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"The Opportunity for Relevance—Creating Innovation and Relieving Stressors" from The Entrepreneur's Intellectual Property & Business Handbook

Jon M. Garon

The Opportunity for Relevance—Creating Innovation and Relieving Stressors

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This article is part of a series of book excerpts from The Entrepreneur's Intellectual Property & Business Handbook, which provides the business, strategy, and legal reference guide for start-ups and small businesses.

1. Finding Uniqueness Through Innovation.

The tools of intellectual property provide a series of techniques to protect the entrepreneur's innovation. Through the lens of patent and trade secret protection, entrepreneurs often look to methods of creating uniqueness—technological innovation, invention, and discovery. Certainly, invention and discovery add great value, but they are often costly in terms of both time and expense. Publicity rights provide the easiest road to exclusivity by connecting the pre-existing fame of the celebrity to any product or service endorsed by that celebrity. For the celebrity entrepreneur, this relationship is self-evident. For other entrepreneurs, it can be achieved through a contractual relationship between the celebrity and the enterprise. Copyright and trademark can provide more indirect methods of developing uniqueness by focusing on the message associated with the product or service rather than directly on that product or service.

The five intellectual property systems provide different methods of protecting the uniqueness of a new product or service, but they only hint at the factors which foster the uniqueness. Instead, the best innovation is triggered by a perceived need. In computer software and hardware, this metaphor is often described as the "killer app," the computer application that is so important that it will trigger a new round of consumer hardware upgrades. In the early days of computing, no one anticipated that the spreadsheet programs were the killer apps that would drive thousands of companies to invest in so-called personal computers. Other killer app opportunities were identified well before they were realized. When Professor Paul Goldstein wrote of the Internet's potential Celestial Jukebox, he anticipated both the music swapping phenomenon of Napster and the universal adoration of the personal MP3 player captured by the iPod five years before their arrival.[1]

Innovation, as suggested by the killer app phenomenon, is not identifying something new, but taking something that is useful, but which has not been practical in the past, and making it widely available to the public. In some cases, the impractical is made practical through engineering or technical breakthroughs. In other cases, the technology or science for innovation has been available for years or decades, but the market had not yet matured to make use of the innovation. For example, the computer mouse predated Windows by many years, but text-based computers had no need for

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[1] PAUL GOLDSTEIN, COPYRIGHT'S HIGHWAY: FROM GUTENBERG TO THE CELESTIAL JUKEBOX 197–236 (1994).

the mouse, so it was not used by IBM. Once the opportunity was combined with the tools to meet that opportunity, success was achieved. Often, this is not genius; it is good timing or great understanding of the needs of the marketplace.

2. The Seven Sources of Innovation.

Management legend Peter Drucker identified seven key sources upon which to build the innovative company. Four of these he identified as internal to the company and three as external, belonging to broader societal changes.

Drucker identified the societal changes as:

- *Demographic* (population changes)*;*
- *Changes in perception, mood, and meaning;*
- *New knowledge, both scientific and nonscientific.*[2]

Drucker identified the internal sources as:

- *The unexpected—the unexpected success, the unexpected failures, the unexpected outside event;*
- *The incongruity—between reality as it actually is and reality as it is assumed to be or as it "ought to be";*
- *Innovation based on process need;*
- *Changes in industry structure or market structure that catch everyone unawares.*[3]

For a start-up entrepreneur, all seven changes are external to the new company, but the "internal" changes are those happening with particular competitors or sectors. The external changes, in contrast, are not tied directly to any industry or sector.

Each of these sources of innovation is a stressor on the status quo. In fact, the list is not confined to these categories. Anything that creates significant stress on the status quo will create a demand to relieve the tension within the current system, and a new system which relieves the tension will eventually replace the old.

Almost all of Drucker's seven stressors are self-explanatory, but none is simple to use. Among the societal trends, a change in perception is the stressor social relevance. As new products, services, fashions, and trends become popular, they create tremendous stress on the previously popular trends. Manufacturers must retool, quickly expanding capacity to deliver new products and services while reducing output in their efforts that support the fading markets.

What Drucker refers to as new knowledge is detailed in the chapters on patents and trade secrets. Drucker suggested that new knowledge is overrated as a source of innovation, but he underestimates the power of new knowledge to beget innovation. Patents and trade secrets may be more difficult to predict than demographic trends, but each new patent brings with it the potential for innovative transformation.

Demographic change provides the best example of societal change. When Drucker first wrote *Innovation and Entrepreneurship* in 1985, the demographics focused on the baby-boom generation dominating the work force and the "baby-bust" population creating significant excess capacity in

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[2] DRUCKER, *supra* note 4, at 35.

[3] *Id.*

public schools and universities. Today, headlines focus on the "boomers" hitting retirement age (with the appellation 'baby' quietly deleted), while the upcoming generations have been parsed into Generation X, Generation Y, and millennials. Less frequently discussed is the emergence of Generation Z, comprised of those born mid-1990s to the early 2000s. Generation Z now makes up 25% of the U.S. population, supplanting both boomers or millennials as the population to target.

Press reports on these generations are far from complete. In addition to the children, grandchildren, and great-grandchildren of World War II veterans, there are many immigrant communities who have come into the United States during the last half century. These communities are not evenly distributed, have different educational experiences (some better, some worse) than their suburban counterparts, have different purchasing patterns, and different stressors. In addition, the urban, suburban, and rural populations have had significant population shifts. Americans move from location to location more fluidly than populations anywhere else in the world. This creates stressors on housing markets, house design, communications, relocations, and many other needs of people shifting locations. Even their reasons for moving vary: better jobs, better environment, better community, or some other opportunity.

Just as demographics are complex and constantly creating many smaller stressors—and so many opportunities for innovation—the other six identified stressors create similar complexities and opportunities.

3. The Opportunity Not to Accept: "We have always done it that way."

If necessity is the mother of innovation, then stressors may be the elusive father. The defense to inefficiency is often the insurmountable barricade, "we have always done it that way." Drucker describes this as the "incongruity," the gap between how something actually works and how we describe it as working. If we have lived with these incongruities for any length of time, human nature allows us to shrug off these incongruities and rationalize their inevitability. As a result, old stressors require entrepreneurs to step out of the system in order to analyze it. More importantly, the entrepreneur has an opportunity to anticipate the stressors caused by new innovation and solve those problems before we have learned to live with them.

Older ongoing, systemic stressors are everywhere. For example, anyone who has worked in a large organization knows that job descriptions are written solely in the abstract. The jobs actually done are based on the strengths and weaknesses of the personnel. Good managers invariably gain responsibilities for tasks that have little to do with their job titles or reporting structures, while weak managers are cocooned like cysts with other staff bearing the responsibilities for accomplishing what those individuals fail to do. Job performance is often measured by change from year to year, rather than in terms of importance to the organizational goals, so the best managers go undervalued while the organizations reward the weak managers for even the most meager improvement. This phenomenon is not corporate incompetence. Rather, it is a natural consequence of our need to interpret the world around us as rational and for individuals to reduce their stress in the world. Without this ability to rationalize and accept the flaws and stresses in the workplace, our frustration would overtake our problem solving. Often, the only time significant staff evaluation takes place is when new management arrives. Whether through merger or reorganization, there is a brief window in which all staff are reevaluated. The downside of this external review is that it is often conducted at a time of significant upheaval to everything else in the organization and often carried out with far less knowledge than would have been available to the outgoing management.

Drucker describes the change wrought by O.M. Scott & Sons Company, when it introduced the fertilizer spreader into the business of lawn and garden fertilizers and pesticides.[4] Previously, fertilizer users struggled to evenly distribute fertilizer on their lawns. Only through time-consuming and potentially damaging trial and error could a person learn the precise concentration of the product. Scotts Miracle-Gro solved this problem, becoming the world leader in the industry, by introducing the automated spreader and eliminating consumer concerns for the use of fertilizer. While the company may suggest that its chemical compositions are different from others, the more striking improvement is the continued emphasis on removing the mixing and measurement challenges for the consumer. It has taken the spreader lesson to every aspect of its product usage model.

Similarly, Target received tremendous accolades for recognizing the historic limitations of the prescription pill bottle. By changing the shape of the bottle, Target allowed the space for labeling medications to be dramatically increased. Better labeling leads to fewer mistakes in medication and dosage—very real medical concerns. Ironically, Target has since left this market, subcontracting to CVS. CVS has not adopted Target's packaging. Like almost everyone else, it accepted the limitations in the pill bottles without challenging the way most prescription drugs were distributed. Society was used to the shape and size of the bottles. After looking at a longstanding systemic problem, Target took the step to make an improvement to the product, but despite the success in the marketplace, its successor has not maintained this advantage.

Even in the case of historic, systemic stressors, the entrepreneur who can step outside the system and identify incongruities or "work-arounds" that have been designed to accommodate the systemic flaw rather than solve the underlying problem, has the opportunity to develop a new product or method to address consumer needs related to the system. The key to innovation is to see that which is so obvious it has become invisible.

4. The Opportunity from the Stressors on Stressors.

An even greater entrepreneurial opportunity lies with identifying the stressors caused by new innovation. Every change brings with it another set of problems. The Internet has increased the speed of communication, brought library resources into every home, and put the individual into the center of content selection—and even creation. On the other hand, the Internet has changed the role of public and academic libraries, it has created a need to authenticate and select written authorities from an overwhelming amount of information. It has created such a demand that consumers find home access to be insufficient, requiring the Internet to be available on devices carried in their pockets.

When the Internet was first popularized, AOL, Yahoo!, Go.com, and others focused on providing library-like organizational hierarchies to the Internet known as portals. With words rather than numbers, Yahoo! led the way in creating a Dewey Decimal System-like syntax to the Internet. Traditional media companies attempted to build portals to deliver their content and control what other content was available to the public on the Internet in the same manner that they programmed television and radio schedules before. Unlike television and radio, the Internet was not limited to a single channel or to programming time constraints. Search engines like Alta Vista and Ask Jeeves provided an alternative to the traditional structures that were not anticipated by traditional media companies.

But there were problems. The portal system was failing because traditional media companies failed to change content access from a delivery model to a consumer driven, on-demand model, and the way in which the first search engines organized Internet content was a bit raw. These stressors created the

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[4] *Id.* at 67.

opportunity for Google to dominate the search landscape by addressing the first-generation problems and solving the stressors created by the search engines. Google's innovation in search was made to answer the inherent limitation of the portal approach to accessing Internet content.

The search engines were born of the desire to funnel from the vast body of information on the Internet that which a searcher is seeking—the truly relevant information. The first-generation search engines based their interpretation of relevance solely on the relationship between the search words and the frequency of matching content on the target sites. Therefore, by simply dumping search terms into a website's content, website owners could drastically improve their rankings. This was roughly analogous to basing search priority on the size of the ads in the Yellow Pages. Despite their shortcomings in terms of actual relevance, these search engines created the basic infrastructure that has allowed Google to lead the market in changing this structure, thereby undermining the portals and becoming a much more useful, and an overwhelmingly more popular search engine with an expanded array of web-based tools.

Search engines like Google currently use complex search algorithms when they crawl web pages looking for the websites that will best connect searchers with the most relevant content. The specifics of an algorithm change frequently, both to fine tune the ability to deliver relevant returns and to try to stay a step ahead of the website owners and consultants who try to "trick" the engines into ranking their sites artificially high. One factor in the way Google and other search engines rank sites is link popularity—how many incoming resource links a site has. Google looks at the volume of links to page as well as the quality of the page that provides the link. Links from pages that themselves have many relevant incoming links help to make the pages to which they link more likely to rank higher. If a website wants better Google rankings, it must make its content more valuable to more users and eliminate barriers to linking to that content. By aligning its criteria to the criteria of consumers, Google solved the stressors caused by the new innovation of search engines and dominated the market for relevance.

The first edition of this book stated that "[t]his process suggests, in turn, that the next generation of search engines will more carefully incorporate user data to prioritize within each search. By tracking the use made on a particular machine or user, an algorithm can incorporate the behavior pattern of the user as well as the relevance of the information based on its content or its web popularity." The product which took this advantage in the marketplace has been Facebook, which built its advertising model precisely by incorporating the user data to prioritize the advertisements being delivered to that individual and charging premium prices to advertisers that sought to target their advertisements. The technology predicted that some company would dominate that niche. Facebook's earlier flirting-app architecture provided the perfect platform to adapt in the market. Myspace nearly worked, but flirting could take better advantage of the advertising than the music-sharing nature of Myspace, relegating it to the background. Yahoo!, which had a dominant lead in online content and advertising revenue, was not designed to mine the data of their users to push content and the advertisements that accompanied the content. To the contrary, Yahoo! valued mediated content—which is much better for society—but provides less value to advertisers.

5. The Opportunity to See the Future.

Google's success stems, in large part, from its founder's drive to innovate to the horizon—a Japanese phrase for far-reaching development goals. The innovation model of entrepreneurship assumes that the enterprise's goal is to solve preexisting problems of process or output. An even greater opportunity exists, however, to focus on long-term, systemic problems and system failures. By

developing plans to overcome those challenges, the entrepreneur innovates to the horizon and increases the distance between his company and that of the competitors.

Most market innovations focus on the stressors that are immediate impediments to process or customer satisfaction. For established companies, a great deal of attention is required to make incremental improvements to products that will create both improved quality and a consumer perception of product freshness. Start-ups have no legacy in the marketplace, so their products and services are typically compared to the established companies, but within a few months or years, they also have their own history and incremental comparisons.

A recent study in the Journal of Marketing provides empirical data suggesting that market focus actually reduces market innovation, particularly transformative innovation.[5] The implications of this study reinforce the need for the entrepreneurs, as well as all other business leaders, to look beyond the short-term innovation when developing corporate strategies. The ability to take this long-view approach is necessarily difficult, but Drucker's list of stressors can readily be applied to the twenty-year horizon as well as the five-year strategic plan.

It is quite uncommon for start-ups to have a twenty-year scenario developed for their company. The level of speculation for the new enterprise hardly makes the exercise worthwhile. A snapshot of the marketplace developed for a five, ten and twenty-year analysis, however, may provide some valuable insights regarding the paths to follow and the paths to avoid. Such a snapshot should take the following into account:

Changes to the particular product, service and industry. The starting point for the long-view analysis should be focused on the history and trajectory of the enterprise's own products and services. But a twenty-year growth plan should be based on a twenty or thirty-year historical analysis rather than a snapshot of last year's competitors or even a five-year comparison. This retrospective analysis can then be used as a benchmark to track and compare the other factors listed below.

The demographic trends of population size, movement and ethnic mix. Expanded immigration (both legal and illegal) are changing markets and culture throughout the United States.

The international changes in world stability and trade changes. While the past thirty years have seen the fall of the Berlin Wall and China's entry into the WTO, historical trend lines suggest both increased international trade and an inevitable balancing of world superpower domination by a single country. Presently, the East-West world dichotomy of Post-War Western domination is being challenged by a restive and reemergent Muslim world as well as an economic shift toward Asia. These changes share some common business implications, but they vary greatly in many regards. The political future has yet to be written.

Technological trends continue to impact all sectors. Gordon Moore's law regarding the doubling of computer chip transistors every two years has held since 1965 despite many scientific articles describing the physical limitations of this continued innovation.[6] Regardless of the sustainability of this particular aspect of innovation, the broader trend of technological progress is likely to continue.

Economic cycles. The U.S. economy runs through recessions and financial cycles that overlap the twenty-year approach. Universities must plan for downturns in enrollment, and companies must plan

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[5] Kevin Zheng Zhou, Chi Kin (Bennett) Yim & David K. Tse, *The Effects of Strategic Orientations on Technology- and Market-Based Breakthrough Innovations, J. MKTG., Spring 2005, at 42.*

[6] *50 Years of Moore's Law*, INTEL, http://www.intel.com/technology/mooreslaw/index.htm (last visited July 12, 2018).

for downturns in the economy. If they fail to include these changes in their planning, they will lack the flexibility required to respond to the inevitable changes.

Changes in relevance. Products and services come and go. Fashions change. The inevitable life cycle of products, services, and social phenomena should be taken into account. The broader view that includes addressing the underlying consumer need, rather than its current mode of satisfaction, will be valuable here.

Government philosophy and regulatory environment. The regulatory environment for products, services, antitrust enforcement, and funding also follow a rough cycle based on the electorate, which inevitably decides when the leadership by one party or philosophy has run its course. Barring assassination or criminal activity, this cycle appears to run longer than economic cycles, so the precise timing has a longer arc. Good planning should take into account the potential for the regulatory environment to change, even if predictions regarding the timing of this change will be highly speculative.

While such a detailed analysis will be difficult, it should provide invaluable information as well as a paradigm for future growth. An outgrowth of a twenty-year planning process will be a set of particularized assumptions that can serve to inform the philosophy of the company. By developing the philosophy out of the twenty-year strategy, the true core assumptions can be articulated. These, in turn, will guide the five-year strategic plan and the annual assessment measures for the growth of the company. By using this approach, the enterprise can innovate both at and beyond the minor changes essential to next year's product line, anticipating the short-term needs as incremental steps to the longer-term goals.

6. The Need for Qualitative, Quantitative, and Comparative Analysis.

Many new companies or innovations are born from the frustration caused by the work-arounds and inefficiencies of the current product or system, so that the innovator cuts the Gordian knot. The innovator, in effect, frees the process or system from its historical constraints, or "the way it has always been done." Often, this is a form of research based on the person's longstanding personal knowledge. While this personal knowledge research often works well, an entrepreneur needs more than his own good idea or personal insight. The entrepreneur critically needs qualitative, quantitative, and comparative research.

Qualitative research should be the first step in any entrepreneurship market analysis. Entrepreneurs should listen closely to what the people on the street know about the problems and opportunities related to the new idea. Conversations with consumers, retailers, shelf stockers, equipment operators, and everyone who is involved at the hands-on level of the product or service are invaluable. Conversations with senior staff and management may help as well, but the need for innovation is often recognized much further down the corporate ladder. At universities, students and secretaries are aware of the problems in the system far earlier than deans or presidents. Auditors ask the support staff more questions than the senior management. This is not because senior management is immune from the problems—far from it. Instead, the support staff has access to sufficient details to make qualitative interpretations of the system patterns.

Qualitative analysis is holistic, impressionistic, and untidy. It may not be subject to rigorous empirical proof. But the comments and reactions of the people involved are often the most important. In his bestseller, *Blink*, Malcolm Gladwell identifies another important aspect to qualitative analysis.[7]

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[7] MALCOM GLADWELL, BLINK: THE POWER OF THINKING WITHOUT THINKING (2005).

While people may be extremely good and highly accurate in forming quick impressions, they generally cannot accurately explain their decision making. As a result, it is more important to rely on the impressions provided by these qualitative interviews than to rely on the explanations people provide to explain their impressions. If a person's initial response to "why did you think that?" is "I'm not sure," accept that answer. Any explanation thereafter is likely to have been made up and could be misleading. The inability to analyze one's impressions does not undermine the credibility of the impression. Gladwell's collection of research highlights that the accuracy of impressions is largely unrelated to the self-analysis of those impressions.

Quantitative analysis should be used to reinforce and critique the qualitative analysis. Theories should be tested systematically and outcomes should be challenged. For start-up companies, quantitative research may be expensive, but can be built into the business plan and funding strategy. Quantitative data is often available from the government and public and private universities. The available data should be incorporated into the analysis of the company. A start-up company does not have to conduct demographic studies before it launches its products, but it should use the federal census data to identify stressors that will support or undermine the launch of its product or service. Also, like all good research, the entrepreneur should invest significant time and effort to prove himself wrong. Most research is beneficial because it keeps manufacturers off the wrong paths. Like the parable of the old man in the woods, his advice may not be enough to find the path out of the forest, but his experience (if not his wisdom) will tell the explorer which paths do not lead out.

Comparative research is a crucial step, but one that is often overlooked. Comparative research is the process of reviewing the successes of other companies in other fields to see if their innovation is adaptable to the entrepreneur's area of expertise or focus. For example, how does the suggestion from both Scotts' fertilizer spreader and Target's medicine packaging suggest new business opportunities? The most significant lesson is, if a company can maintain the product's quality, while simplifying the use, a premium price can be charged.

An example of this struggle can be seen in the field of home coffee brewing. Instant coffee is simple, quick and mess-free. Nothing can make coffee preparation simpler. Unfortunately, instant coffee does not taste like fresh ground coffee, nor does it create the gourmet experience of brewing coffee—the social relevance of selecting the beans and the sensory experience of the aroma. Keurig Green Mountain and Nescafé each solved this challenge with innovative, patented technology involving coffee pods inserted into patented machines. Keurig, in particular, saw its patented machines become the modern home standard in 2012 when the patent on the pods expired. Many of the pods sold are manufactured by Keurig Green Mountain and others license Keurig trademarks. But the availability of pods from other manufacturers greatly expanded the usefulness of the machines. This grew the shelf space for pods and further reinforced the social relevance of the Keurig coffee system.

The evolution was also described in the first edition of the book. In that edition, the yet-to-be-solved problem of high-quality, simple premium home brewing suggested the following process:

> To achieve the next step in premium home brewing, the entrepreneur must talk with coffee drinkers and home grinding customers to identify the problems or stressors to be solved. From there, the comparisons to other industries can be used to simplify the consumer's process without eliminating the benefits of that process. Careful quantitative analysis should be used to develop the potential for the market, the growth or saturation of the field and a better understanding of the price-points at which solutions will be accepted by the marketplace. The successful entrepreneur will apply these three processes to the home brewing stressors in order to launch the next generation coffee system.

The example both mirrors many of the steps undertaken by Keurig and highlights the ability to scan any marketplace for stressors and identify opportunities for new products and services. The stressors create opportunities for entrepreneurs to provide useful market solutions. The entrepreneur does not need to be a genius nearly as much as the entrepreneur needs to understand how to identify where solutions are needed and then solve those problems with stable, somewhat exclusive business strategies.