Intellectual Property and the Entrepreneurial Process

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Abstract

This paper uses an autoethnographic approach to analyze the work of an entrepreneur on a the new venture, AirOhMail, in regards to intellectual property and product protection. By comparing AirOhMail with the failed start-up, SurPrise - both companies attempting to commercialize the same product - this paper demonstrates how a low-level innovation product can better achieve success in the start-up phase by avoiding patents and pursuing more entrepreneurial means of intellectual property protection. Through a process of effectuation and bricolage such as contracts with exclusivity clauses, gaining first customer intent, building legitimacy through a written business plan, finding an angel investor, and capitalizing on a first mover advantage, AirOhMail demonstrates success in the start-up phase in spite of, and because of not having a registered patent.

Keywords: intellectual property, entrepreneurial process, alternatives to patent, entrepreneurial autoethnography

Introduction

An entrepreneur starting a new venture is faced with new decisions to make every day. In a venture centered around a new product, eventually the question of intellectual property protection becomes one of these major decisions to make. The entrepreneur is then left with one of two choices: to either register intellectual property protection such as a patent, or to not. Most existing research makes this choice seem obvious; a new invention should be patented, but there are a number of factors to consider when making the intellectual property protection decision. These factors include the type of intellectual property protection available, the extent of the innovation, the future plans of the firm, how strong the patent will be to protect the product, and the overall cost of intellectual property. Much literature views patenting as a necessary course of action for an entrepreneur to protect the invention from competitors and offer a tradable asset in the future. For a new venture in the start-up phase, however, the cost of a patent can be crippling.

The need for registered intellectual property, specifically patents, varies based on the type of innovation at hand. More complex or high-innovation products and pharmaceuticals are more likely to need protection, in part because of the high research and development cost for these products. For the sake of this paper, however, the focus will be on low-level innovations. An entrepreneur starting a company around a low-level innovation faces the threat of competitors inventing around the innovation even with patent protection. Therefore, alternative means of product protection are necessary for the new firm. The question then becomes, is registered intellectual property necessary for the success of the new venture, or are other means of product protection available and sustainable?

In this paper I will demonstrate through autoethnography how an entrepreneur starting a company around a low-innovation product can achieve success in the start-up phase by avoiding a patent and opting for more entrepreneurial means of intellectual property protection including working through an effectuation process and using bricolage in resource management.

Frame of Reference

Past research into the field of intellectual property assets and the entrepreneurial process generally promotes the idea that an entrepreneur should seek registered intellectual property such as patents, trademarks or copyrights. When this is not available, a firm should keep trade secret as a competitive advantage. In their analysis of industrial property protection, Rafeiner et al. refer to applying for a patent or trademark as "the first step" that a new venture should take (Rafeiner, 1999). The reason for registered intellectual property, specifically patents, is summarized in the book *Intellectual Property: A Power Tool for Economic Growth* as "The premise of the patent system is that this shelter and the resulting competitive advantage encourage invention because the inventors know that they can recap a financial reward from their ingenuity" (Idris, 2003). The core assumption is that intellectual property protection will protect a new product, add value to the firm, and eventually lead to financial gain. These assumptions, however, fail to take into account the entrepreneurial decision making process in the start-up phase of a new venture when an entrepreneur would apply for a patent including why an entrepreneur may not choose to pursue a patent as well as the appropriateness of the patent for the invention.

Covering this gap, a more wide view of the role of intellectual property and the entrepreneurial process is taken by Marcum et al. who provide advice for an entrepreneur seeking intellectual property protection in 'Entrepreneurial decisions and legal issues in early venture stages: Advice that shouldn't be ignored' (2011). Marcum et al. recognize both strengths and faults in the entrepreneurial decision making process. Strengths include the ability of entrepreneurs to recognize and exploit opportunities, but she largely faults entrepreneurs who fail to seek legal counsel for contracts and company registry as well as intellectual property matters (Marcum, 2011). Marcum et al. sees the decisions of many entrepreneurs to be motivated purely by current costs with little to no thought of the long-term effects on the future of the firm(Marcum, 2011). While Marcum recognizes that intellectual property costs are high in the start-up phase, like Rafeiner and Idris, she argues that intellectual property is the most valuable asset for a new venture in the long term (Marcum, 2011).

What Marcum does not recognize is, besides cost, why an entrepreneur would make the conscious decision against registering intellectual property protection, specifically patents. According to The Structural Complexity Model for business growth, a new business

is in a formative situation: seeing and acting simultaneously, and only elements of business that help alleviate the immediate struggle for survival of the business is nurtured (Söderling, 1998). An entrepreneur must first make it through the formative stage before he can begin to plan for the future. This includes using limited resources such as capital to add future intellectual property value when present survival of the firm is still uncertain. According to Söderling's model, if intellectual property makes a business stronger or is definitely necessary in the formative stage, an entrepreneur will act on it, otherwise it will be passed by (1998).

The focus of the Marcum et al. article is to provide advice to a new venture. The article, however, provides no insight into if new ventures are successful by following her intellectual property advice. The data on the use of patents is available through the Cohen et al. survey across a variety of industries to examining the effectiveness of patents and exploring why or why not businesses decide patent a new inventions. In contrast to the assumption that a patent will lead to financial gain, Cohen et al. discover that a large majority of patents do not provide any financial return (2000). These patents can still, however, function as a way to block competitors from creating future innovations, and often times the patent is filed with the sole intent to block a competing firm (Cohen et al. 2000). In regards to this type of behavior, the view of Boldrin et al. is that patents, specifically the idea of patents for blocking innovation of competitors, as a destructive practice for innovation and advancing society as a whole (2008). Boldrin et al. argue that innovation occurs best without patents and that inventors can recoup research and development costs - excluding pharmaceuticals - by simply having a first mover advantage (Boldrin et al. 2000). The case Boldrin makes is extreme in wanting to dissolve intellectual property all together, but it does provide a case against registered intellectual property (2000).

Cohen et al. do not make the assumption that a patent is the best option for intellectual property protection, and discover that a number of business intentionally decide not to patent new innovations. The reason for not pursuing a patent is largely because the firm fears that the patent would be easy to design around or because they don't want to give away trade secrets about their product (Cohen, 2000). This fear is compounded by the threat that inventions produced in China face a risk of intellectual property theft even if having a registered patent (Maskus et al. 2005). Inventions seen as more complex innovations are more likely to receive patents where as low-innovation products are more likely to pursue

other advantages such as lead time or trade secrets (Cohen, 2000). Other less prominent reasons for not seeking a patent include a lack of novelty in the invention, and finally, the cost involved in filing and defending the patent (Cohen, 2000). This study, while a helpful insight into established firm's view toward patent intellectual property does not necessarily transpose onto entrepreneurs operating independent of an established firm with limited resources.

When starting a new venture, most entrepreneurs do not have the resources of an established firm. An established firm gaining registered intellectual property adds value to the firm. For a start-up firm with no residual value - assuming sales are zero - the intellectual property becomes the firms value. If the cost of receiving this intellectual property causes the new venture to fail, the new venture once again gains no value. An entrepreneur, therefore, then relies on an effectuative process and entrepreneurial resource management such as bricolage to create new resources and add value to the firm (Sarasvathy, 2001; Baker, 2005). These entrepreneurial ideas can be extend to the process of intellectual property protection. But will this entrepreneurial intellectual property protection help a new venture, or as Rafeiner suggests, is registered intellectual property necessary for commercial success? (1999). Can an entrepreneur with a low-innovation product achieve success by avoiding patent and opting for more entrepreneurial means of intellectual property protection?

Method

Over the past six months I have started a business called AirOhMail. Using my experience of working on AirOhMail I will attempt to provide insight into the topic of intellectual property in the entrepreneurial process using an autoethnographic approach. I have kept a weekly written reflection of major occurrences in the development of AirOhMail with both direct and indirect links to entrepreneurial literature. Through the autoethnographic approach I can now provide a unique, first-hand account of intellectual property and product protection problems in the start-up phase of a company. There remains, however, certain limitations to this autoethnographic approach. According to Leon Anderson in his paper "Analytic Autoethnography" the limitations of an autoethnographic approach include having a split focus of actively working in a project while being academically metacognitive about the task at hand (2006). In the case of AirOhMail, my focus became increasingly on the business and less on the research. Additionally, autoethnography can provide insight into the emotional effects of a subject studied (Anderson, 2006). For this paper I will not highlight the emotional insights of autoethnography and instead focus on reasoning behind intellectual property decisions in relation to the success of a start-up company.

Analysis

My business, AirOhMail, revolves around the commercialization of a new, low-innovation product that provides a substitute for a traditional greeting card. AirOhMail is a repackaging of a foil coated balloon that allows it to be written on and function as both a balloon and a greeting card simultaneously - an inflatable greeting card. The idea was originally conceived of by designer Tien Pham in 2006. Pham worked on the idea under a parent company he founded in 2007 called SurPrise until he abandoned the company in 2009. In November of 2010 I took up Pham's idea and re-founded the company, this time naming it AirOhMail after the product for sale. Since November, AirOhMail has been generally successful in both commercialization and funding. So why has AirOhMail seen success where SurPrise found failure? I attribute a major reason to the pursuit and perceived need for registered intellectual property, specifically a patent, in the start up phase.

When starting SurPrise, Tien Pham created a new invention - the inflatable greeting card. In wanting to protect his invention, Pham sought to patent the inflatable card in the USA. Much academic literature would agree with Pham's logic. According to Rafeiner et al. "A company, in an attempt to maintain its competitive edge, should defend its intellectual property assets vigorously which, at first step, means obtaining patents and trademark." (Rafeiner, 1999). Pham thought that because his inflatable greeting card was new he needed to protect it from imitation with a patent, and in doing so he created a high cost in both time and finance for his new venture.

Through his network of friends and family, Pham was able to raise over $20,000 USD to support his new business. Half of his funding went to product production and general business development, and the other half was spent filing the first draft of his patent application in 2007. Months later the patent was reviewed, and the claims were denied. This is not unusual, but by this time Pham had run of start-up capital to defend the patent application further, and he left the patent abandoned. Pham had limited resources and used 50% of his finance to protect an uncertain future. A loss that can be contributed to following a causation path, focusing more on potential future returns than affordable loss (Sarasvathy, 2001). The intent of the patent was to protect SurPrise from competitors in the future, but in the present the patent became a major force in the downfall of the company. Had SurPrise followed effectual reasoning, Pham may have created value in the now as opposed to predicting future value later (Sarasvathy, 2001). This is in stark contrast to Marcum et al.

who state "Although the up-front expenditure may seem costly to the entrepreneur . . . intellectual property is likely one of the most valuable assets of the business and its protection should be a priority" (2011). In the case of SurPrise, protecting intellectual property became the downfall of the company.

If Pham had pursued the patent further he would have accumulated an even higher start-up cost. Alternatively, had all the claims of the SurPrise patent been accepted in the first filing, Pham would still have had to sell 3,500 inflatable greeting cards to cover the intellectual property cost and another 3,500 to cover the cost of production. When starting AirOhMail, I recognized the benefits of having a patent, but reflecting on Pham's failed attempt with SurPrise, I questioned if pursuing a patent was the best option for protecting the inflatable greeting card product?

In November 2010 I brought this question of the SurPrise patent to two different intellectual property lawyers. I consulted with Per Mercke and Thomas Torounidis seeking advice on whether I should continue to pursue a patent for the inflatable greeting card. Both lawyers agreed that the invention could be patented, but the patent application filed by Pham was left abandoned for over a year. This meant that a European patent was no longer possible, and a revival of the U.S. patent was possible for an additional fee. The process would take over one year and estimated to cost around $20,000 USD. Mercke's initial advice was that $20,000 would be better spent on production, marketing and business development than on patent (personal communication, November 2010). In line with the findings of Cohen et al., Mercke was concerned that any patent obtained for this product could be easily designed around if a competitor really wanted to take the idea (Cohen, 2000; P. Mercke, personal communication, November 2010). Torounidis's initial reaction was that the invention should be patented in the U.S., and that the patent provided an opportunity for future sale of the company (personal communication, December 2010). After further research into the cost necessary to complete the patent applicaiton, Torounidis changed his mind and saw trademark as a better opportunity for company protection (personal communication, January 2011).

Following both Mercke and Torounidis's advice, I left the patent for AirOhMail abandoned. In doing so, I have found that *not* pursuing a patent provides a number of advantages in the start-up phase including a low start-up cost, the opportunity for redesign, the opportunity for effectuative action, and a freedom to fail. First, not pursuing a patent made the start-up cost and break even point for AirOhMail relatively low. The inflatable

greeting card is an inexpensive product to make, and with no additional patent fee, the break even point for AirOhMail is projected to come much sooner than it was for SurPrise. Second, not having a patent leaves the design of AirOhMail open to redesign and improvement. Third, a patent on the inflatable greeting card would finalize and restrain future changes to the product. Once the inflatable greeting card reaches the market, I am free to free to change its design and functionality in response to customer demands without jeopardizing any intellectual property assets. A patent on the inflatable greeting card would largely put AirOhMail on a causation path, but without a patent the company is open to change and adapt as new resources and opportunities become available (Sarasvathy, 2001). Finally, if AirOhMail proves not to be a successful company, it can still fail as a start-up without experiencing major financial loss. I am much less financially invested in the product than Pham and his family.

Having foregone a patent, AirOhMail now faces a number of obstacles in product protection as a new venture commercializing a new product. These obstacles include the threat of imitation from competitors and suppliers, and an increased difficultly in finding formal venture capital by not having a patent as a tradable asset. Recognizing these drawbacks and acknowledging the need for some type of product protection has forced me to act entrepreneurially in the start-up phase. Product protection for AirOhMail has largely come through effectuatvie action in business development, bricolage in resource management, and capitalizing on a first mover advantage.

In the case of AirOhMail, the inflatable greeting card would be fairly easy to imitate on the market so I needed to create some type of barrier to entry. A patent would be one such barrier, but having previously ruled that out I am forced to act entrepreneurially to create new barriers. The first barrier I have used is to creating exclusive distribution with my customers. In the past four months I have gained intent from seven stores to retail AirOhMail in the future. Seeing this intent through the lens of bricolage, the customers become a new resource at hand (Baker, 2005). When creating a final contract to retail AirOhMail, I will include an exclusivity clause for AirOhMail. This clause will make AirOhMail the only inflatable greeting card/mailable balloon that the retailer can sell. I will use the first mover advantage to capture exclusive segments of the market. If competitors would choose to copy the design of AirOhMail, these retailers would not be able to sell their designs in stores due to this

agreement. Furthermore, I can extend this exclusive distribution to contracts with future retailers.

I will further build off of the first mover advantage of the inflatable greeting card using bricolage to align current skills and resources to create new value for the firm (Baker, 2005). One of these skill sets within AirOhMail is that the designer and the inventor of AirOhMail, Tien Pham, is still active in the company. Pham has unique design talents that cannot be copied by competitors. Having worked on the inflatable greeting card for two years, Pham has created a selection of new inflatable card designs that can be used in a product rollout strategy. The product rollout strategy secures the first mover advantage for AirOhMail by keeping the company ahead of potential competitors on The Structural Complexity Model curve (Söderling, 1998). Finally, as a first mover I have the opportunity to build a connectedness up and down the value chain, securing suppliers and retailers.

For future action, I plan to continue to work effectuatively and create a strategic partnership with an existing greeting card company (Sarasvathy, 2001). This partnership could give AirOhMail access to new distribution chains, and the existing company new product for the greeting card market. To protect AirOhMail in this situation, I have drafted a non-compete agreement which would prohibit this partner company from creating a similar product and usurping AirOhMail.

Another threat to AirOhMail is the threat that exists from suppliers. The prototype of the inflatable greeting card was created in China, and AirOhMail is therefore vulnerable to a supplier who could resell the inflatable cards to another firm (Maskus et al. 2005). In this case, if AirOhMail had a patent it might not stop the supplier from reselling the product as China struggles to enforce intellectual property laws (Maskus et al. 2005). Once again, barriers are needed to protect AirOhMail, this time from suppliers. To construct a barrier I have been very selective in sourcing suppliers. The balloon portion of AirOhMail will still be produced in China, but the packaging and assembly will be made in Poland. When speaking with balloon manufacturers, I only give select information about the balloon and limited information on the final product being made. Using multiple suppliers in different parts of the world creates a barrier at the supply source. The final assembly of AirOhMail will be completed with the packaging in Poland. Poland manufacturing creates slightly higher margins for AirOhMail, but it brings a stronger climate of trust than working with Chinese produces.

The final obstacle for a new firm without formal intellectual property is finding access to start-up capital. Many venture capital firms look for registered intellectual property as a top priority in making an investment (De Clercq et al. 2006). To offer some type of registered intellectual property protection and create valve to be leveraged in the future, I have opted to trademark and to build the brand of AirOhMail. The cost of a trademark is a fraction of a patent, and as a form for registered intellectual property a trademark carries potential future value in the sale of a brand (Rafeiner, 1999). The low cost for a trademark it is in line with effectuation reasoning as an acceptable loss if AirOhMail fails, and a way to maintain some control of an unpredictable future if AirOhMail succeeds (Sarasvathy, 2001).

In searching for start-up capital for AirOhMail I have used other means outside of registered intellectual property to attract an investor including creating a well-developed business plan, gaining legitimacy through business plan competitions, targeting a large market, having high margins, and building a customer base. A business angel interested in AirOhMail wanted to see the business plan to learn about the company and its offerings. He had questions after initially reading the plan, but he did not wait for his questions to be answered before offering investment. AirOhMail won a top student prize in the business plan competition Venture Cup, and immediately afterwards the business angel offered to invest in the company. We had not met personally, and he had not seen the prototype of the product, but the legitimacy gained through Venture Cup caused him to want to invest. As opposed to what De Clerq outlines for attracting start-up capital, the AirOhMail investor is a foreign investor who is not involved in the greeting card industry, but he said he was attracted by the high margins and market size of the opportunity as well as the initial customer base that I had put together (N.W. Rayner, personal communication, May 2011; De Clercq 2006). All of these elements led to AirOhMail overcoming the obstacle of finding start-up funding, despite the lack of a patent. In a lecture by business angel Patrick Söderlund at Lund University, Söderlund outlined what he looks for when investing in a new business putting the person behind the business as his top priority and intellectual property as number eight (2010). The experience of AirOhMail is more in line with Söderlund than theory described by Marcum et al. or Rafeiner et al.. While a patent may be an attractive asset to a venture capitalist, as AirOhMail has shown it is not necessary in receiving external funding.

The ultimate success of the company AirOhMail is yet to be determined. In the past six-months AirOhMail has seen success by attracting customers and investors for the new

venture, starting off where SurPrise failed. Admittedly, AirOhMail had the advantage of starting at a sales and marketing stage instead of a product development stage like SurPrise. Overall, AirOhMail has been able to function more successfully as a start-up and gain a more beneficial financial position than SurPrise. This success comes largely from foregoing a patent and still gaining intellectual property protection through a trademark and by working entrepreneurially through an effectuation process and bricolage.

Conclusion

An entrepreneur starting a company around a low-innovation product can achieve success as a start-up company by avoiding a patent and opting for more entrepreneurial means of intellectual property protection including working through an effectuation process and using bricolage. AirOhMail serves as one example of this, failing as the company SurPrise due largely to financial restraints caused by seeking intellectual property through patents, and now succeeding as the company AirOhMail and protecting its intellectual property through entrepreneurial means. The looming questions still remains, however, of can a company succeed using entrepreneurial intellectual property protection in the long term?

Moving beyond this autoethnography, future research is needed to see if there exists a pattern of failure due to the pursuit of intellectual in a new venture? This could include an assessment of start-ups with patent protection that fail without making back the capital spent on the patent, or research into the success rate of start-ups which use more entrepreneurial means of intellectual property protection. Finally, research could be done into the future of AirOhMail. AirOhMail is succeeding now, but it is too soon to determine if AirOhMail will be a success in the future. A follow up study could be done to determine if entrepreneurial intellectual property was sufficient to maintain a sustainable competitive advantage for the firm or not.

Ultimately, the formation of a company is a constant struggle for survival for the firm (Ahlström Söderling, 2007). Receiving registered intellectual property protection such as patents can be a strong way to protect a new firm, attract investors, and create barriers to entry for competitors; however, patents can come at a very high cost in both time and capital for a new venture. As outlined in this paper, there exist alternate ways in which an entrepreneur can protect intellectual property, and in doing so provide a better overall climate for success in the start-up phase of a new venture.

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