change and evolve, sometimes in unpredictable ways.

Third, and perhaps most important, the entrepreneurial journey itself changes both the opportunity and the entrepreneur. This