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Intellectual Property for New Entrepreneurs

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Abstract – New entrepreneurs, regardless of age, encounter several barriers regarding intellectual property. My research posits that new entrepreneurs are burdened by both informational barriers and lack of resources. A data driven analysis of this problem produced an easy to comprehend guide targeted to new entrepreneurs. This paper presents a subjective guide for entrepreneurs that details patents, trademarks, copyrights, and licensing.

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Introduction

New inventors generally ideate a new product or process but then struggle to protect and innovate on that intellectual property. Having personally been through a collegiate entrepreneurship program, it is my belief that entrepreneurial success is gatekept from new inventors and entrepreneurs due to their limited capital. This meaning that, because this demographic is not the focus of intellectual property resources, existing resources tend to be both financially and intellectually out of reach. In investigating the facets of the new entrepreneur and the challenges that face them, this paper intends to bridge the intellectual property information gap that exists by providing a free and accessible guide.

To evaluate the value of such a guide, it is important to first examine and understand the existing literature. The literature reveals 1) the primary barriers that exist for new entrepreneurs, 2) market strategies pursued by new entrepreneurs, and 3) new theories for youth entrepreneurship and how they interact with previous ones. In some sections of this paper, young entrepreneurs will be examined because existing scholarly works focus theory on young entrepreneurs and this group effectively subsets the larger new entrepreneur persona that is more generally discussed in this paper.

First and simply, what factors garner entrepreneurial growth and which factors deter it? Andres Hincapie, through his contrasting study of the young and later in life entrepreneurs, determined that income risk aversion, entry costs, and informational barriers are the three major factors that deter young entrepreneurship.¹ This is important to understand in conjunction with

the research of Geldhof et al. which challenges the long-held theory of trait driven entrepreneurship. Geldhof et al. emphasize the importance of viewing entrepreneurship as a “behavioral process” that can be developed as opposed to a trait driven activity that derives its success from “fixed characteristics of the individual.” Thus, success in entrepreneurship, if not driven exclusively by inherent characteristics of the individual, can be influenced by external factors and any negative factors can be addressed and overcome. Moreover, Hincapie measures two policies of entrepreneurship against one another. In the first, referred to here as subsidies, programs are implemented to subsidize the costs to enter a market as a new entrepreneur. The second policy focuses on instituting educational programs, to bridge the information and expertise gap that may block new entrepreneurs from entering a market. He finds that not only do educational programs outperform subsidies, but also that these policies have better returns when implemented with the young entrepreneurs. These findings bolster this research by showing that bridging an information gap for new entrepreneurs is likely to increase chances of success.

Outside of policies, there do exist other factors that can help to grow entrepreneurship. More specifically, what is known as a relational developmental system is thought by Geldhof et al. to influence the development of entrepreneurship. A relational developmental system is more simply stated as an influence factor where the person’s environment or context in conjunction with their role models impacts their growth and development in an area. In the research of

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3 Hincapié, supra note 1.
4 Geldhof et al., supra note 2.
Geldhof et al., they suggest that a person’s will and ability to control their own developmental system is almost as important as the system itself.\(^5\)

**Theory and Hypotheses**

The theory for this research stems from a recent study of 600 young entrepreneurs which found that positive psychological capital, namely hope, resilience, and self-efficacy, have correlated positively with the success of startups.\(^6\) It logically follows from the existing literature that entrepreneurs are not always born, they are taught, developed, and, to an extent, self-made. I posit that a financially and intellectually accessible guide to intellectual property targeted towards the new entrepreneur will help to address informational barriers and has the potential to increase psychological capital, namely, self-efficacy.

**Method**

For this research survey, I developed a set of questions to measure 1) prior knowledge of intellectual property, 2) barriers to entrepreneurship and intellectual property, and 3) self-efficacy, measured as confidence, as they relate to the respondent’s innovation, intellectual property, and knowledge thereof. The questions asked in the survey can be found in the appendix to this paper. Respondents selected, due in part to sample size, are not representative of the new or young entrepreneur population. Those selected were chosen because of their current participation in a mid-size midwestern university’s entrepreneurial development program where participants develop their product or business idea over the course of a semester and then pitch the idea to potential investors. Keeping the context of the participant pool in mind, the results

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\(^5\) Id.

interpreted below should not be taken as representative and are simply meant to provide insight into the mind of young entrepreneurs in the early 21st century. These results are valuable to the extent that they provide relevance for the motivation of this research and guide.

Empirical Results

In analyzing half-hour interviews with the program participants, the following are trends that appeared. Most respondents felt that they had ‘some knowledge’ of the presented types of intellectual property, patents, trademarks, copyrights, and licensing, when presented with a scale of “No Knowledge | Some Knowledge | A lot of Knowledge | Advanced Knowledge.” Over the course of the semester, respondents spent, at most, 10 hours investigating any form of intellectual property related to their innovation. On a scale of, “Not at all confident | Somewhat Confident | Very Confident | Extremely Confident,” respondents felt both ‘Very Confident’ and ‘Extremely Confident’ about their ability to advance their product or idea in their current state. However, when asked on a scale of “Not at all | Somewhat | A lot | An immense amount” how much they felt increased general knowledge in intellectual property would change this same confidence, all responded with ‘Somewhat’ to ‘A lot.’ All felt that intellectual property was at least “Very Important” to both the protection and value of their products. Challenges and barriers discussed by participants will be discussed in the Discussion section below.

Discussion

In sum, the results show that, anecdotally, respondents have little existing knowledge of intellectual property, and they feel that increased knowledge would increase their confidence or self-efficacy. Individually, identified barriers to investigating intellectual property discussed by respondents included, the complexity of the topic, the notion that limited knowledge inhibits the ability to ask the right questions, access to resources, and the cost of receiving legal advice. A
recurring theme was that respondents identified the desire to learn which online tools can be used for intellectual property research and how those tools are used. This theme motivated the tool section of the guide developed for this project. Additionally, some respondents specifically identified the mentorship and education that they receive through their program as the most impactful factor in overcoming challenges. This finding specifically supports the relational developmental system discussed above and suggests that perhaps development of relationships and personal environment should be identified as a specific area to focus on for new entrepreneurs.  

Though the new entrepreneur should be understood as an individual with motivations, barriers, and specific knowledge, these developing entrepreneurs are part of a larger stratum of American society and should be further understood in that group context. The following section aims to analyze new entrepreneurs as a group actor in society.

**The Entrepreneurial Stratum**

The following section examines entrepreneurs and inventors with regard to patents. This historical demographic data paired with current trends aims to provide a broader insight into the new entrepreneur. This analysis should supplement the small sample empirical results discussed above. In examining the available data and research, I set out to analyze 1) What is the demographic makeup of the entrepreneurial class in the United States, and how is that makeup changing? 2) What industries are trending with regard to patent innovation?, and 3) What does this data mean for the future of new and young entrepreneurship? These tasks require the

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7 Geldhof et al., *supra* note 2.
interpretation of scholarly data alongside the use of aggregate data provided by the World Intellectual Property Organization (WIPO).

**Demographics and Trends**

The United States Patent and Trademark Office (USPTO) provides data on patent applications. This data contains the names of the patent applicants; however, no demographic information is provided. Thus, the aggregation of demographic data on young and new entrepreneurs is a project beyond the scope of this work and is an area identified as potential future work for researchers. It follows, that to investigate the demographics of patent applicants, existing scholarly research must be relied upon. Researchers from the University of Wisconsin and the University of Iowa identified this problem and approached the data from a broad scale. Sarada and colleagues programmatically cross referenced the names on patent applications from 1870 to 1940 with the federal census in order to aggregate demographic data on patent applicants.8 Somewhat unsurprisingly, Sarada finds that, women, blacks, and younger people face, “systematic barriers” in patent attainment.9 Moreover, their findings show that patent holders are likely to have wealth and “intergenerational links” (family members who previously went through the patent process).10 International data collected within the last twenty years however does show both that the patent gap between men and women is shrinking and that the average age of inventors is on a slow decline.11 However, that average age is still much higher

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9 Id.
10 Id.
than what would be considered a young entrepreneur in this paper.\textsuperscript{12} Jung and Ejermo go further in advising that younger folks are inventing more frequently as a result of a “decreased burden of knowledge” and technological opportunities.\textsuperscript{13} Both of these factors can be used to the advantage of any aspiring new entrepreneur or inventor.

With a working knowledge of the characteristics of patent applicants, the question becomes what do they patent? Again, unfortunately, the USPTO does not present easily refinable aggregate data. Thankfully, WIPO provides a much better dataset that can address this question. However, before discussing the data, it is important to note that WIPO data is only applicable to patents filed under the Patent Cooperation Treaty (PCT) which means the data covers the scope of international patents and loses some national specificity. Nonetheless, time series data on United States PCT applications is presented below.\textsuperscript{14}

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{fig1.png}
\caption{WIPO U.S. Data}
\end{figure}

\textsuperscript{12} Id.
\textsuperscript{13} Id.
The major takeaways from the WIPO data are 1) “Computing Technology” is by far the most patented item under the PCT for the U.S. 2) the “Furniture and Games” category is the least applied for except for the “Other” category, and 3) the number of overall PCT patent applications is increasing. For new entrepreneurs whose patents, as a result of information barriers, would likely not include new technology, the data can be interpreted to mean that it is not likely that a PCT patent will be needed. Further, the data can serve as a signal as to which growing fields to pursue throughout an educational and entrepreneurial career.

It should be noted that the original intent of this section was to perform an original Pythonic computational analysis of entrepreneurial demographic data. The goal of this analysis was to show current trends in entrepreneurship as to who are becoming entrepreneurs and what area their intellectual property falls within. However, the required aggregation of this data from the USPTO and Census databases was unforeseen. Thus, prior research was gathered and interpreted to provide at least some insight for new entrepreneurs.

Guide

The following section presents the aforementioned guide that has been motivated by both personal and historical empirical research. The goal of this guide is to provide a short, comprehensible, and introductory intellectual property guide to new entrepreneurs. The guide is structured as follows: 1) Trademarks are presented first as they are somewhat easily attained, affordable, and they provide protection for the name, symbol, or design that an entrepreneur can advance their intellectual property under, 2) Patents, both design and utility, are presented as the majority of entrepreneurial intellectual property falls under patents, 3) Licensing is then
discussed as a way to innovate on those inventions, 4) Lastly, copyrights are discussed as they provide protection for the forms of intellectual property that are more creative in nature.

**Trademark Background**

A trademark, defined by the United States Patent and Trademark Office (USPTO), is, “generally a word, phrase, symbol, or design, or a combination thereof, that identifies and distinguishes the source of the goods of one party from those of others.”\(^{15}\) For simplicity of understanding, a trademark is sought when someone is looking to protect intellectual property such as a brand name or logo. Though trademarks are registered through the USPTO, enforcement of the trademark, for example, if another company or individual were to use a similar mark, falls upon the holder of the trademark.\(^{16}\)

To garner an appreciation for what is about to be discussed, it is important that the philosophical underpinnings of trademarks be addressed. There are two theories that stand somewhat in contrast to one another. The first suggests that trademarks are in place to serve an economic utilitarian purpose and, “are principally concerned with ensuring that consumers are not misled in the marketplace.”\(^{17}\) However, some believe that this concept has unrightfully expanded the rights of the trademark owners. Thus, the second theory posits that trademarks are in place to promote a “just and attractive culture … where monopoly of trademarks is not permitted [and] the use of trademarks should promote an environment of free and fair competition in the marketplace.”\(^{18}\)

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\(^{16}\) Id.


\(^{18}\) Id.
registration thereof, the underlying theory should be considered to promote benevolent practical application of trademarks.

Considerations and Process

Perhaps the most important item to consider before applying for trademark registration is whether the mark could be confused with an existing mark. In fact, the USPTO will reject trademark applications under the “likelihood of confusion” if, “(1) the marks are similar, and (2) the goods and/or services of the parties are related such that consumers would mistakenly believe they come from the same source.”19 Further, when considering a mark, the USPTO suggests that the mark be what is considered “fanciful or arbitrary.”20 This is interpreted to mean that if, for example, the mark was a name for a bowling ball manufacturing company, in order to be fanciful or arbitrary, one would use a name such as NORWES to be fanciful or DACHSHUND to be arbitrary. In both cases, the mark has nothing to do with the concept of manufacturing bowling balls and is thus considered to be strong and easily protectable. Once decided that the proposed mark will not likely lead to confusion, it is suggested by the USPTO that an attorney who specializes in trademarks be contacted. The trademark must then be filed with the Trademark Electronic Application System (TEAS).21 Materials for self-filing as well as answers to frequently asked questions can be found via the USPTO reference used for this paper or via the USPTO website.

Entrepreneurial Considerations

For new entrepreneurs, capital may be limited. Thus, when considering filing for trademark protection for a name or logo it is important to account for cost. If one were to self-

\[19\] USPTO, supra note 15.
\[20\] Id.
\[21\] Id.
file, which is not advisable, the minimum cost incurred would be approximately $225.00; whereas, if one were to file with the help of an attorney, attorney fees can increase this cost to between $500.00 and $2,000.00.\textsuperscript{22} Henceforth, I present an important discussion for any new entrepreneur: what is the difference between TM and ®. TM, meaning common law trademark, is a protection that can be used with a name or logo without having to pay any attorneys or file any paperwork with the USPTO.\textsuperscript{23} Essentially, common law trademarks are geographically bound, and they prevent anyone in the same region from creating a “likelihood of confusion” with that mark.\textsuperscript{24} In contrast to this, ® stands for registered trademark. Though more costly, a registered trademark presents a few additional benefits: (1) the mark will be registered in the USPTO database for other companies to view when preparing to file their marks (2) the mark is nationally enforceable (3) the mark, being registered, is more easily enforced that it would be with common law protections.

For practical application, it is the opinion of this author that a TM should be used and applied by new entrepreneurs as soon as possible. Further, when considering a trademark, it is important, for protection purposes, that a mark be used that meets the fanciful or arbitrary criterion. This step of mark creation is important and should not be rushed nor overlooked. Lastly, I would suggest that a trademark be registered once proof of concept has been obtained, capital is not too sparse, and internet sales or campaigns begin. Of the previous factors, the internet is the most important as mark usage on the internet is likely to leave geographical common law protection and be in need of registered federal protection.

\textsuperscript{22} 2021 Trademark Costs | How Much To Register A Name or Logo?, THERVO, https://thervo.com/costs/trademark-cost (last visited Jan 18, 2021).
\textsuperscript{24} Id.
Patents

The patent process in the United States began in 1790 when Congress passed ‘The First United States Patent Statute.’ However, the idea of the patent did not begin in 1790. In fact, the general concept of patents that is still roughly used today began in 1624 in Britain with the Statute of Monopolies. Monopolies were only granted to inventors and were done so subjectively by the Crown. There were some corrupt features of the system such as high cost imposed by the crown in maintaining a monopoly and that monopolies were often granted to those who were bringing technology to Britain that was developed by someone else in a different country.

Thus, the 1790 Act shows remnants of the British system of monopolies in that it grants, “the sole and exclusive right and liberty of making, constructing, and using and vending to others to be used … for any term not exceeding fourteen years.” The corruption in the British system influenced Congress in their writing of the 1790 Act. The 1790 Act prevented such corruption by stating, “if it shall appear that the patentee was not the first and true inventor or discoverer, judgement shall be rendered by such court for the repeal of such patents.” Further, the cost of filing and obtaining a patent is outlined at the end of the act, and, after inflation, it calculates to roughly $106.00 which was substantially less than the cost in Britain.

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26 Id.
27 Id.
29 Id.
Ultimately, the United States opinion on intellectual property was best stated by Supreme Court Justice Joseph Story in 1817 when he said:

The inventor has a property in his invention; a property which is often of great value, and of which the law intended to give him the absolute enjoyment and possession … involving some of the dearest and most valuable rights which society acknowledges, and the constitution itself means to favor.  

In the past two centuries one more pivotal change happened in the United States patent system. The Patent Act of 1836 introduced a patent examination system that resulted in the creation of the United States Patent and Trademark Office (USPTO) that still exists today. Many more changes have occurred since then as technology continues to change and develop.

**United States Patent Process**

In general, an inventor, business or university will seek the assistance of a patent attorney to help prosecute a patent with examiners at the USPTO. The patent attorney files a patent application with the USPTO to be reviewed by an examiner. When the examiner reviews an application, he/she is looking to see if the claims are, “supported by the description, patentable subject matter, useful, novel, and nonobvious.” The examiner will then render an opinion on the claims as to whether they are valid. This circular process of the attorney modifying claims and the examiner rendering opinions continues until either a patent is granted, the attorney and client rest, or an appeal is filed. Appeals can be filed with the Patent Trial and Appeal Board (PTAB) or the United States Federal or Circuit Courts.

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30 Khan and Sokoloff, *supra* note 25.
32 *Id.*
The protections granted to the patent holder allow her to invoke those protections if the patent is infringed. The Patent Act states, “Whoever without authority makes, uses, offers to sell, or sells any patented invention, within the United States … during the term of the patent, therefore, infringes the patent.” Patent owners can sue those who directly infringe their patent or enable infringement of their patent for either literal (matching claims) or nonliteral (equivalent claims) infringement.

Utility Patents

The first and most common type of patent in the United States is known as a utility patent. Utility patents are distinguished from design patents in that utility patents give protection for how something works as opposed to how something looks. The second distinguishing feature to consider is that utility patents are valid for 20 years and design patents are valid for 15 years. Discussed briefly in the previous section is the idea of patent claims. Regarding utility patents, claims made are classified as either independent or dependent claims. Independent claims of which there may be between one and three, “define the basic invention, whereas dependent claims,” of which there may be generally seventeen total, “augment independent claims or other dependent ones … ,[and] may relate to a preferred way in which the independent claim is practiced.” An easier way to think of claims is as a way to tell a story about a house. The independent claim might say, “There is a house.” Though this could stand alone, it is not a very detailed story. Dependent claims would be used to describe the house. One might say, “The

33 Id.
34 Id.
house has a basement, it has a two-car garage, and it has blue siding.” Dependent claims rely on
the “house” but help to distinguish the main structural claims being made.

When considering which patent to pursue, it may prove beneficial to apply the process
versus product innovation test, discussed by Goel and Saunoris. If an invention relates to a
process of doing something, it is most likely to fit with utility patents; whereas, if the invention
or alteration relates to product innovations, it is more likely to fall under the design category but
may rest under both.37 An additional note on utility patents and one that is truly beyond the scope
of this research, is that inventors and entrepreneurs are well advised to conduct prior art searches
to determine whether or not their idea is truly patentable or if it has already been patented. This
is a crucial step in the process of patents and one for which entire books and book chapters have
been written. A short section on tools that can be used for this process is presented at the end of
this paper.

*Entrepreneurial Considerations*

Thus, a new entrepreneur, presumably with little to no formal legal training or education,
may rightfully ask whether a utility patent should be pursued. Authored for the Managerial and
Decision Economics Journal just this past year, Goel and Saunoris posit a theory of directional
causality that exists between U.S. patents and concurrent rise and fall of entrepreneurism in the
U.S.38 Moreover, the decline in rates of entrepreneurism is attributed to the likely increased
levels of expertise that are required to successfully yield a utility patent.39 Conversely, and to be
discussed later in this research, Goel and Saunoris find that design patents, “encourage startups,
and … might enable startups to gain foot holds in their markets.”40

37 Goel and Saunoris, *supra* note 35.
38 *Id.*
39 *Id.*
40 *Id.*
Though encouraging that such a relation exists, cost remains a factor. Without an attorney, filing for a patent in the United States, though only between $100.00 and $300.00 initially, has several extraneous USPTO fees attached such as a search fee and an examination fee which can add an additional one to two thousand dollars to the overall fee depending on the type and size of the company and application.\textsuperscript{41} Needless to say, adding an attorney to this process increases cost by several thousand dollars. The recommended path forward would be to file a provisional patent first. The cost of filing a provisional patent is significantly cheaper than filing a non-provisional patent. Filing a provisional patent gives the filer one year to then convert the application to non-provisional. In layman’s terms, provisional patents ‘hold your spot in line.’ For example, if your provisional has been filed, it prevents a competitor, who may file within that year, from receiving the patent before you. As a final note, provisional patents can only be filed for utility patents and not design patents.\textsuperscript{42}

During the year of provisional protection, when considering filing for a non-provisional and weighing the costs, consider this line from Rimai’s \textit{A Guide for Implementing a Patent Strategy}, “Absent proper patent protection, there is no reason why a company should pay you anything to practice the technology that you so painstakingly advanced.”\textsuperscript{43} Overall, the key word for patents and intellectual property on the whole is ‘Caution.’ If an inventor or entrepreneur is not cautious when proceeding with IP development and protection it can be very easily duplicated and stolen.

\textsuperscript{42} Provisional Application for Patent, \url{https://www.uspto.gov/patents/basics/types-patent-applications/provisional-application-patent} (last visited Apr 12, 2021).
\textsuperscript{43} RIMAI, \textit{supra} note 36.
Design Patents

Design patents are the less common of the two types of patents and can be understood as stylistic and cosmetic innovations. The basic filing fees for design patents are less than that of utility patents, but it is important to remember that the protection duration of design patents is five years shorter than that of utility patents. When considering design patents, the following apply: (1) it must be an “ornamental design for an article of manufacture,” (2) the design when separated from the manufacturable item is not protected by the patent, and (3) the visual appearance is protected, and functional aspects are not. Overall design patents are considered to be cheaper to pursue and easier to obtain as they are often less involved.

As an innovator/entrepreneur, it is helpful to know what the courts do to determine whether a design patent has been infringed. This can be helpful when completing preliminary searches on your design. The courts use what is called, “The Ordinary Observer Test.” Essentially, the test proclaims, “Two designs are substantially the same if their resemblance is deceptive to the extent that it would induce an ordinary observer, giving such attention as a purchaser usually gives, to purchase an article having one design supposing it to be the other.” Thus, it may be helpful to have friends and family examine your design compared to those similar to help determine whether or not moving forward with a design patent is a viable option.

44 Goel and Saunoris, supra note 35.
Entrepreneurial Considerations

In researching where the biggest “bang for the buck” is in patents for entrepreneurs, Goel and Saunoris find that design patents lead to a greater increase in startup entrepreneurship than do utility patents. Moreover, as it is backed by empirical findings, I would posit that it is more time efficient and cost effective to a beginning entrepreneur to pursue a design patent than to pursue a utility patent. However, if considering a utility patent, it is most cost effective to pursue a provisional patent to effectively buy one year of research and design and protection before converting the patent application.

Licensing

In the realm of intellectual property, licensing can prove to be an illusive term. However, it can be simply understood as a contract between two parties that allows one party to use the intellectual property under agreed upon terms. An important distinction is that licenses are not intrinsically intellectual property; instead, they are a method of innovating on previously created intellectual property such as patents, trademarks, and copyrights. Separate and apart from the initial costs of obtaining the initial intellectual property, there exist costs to create and negotiate a licensing agreement. The cost associated with creating and negotiating a licensing contract can vary considerably depending on the complexity of the agreement and resultant number of hours an attorney invests into the project. A liberal estimate for this innovation step would be

48 Goel and Saunoris, supra note 35.
between $1,000.00 and $5,000.00 depending on the attorney’s billable rate which often lies between $100.00 and $500.00 per hour.

Entrepreneurial Considerations

One interesting point to be considered is the distinction between innovation and invention that Meurer makes in a Houston Law Review article. He suggests that an invention is more so a technical achievement, and innovation is the “development and commercialization” of said invention.\(^5^1\) Given that, “entrepreneurship is costly and risky”, consider the following example from Meurer, “Jobs and Wozniak at Apple®, and Gates at Microsoft® are great innovators, but perhaps not great inventors. Bell and Edison on the other hand, were both great inventors and innovators.”\(^5^2\) It can be tempting or even a point of pride to try and show that one can embark upon and see through this journey of entrepreneurship alone; however, accepting partners and building a team is sometimes a necessary element of success that is either forgotten or pridefully refused.

To reiterate, invention is the development of intellectual property whereas innovation is the marketing and commercial development of that intellectual property.\(^5^3\) Licensing can be effectively used as a tool for innovation. Innovation proves to be necessary when considering the following excerpt from Teece, “when imitation is easy, markets don’t work well, and the profits from [invention] may accrue to the owners of certain complementary assets, rather than to the developers of the intellectual property.”\(^5^4\) In his paper, Teece provides a concrete example of this

\(^5^2\) Id.
\(^5^3\) Id.
phenomena - RC Cola®, was the first beverage company to package soda in a can, but because Coca Cola® and Pepsi® were larger and better positioned, they benefited from the invention while RC Cola® largely saw no gain.55

The entrepreneur must decide whether to fully engage in the innovation process, meaning the entrepreneur would protect, produce, and package her intellectual property or whether to enter into a licensing agreement where another would pay her a fee to be able use the intellectual and take on a piece of the innovation. The entrepreneurial role in the latter is to ensure that the contractual terms of the licensing agreement are adhered to by the licensee. Teece provides a succinct model, shown in Figure 2, to help entrepreneurs decide whether to take their idea to market alone, “integrate,” or to enter into a licensing agreement, “contract for access.”56 For benefit of understanding Teece’s chart below, “appropriability regime” translates to how well protected the intellectual property is, and “specialized assets” are necessary when there is dependence between the invention and complementary assets.57 The remaining aspects of the chart should be generally comprehensible. Significantly, new entrepreneurs and inventors with intellectual property should recognize that it is likely they will almost always end up in the “Contract for Access” boxes.

55 Id.
56 Id.
57 Id.
Landing in the “Contract for Access” position should not be viewed as a negative. In fact, “contractual relationships can bring added credibility to the inventor/innovator, especially if the innovator is relatively unknown when the contractual partner is established and viable.”

For ease of use for the reader, in the appendix to this paper, I have provided a more easily interpreted version of the above chart.

As with all entrepreneurial endeavors, there are risks and areas of caution. When seeking a license agreement, it can be difficult to convince suppliers, manufacturers, and distributors to make “costly irreversible commitments” which hinge their financial success or failure on the

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58 Id.
intellectual property of the inventor. Persuading other parties to join in this risk is akin to the challenge of pursuing venture capital. Moreover, Ruckman and McCarthy find in their study, investigating the success of patents in attaining license agreements, that entering a license agreement can be made even more difficult as, “a licensor’s standing and organizational learning rather than the quality of the patent alone influence the success of outward licensing.” Nonetheless, pursuing a licensing agreement for intellectual property can decrease both the risk and reward for the entrepreneur, but it will likely increase the likelihood of recognizing any reward from the intellectual property.

Copyright

The final key form of intellectual property protection to be discussed is copyright. For a basic understanding of the protection, the United States Copyright office writes that copyright, “protects original works of authorship including literary, dramatic, musical, and artistic works, such as poetry novels, movies, songs, computer software, and architecture.” Copyright varies from patents in that it does not protect inventions or discoveries. Once an original work is created and “fixed in a tangible format” it automatically receives copyright protection. However, it is recommended that copyrights be registered in the United States as the process is relatively inexpensive and provides a number of benefits to the creator. Registered copyrights are

59 Id.
62 Id.
63 Id.
valid for the life of the author plus seventy years.\(^{64}\) A discussion as to whether a new entrepreneur should register their copyrights is presented in the following section.

**Entrepreneurial Considerations**

Let us begin by discussing the “poor man’s copyright.” New entrepreneurs with creative works are likely to fit in the poor man or woman category. Often when looking into copyright protection, the internet will suggest pursuing a “poor man’s copyright.” This process simply entails the entrepreneur taking her creative work and mailing it to herself. The theory is that the mail could prove the date of creation.\(^{65}\) However, there are no instances of this protection method holding any weight in court and, more importantly, the creative work has a federally recognized copyright as soon as it is complete and tangible.\(^{66}\)

Now that some time and postage has been saved, why should a copyright be registered? First off, both registered and unregistered copyrights afford the creator the, “right to prevent others from copying and selling copies of the work, or creating additional derivative works.”\(^{67}\) Remedies for infringement for unregistered copyrights generally include any actual damages that can be proven and orders requiring the infringing party to destroy any copies and cease and desist.\(^{68}\) Though this may seem generous of the federal government to afford these protections without registration, the benefits provided by registering a copyright make the filing fee of $35.00 seem like the best money that a new creative entrepreneur will spend. In her analysis, Melanie Tomanov indicates registration to do the following: (1) create a public record of

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\(^{64}\) NANCY KUBASEK ET AL., DYNAMIC BUSINESS LAW: THE ESSENTIALS (4th ed.).


\(^{66}\) Id.

\(^{67}\) Melanie Tomanov, Copyright Registration Basics for “Creative Entrepreneurs”, 34 LICENSING JOURNAL 18–22 (2014).

\(^{68}\) Leonard DuBoff & Christy King, Copyright and You, 55 TECHTRENDS TECH TRENDS 13 (2011).
ownership for the work, (2) allow for immediate and credible legal action if infringement occurs, (3) shifts the burden of proof to the infringing party, (4) allows the creator to collect statutory damages, and (5) enables the creator to monetize the copyright in the sense that it can be licensed and also used as collateral for loans.\textsuperscript{69} It is crucial to take away from this discussion that lawsuits cannot be filed until a copyright is registered, statutory damages resulting from infringement cannot be collected if the copyright was not registered in a reasonable amount of time, and registered copyrights are more likely to deter frequent infringers.\textsuperscript{70} As registration begins to become the apparent choice, the recommendation is to file for copyright registration before sharing the work with the public or no further than three months out from creation.\textsuperscript{71} Before proceeding, it is worth taking a moment to clarify the difference between actual damages that can be sought for unregistered copyrights and statutory damages that can be sought under registered copyrights. Actual damages include any damages that result directly from the infringement such as lost sales and revenue.\textsuperscript{72} The issue is that it is often very difficult to prove actual damages. Statutory damages provide set dollar amounts under the law that can be awarded in infringement cases, and these damages are much less burdensome to prove and seek out.\textsuperscript{73}

When trying to determine whether a copyright has been infringed, it is also important to keep in mind the fair-use doctrine. The fair-use doctrine allows for a portion of a work to be used for, “criticism, comment, news reporting, teaching, scholarships, and research.”\textsuperscript{74} There is an

\textsuperscript{69} Tomanov, supra note 67.
\textsuperscript{70} Id.
\textsuperscript{71} Id.
\textsuperscript{73} Id.
\textsuperscript{74} KUBASEK ET AL., supra note 64.
intriguing case law history that revolves around the fair-use doctrine and is worth reviewing if it is thought that your work may have been infringed.

New creative entrepreneurs should register their copyrights early and often. Though the filing fee of $35.00 may increase in total cost if the help of an attorney is sought, once the entrepreneur is accustomed to the process, it is likely that an attorney’s help will no longer be needed. Generally, copyright registration consists of the following steps: 1) an account must be made with the Electronic Copyright Office, 2) a few identifying questions about the creator and the work are asked and answered, and 3) after payment, the creative work, depending on its format must be either uploaded to the site or mailed into the Copyright office. Having completed registration it may also be of benefit to know that registered copyrights can be licensed. This is important for those with limited capital who are likely better suited to pursue a licensing agreement as discussed in the licensing section of this paper.

Tools

When interviewing young entrepreneurs in the survey conducted for this paper, respondents identified a need for knowledge of intellectual property research tools available to new entrepreneurs. In response to this need, this section identifies some core ways in which new entrepreneurs can pursue this information.

Google Patents

First, I present Google Patents as it could be the first tool encountered by a new entrepreneur and because it is the most friendly and intuitive tool for IP searches for someone

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just starting out. The search engine provided by google for patents is broad and intuitive, yet somewhat limiting. The user-interface for Google Patents is familiar and easy to navigate as it mimics the traditional Google search engine. Patents can be searched simply by typing keywords into the search bar or through the advanced search feature. However, when compared to the USPTO’s PatFT, its advanced search is much more limited and, if not employed correctly, searches can return results ranging back to the first U.S. patent issued in stark contrast to USPTO’s 1976 limit.\textsuperscript{76} Depending on needs, Google may be preferred if in need of international patent results as its database can return global results whereas, when using the USPTO as a search tool, a different database would need to be used. Thus, though Google Patents is sometimes accused of being too broad of a database and sometimes not as accurate, it could be a familiar place to start for a beginning inventor who is trying to get a sense of what other related intellectual property exists.\textsuperscript{77}

**USPTO**

Second, I present the United States Patent and Trademark Office (USPTO) resources as they could also be the first encountered by a new entrepreneur. The USPTO has a page titled, ‘Inventor and entrepreneur resources.’\textsuperscript{78} With regard to intellectual property research, they provide detailed yet comprehensible search steps for investigating both patents and trademarks in their database. For completeness, the USPTO Patent Full-Text and Image Database (PatFT) and its accompanying seven step guide would be used to conduct a prior art search. The benefit to conducting a prior art search is that it can give the inventor either pause or peace of mind by


\textsuperscript{77} Id.

answering the question of whether their idea has already been executed. Additionally, the USPTO contains the Trademark Electronic Search System (TESS) that serves a similar function as discussed with patents. Coupled with the guidance provided by the USPTO, TESS can give entrepreneurs a sense of what similar trademarks exist and the likelihood of their trademark being accepted.

The tools provided by the USPTO are extremely powerful. However, there are some drawbacks. First, the user-interface for the PatFT is not intuitive or welcoming, and as such, the guides provided by the USPTO may be heavily referenced and relied upon. Second, interpreting the legal concepts that lie within these databases, such as comparing claims in patents and interpreting the likelihood of confusion for trademarks, may be difficult for the beginner. In sum, if an individual has right amount of motivation to learn and ample amount of time, the USPTO resources could prove beneficial, especially for the repeat inventor.

Lexis Nexis (Nexis Uni)

Lastly, as this paper and guide is aimed towards young and new entrepreneurs enrolled in higher education, I want to present an extremely powerful and valuable tool to which many universities provide free access. Firstly, Lexis Nexis is a legal research tool used by legal professionals and costs several thousand dollars per annum. Within its suite of products, Lexis Nexis has a product called TotalPatent One. In my analysis, TotalPatent One brings together the positive aspects of Google Patents and USPTO’s PatFT by providing users with an in-depth database, a friendly and intuitive user-interface, and ample options provided within the advanced search feature. With that being said, the learning curve for TotalPatent One is likely to be much

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higher than the two databases previously mentioned. Lexis Nexis does provide an in-depth user guide for the software. Overall, if the time is available to be invested, I would recommend learning TotalPatent One to get some of the same insights that a paid patent search would yield. The only downside to this software is that, unless pursuing a legal education, upon graduation the inventor/entrepreneur will likely lose access. Albeit the skills and heuristics learned in operating the software are likely to transfer easily to free patent search platforms.

Tools – Conclusion

This guide is created with a focus on young and new entrepreneurs, if enrolled in a university, the university an entrepreneur is attending may have research librarians who may be able to assist in performing business research and possibly beginning patent research. Subjectively, I would suggest doing some preliminary research beginning with Google Patents to get a general feel for where the intellectual property stands. Having completed this initial step, I would contact a research librarian and begin working towards attaining a working knowledge of a professional database such as TotalPatent One. However, if such an advanced resource is not available, it is then that I would recommend moving on from Google Patents to the USPTO databases to begin to gain a more in-depth knowledge of the existing and competing intellectual property. Please note that these steps are subjective, and each individual should pursue intellectual property in a way that makes the most sense for them.

Intrapreneurship

As discussed, entrepreneurship for young individuals carries a large amount of risk with low success rates. For those who may be risk-averse but enjoy the entrepreneurial process,

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intrapreneurship should be considered. An intrapreneur carries much less risk and generally has more stability as they are employed by a company to perform entrepreneurial tasks such as research and development. However, with the increased stability comes a decreased reward as the intellectual property created as part of a company generally stays with the company or is shared with the company. This role is simply to be considered as another pathway on which to employ one’s entrepreneurial talents; however, these roles and their legal rights and responsibilities should be investigated individually when applying to various companies.

Conclusion

In sum, those with the entrepreneurial spirit, when equipped with the right tools and empowered in their environment, can succeed. Both existing scholarly works and the survey data compiled for this paper show that new entrepreneurs feel the burden of economic and educational barriers when it comes to intellectual property. Self-efficacy and confidence of the entrepreneur can be increased with better education and supportive mentors. This guide, supported by empirical findings, aims to serve as a practical scholarly guide for new entrepreneurs investigating intellectual property, namely trademarks, patents, copyrights, and licensing.

Future Work

With respect to future work, the Pythonic analysis of current USPTO patent data coupled with recent Census data would help to provide more current academic insight into the demographic trends of intellectual property. Additionally, researchers would be well positioned to field a national survey to new entrepreneurs in aim to define the term ‘new entrepreneur’ more
robustly in an academic sense and to yield a more representative data set on the current mindset of new entrepreneurs in the United States.

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Appendix

Presentation Experience

As a note on this project, as my primary advisor Prof. Kirk Kern is the Director of the Paul J. Hooker Center for Entrepreneurship and organizer of The Hatch program, I was able to present this research and guide to the 2021 class of Hatchlings during one of their class periods. This close to twenty-minute presentation opportunity allowed me to present a brief guide on intellectual property to the Hatchlings and to the field questions that they had about their projects. The presentation used can be accessed via the link below.

https://falconbgsu-my.sharepoint.com/:b:/g/personal/mwjohns_bgsu.edu/EQ6dO6vMpkBDjA4AzqfY0BAAD5fVrA6fFQewrJhJPs1-g?e=3Sh9UZ

Survey Questions

Questions from the survey referenced:
1. On a scale of No Knowledge | Some Knowledge | A lot of Knowledge | Advanced Knowledge
   a. How knowledgeable would you say you are on
      i. patents
      ii. trademarks
      iii. copyrights
      iv. licensing

2. How much time have you spent investigating intellectual property?
   a. What have you done to investigate?

3. What if anything inhibits you from investigating intellectual property?

4. On a scale of Not at all confident | Somewhat Confident | Very Confident | Extremely Confident
   a. How confident do you feel in your ability to advance your idea?

5. On a scale of Not at all | Somewhat | A lot | An immense amount
   a. How much do you think increased general knowledge in intellectual property would boost your confidence in your ability to advance your idea?

6. On a scale of Not at all important | Somewhat Important | Very Important | Extremely Important
   a. How important do you believe pursuing intellectual property is for the:
i. Value of your idea

ii. Protection of your idea

7. What challenges do you feel face you as a young entrepreneur?

8. How do you hope to overcome those challenges?
Start Here

To go to market, you need more equipment and resources.

Yes

Can potential competitors easily gather/create these resources?

Yes

Enter a license agreement.

No

No

Commercialize immediately.

Is your intellectual property protection strong?

Yes

Are components of your invention unique and critical to its construction?

Yes

Enter a license agreement.

No

Enter a license agreement.

No

Enter a license agreement.

No

Enter a license agreement.

Do you have enough cash to protect, produce, package, and sell your idea?

Yes

Are competitors or imitators better positioned for success?

Yes

Enter a license agreement.

No

Integrate into the market on your own.