

STUDENT ENTREPRENEURSHIP: A RESEARCH AGENDA

Julien Marchand*, Dr. Antoine Hermens, Dr. Suresh Sood
Management Discipline Group, University of Technology Sydney, Australia
*(corresponding author) julien.marchand@student.uts.edu.au

Abstract:

The purpose of this paper is to define the term “Studentpreneur” and stimulate research in the field of Student Entrepreneurship. A research agenda is proposed to further the knowledge of Student Entrepreneurship. The paper identifies Student Entrepreneurship as an emerging phenomenon that provides a dual opportunity. The first is the opportunity to zoom in on one category of entrepreneurs and observe if the traditional theories developed in the “meta category” of entrepreneurs apply to this subcategory; for example, Traits, Psychological tests and Dynamic Capabilities, in a goal to legitimate them further. The second opportunity is to study Studentpreneurs as an exemplary case. Two themes are suggested for the research agenda linked to the latter opportunity: Identity Construction and management of Multiple Identity.

Key words: entrepreneurship research, entrepreneurship, student entrepreneur, studentpreneur, dynamic capabilities, traits, multiple identity, identity formation, psychological testing.

Introduction

The task of the research program “Global Entrepreneurship Monitor” (GEM) is to evaluate each year the level of entrepreneurial activity for each country. The Global Entrepreneurship Monitor (2013), which includes data of sixty-nine countries, posits that “one-third of the differences in economic growth among nations may be due to differences in entrepreneurial activity”. For this reason educational entities, the community, and government have identified entrepreneurs as fundamental in the development of new ventures (Hisrich, Langan-Fox, & Grant, 2007). Universities are now are tasked with promoting regional development and economic growth (Rothaermel, Agung,

& Jiang, 2007). They are now providing entrepreneurship education and offering incubator facilities, becoming more and more “entrepreneurial universities” (Politis, Winborg, & Dahlstrand, 2011; Rasmussen & Sørheim, 2006).

In contemporary times, uncertainty about economic stability has been rising. As a result, students are “now faced with a wider variety of employment options, the probability of ending up with a diversity of jobs, more responsibility at work and more stress” (Henry, Hill, & Leitch, 2005), which makes entrepreneurship a more appealing option for future graduates. Entrepreneurship skills provide students with more flexibility in choosing their career. They know that starting their

own business at any point in their life is still an option due to economic crisis, downsizing or other events. This is also confirmed by the literature on Youth Entrepreneurship, of which Student Entrepreneurship is a part. As Henderson and Robertson put it, “young people are likely to experience a portfolio career consisting of periods of paid employment, non-work, and self-employment” (2000). Additionally, according to the latest report from the Kauffman Foundation (2013), it is a global phenomenon: “Among young people, the word has gone out that those without self-starting skills may be at a permanent disadvantage.”

The impact on the global economy of previous successful students who started their business while at university, or shortly after, is well known. Larry Page and Sergey Brin met at Stanford and started Google as a research project for their graduate studies (Vise, 2008) and now have over 53,000 employees (Google Inc., 2014). Bill Gates (Wallace & Erickson, 1993), Steve Jobs (Isaacson, 2011), Michael Dell (Dell & Fredman, 1999), and Mark Zuckerberg (Yadav, 2006) all started their businesses in their dorms before dropping out. The companies they created now employ almost 350,000 people and reach many more, with over 1.3 billion active users for Facebook alone (Statistica, 2014). More recent student entrepreneurs who dropped out include Matt Mullenweg who created Wordpress while at the University of Houston (Welch, 2014) and Shawn Fanning with Napster (Tart, 2011). Exceptions do exist including Reditt founders; Steve Huffman and Alexis Ohanian (Tart, 2011) but rarity it seems.

However, this suggests more research is needed on student entrepreneurs (Politis et al., 2011).

The authors of this study lead the development of a research agenda on Student Entrepreneurship with the main question: Who are those students who decide to go down the path of entrepreneurship? This question then leads to: How can we further the understanding of Student Entrepreneurship? To reach this goal, the methodology undertaken uses a two-step approach. The first step involves a systematic search of the key words “student entrepreneur” and “student entrepreneurship” in the large volume of management literature and also in the literature on entrepreneurship. Then the articles are filtered to keep only the ones where the definition of student entrepreneur and student entrepreneurship are aligned with this research. Due to a paucity of results, the second step consists of a research of student entrepreneurship on much wider range of journals and following the snowballing technique (following citations and authors in relevant articles).

We define “Studentpreneurs” and identify Student Entrepreneurship as an emerging phenomenon and then show that while the intentions of students to become Entrepreneurs have been studied, how they practice Entrepreneurship has not. It is then postulated that the study of the phenomenon of Student Entrepreneurship is a dual opportunity. The first is the opportunity to zoom in on one category of entrepreneurs and examine if the traditional theories

developed on the “meta category” of entrepreneurs apply to this subcategory, namely Traits, Psychological tests and Dynamic Capabilities. The second opportunity is to study Studentpreneurs as an exemplary case, with incredible examples (Michael Dell, Bill Gate or Mark Zuckerberg) and extraordinary conditions (educational environment and the low cost of starting a business, for instance). Two themes are suggested for the research agenda that are linked to the latter opportunity: Identity Construction and management of Multiple Identity.

Definition of Entrepreneur and Entrepreneurship

The first definition of the term Entrepreneur was provided by Cantillon in 1755. Entrepreneurs, or “undertakers” in a literal translation, are “gens a gages incertains” (Cantillon), which in modern English translates to: “someone who assumes the risk and may legitimately appropriate any profits” (Bruyat & Julien, 2001). For Schumpeter (1951), an entrepreneur is an innovator who introduces new services, products or technology. These very wide definitions are constantly being updated.

The definition of Entrepreneurship for this study is formulated from the practitioner view of Tjan, Harrington and Hsieh (2012) and the academic view of Bruyat and Julien (2001). For the former, Entrepreneurship refers to the first-stage of the founding of a business and connotes the classic Silicon Valley notion of a start-up and the innovative spirit required to launch one (Tjan et al., 2012). For the latter, Entrepreneurship is seen as a process of change for the

venture and the entrepreneur: “while Entrepreneurship is to do with a process of change, emergence and the creation of new value, it is also a process of change and creation for the entrepreneur” (2001).

From Student Entrepreneur to Studentpreneur

Entrepreneurs are defined in a multitude of ways in the literature. The same is true for Student Entrepreneurs but the definitions are significantly less specific. They see themselves as “dream merchants” Purewal (2001) or they “build emerging businesses rather than extending and defending existing businesses” (Baghai, Coley, & White, 2000). A broader definition contends: “He isn’t only interested in building businesses. He’s also the political science major who starts a political organization, using it as a platform to connect thinkers from other disciplines” (Torenberg, 2012). They can also be the students using “classrooms and labs as platforms, resources, and subsidies to construct marketable products, processes, or services” (Mars, Slaughter, & Rhoades, 2008). They are sometimes defined as “academic entrepreneurs” however most of the research on academic entrepreneurship focus on faculty members having entrepreneurial activities, not on the students (Bercovitz & Feldman, 2008). Even though there has been significant research on academic entrepreneurship, academics being entrepreneurs is a moderately marginal phenomenon when compared to “the large number of student entrepreneurs who are educated and fostered in the university context,

and who often continue to develop their new firm in interaction with the university after graduation” (Politis et al., 2011).

This study departs from much of the previous work by exploring the Student Entrepreneur, not just as a student attending entrepreneurial classes, but as conducting a business on/near campus while simultaneously attending formal university award courses. To refine further the definition of the phenomenon of Student Entrepreneurs, the business has to be innovative (not a reproduction of a traditional business) and at least at the incubator/start-up stage (generating revenue). As a consequence, the definition of Student Entrepreneur for this research agenda is as follow: The Student Entrepreneur is an individual attending award classes at university and conducting innovative and revenue generating entrepreneurial activities.

After further exposure to conferences on Entrepreneurship, the authors have come to the conclusion that even if the definition is altered and shared, the general understanding of a “Student Entrepreneur” remains as a student enrolled in an Entrepreneurship course. For this reason, the new term “Studentpreneur” is used to clearly depart from that general understanding. Definition of Studentpreneur for this research agenda: the Studentpreneur is an individual attending award classes at university and conducting innovative revenue generating entrepreneurial activities.

Student Entrepreneurship is an Emerging Phenomenon

The paucity of results of the systematic search of terms relevant to student entrepreneurship demonstrates that it is not an established and well research phenomenon at the top level of the management literature. The key words used for the systematic search are: "student entrepreneur*", "college age entrepreneur*", "undergraduate entrepreneur*", "student start-up*" and "student startup*". This systematic search was performed using the database SCOPUS. Forty-two of the top academic journals in Entrepreneurship, Management, and Organisation Studies were selected for the scope with no limit regarding the year of publication. These journals are ranked either A* or A in the 2013 Australian Business Deans Council (ABDC) journal quality list. Only 14 journal articles meet the research criteria. Eleven focus on the intentions of students to become entrepreneurs. Another one treats of the role of entrepreneurship clubs and societies in entrepreneurial learning but does not mention students running a business (Pittaway, Rodriguez-Falcon, Aiyegbayo, & King, 2011). Finally, only two focus on Studentpreneurs as we define it in this research agenda. The first one is a narrative of a team of academics and students in setting up a business, “Envirofit International”, published in *Entrepreneurship Theory & Practice* (Hudnut & DeTienne, 2010). The second one, “Student Entrepreneur: Resource Logic & Effectual Reasoning” (Politis et al., 2011) is a response to the call for research for comparative studies studying if student entrepreneurs are

different to other kinds of entrepreneurs. One of its main finding (see quote below) is that student entrepreneurs are a different group of entrepreneurs, at least in the use of resources. It is a significant starting point for this research agenda.

“Relatively little is known about young adult views on Entrepreneurship. The work that has been undertaken tends to focus on the specific factors which influence someone to start a business rather than Entrepreneurship as a career choice.” These words from 2000 by Henderson and Robertson show that the research has not been focusing on youth embracing entrepreneurship. However, a set of new studies demonstrates that it is a growing area, even an “emerging phenomenon” (Mars et al., 2008). The latter authors even define a category of Student Entrepreneurs very closely to Studentpreneurs: the State Sponsored Student Entrepreneurs. Their reasoning is that entrepreneurial students take more and more advantage of university resources such as specialised professors, spaces such as incubators, patent and copyright protections provided by the university and sometimes their classroom learning. They are also “utilising the entrepreneurial environments of their universities to access markets with the products, processes, and services they have created” (Mars, 2006).

Another reason for the emergence of Student Entrepreneurship can be seen in the fact that Entrepreneurship education is now mainstream (Politis et al., 2011). The Kauffman Foundation in 2008 reported that it was “one of the fastest growing subjects in today’s

undergraduate curricula”. According to the same report, the number of Entrepreneurship courses in the U.S. rose from 250 in 1985 to 5,000 in 2008 with over 9,000 faculty members teaching it. This is the result of high-level investment in Entrepreneurship education. For instance, in 2006 the Kauffman Institute selected nine U.S. universities to receive \$25.5 million to assimilate entrepreneurship into all areas of research and study. The result of such a boost in Entrepreneurship education explains partially the surge in Student Entrepreneurship, making this phenomenon an important area for further study.

How Have Studentpreneurs Been Studied? Intentions vs. Practice

In the entrepreneurship literature, the closest area to studies on Studentpreneurs are studies on self-employment and/or entrepreneurial intentions of students after they graduate. The reasoning for this is psychologists see the appraisal of intentions as the closest way to predict behaviour (Ajzen, 1991). A significant amount of the studies on behavioural intentions (McStay, 2008) have been conducted by psychologists, and more specifically cognitive psychologists (Ajzen, 1991; Fishbein & Ajzen, 1975; Searle, 1983), which demonstrates the need for a cross-disciplinary literature review. For some researchers self-employment intentions and entrepreneurial intentions are synonyms (Souitaris, Zerbinati, & Al-Laham, 2007; Walter, Parboteeah, & Walter, 2011). For others, entrepreneurial intentions relate specifically to high growth start-

ups (Krueger 1993 in Walter 2011) whereas self-employment includes all types of entrepreneurship (Walter et al., 2011). In any case, both types of studies focus on the prediction of student behaviour. The classical theory of planned behaviour has largely been used in entrepreneurship research (D. A. Shepherd & DeTienne, 2005; Souitaris et al., 2007). Being identified as the fundamental element for understating the process of setting up a startup is the reason for such a focus on entrepreneurial intentions. In such research two streams of study have been privileged “personal characteristics” or “traits”, and how contextual factors affect the intentions to become an entrepreneurs (Lüthje & Franke, 2003). Important findings come from such research. Walter et al. (2011) demonstrate that “the university setting can directly affect the likelihood that students identify and exploit opportunities, and thus their self-employment intentions”. This leads Walter et al. (2011) to the conclusion that the more the university exhibits “characteristics conducive to entrepreneurship”, the more it will influence their students toward intentions of becoming an entrepreneur.

However, typically, studies on intentions do not focus on students who already run a business but on larger samples of students attending (or not in some cases) entrepreneurship classes. As a result, the findings of such studies may or may not apply to Studentpreneurs; further research is required to validate this hypothesis or otherwise. The most common limitation of behavioural intention studies applied to

entrepreneurship, as noted by Walter et al. (2011), is that the “predictive validity of intention” has been demonstrated in a general context only (Armitage & Conner 2001 in Walter 2011). The logical conclusion is that even if the students have the intentions of self-employment or starting a high growth business, they may or may not act on their intentions (Bhave 1994 in Walter 2011). Indeed, what happens to the students with such intentions when the reality of living expenses, lifestyle and work-life balance settles in after graduation? How many graduates who said they wanted to become an entrepreneur realise they are not made for the frugal life of an entrepreneur? Typical first time entrepreneurs cut all their spending to invest everything in their venture. There are countless stories of young entrepreneurs sleeping on their friends’ couch and using multiple credit cards while building a business (Stanford University's Entrepreneurship Corner Podcast (2015).

Self-employment and entrepreneurial intentions studies have important findings. However, the literature on students practising entrepreneurship is limited and further research is required to investigate if such findings can be applied to Studentpreneurs.

Zooming in on Studentpreneurs: Can Classical Theories be Applied to this Sub Category of Entrepreneurship?

Can Psychological Approach of Traits and Attributes theories be applied to Studentpreneurs?

Thirty years of academic research has

been conducted on the psychological traits of becoming an entrepreneur. The locus of control and high Need for Achievement, or NACH, (Begley & Boyd, 1988; Essers & Benschop, 2007; Hornaday & Aboud, 1971; McClelland, 1965; Schmitt-Rodermund, 2004) are now widely recognised as traits of entrepreneurs and are commonly used in Entrepreneurship studies as noted by Davidsson in the latest ACE research vignette (2013). Caveats need to be taken into account as other researchers have demonstrated no significant results for the Need for Achievement (Hansemark, 2003).

Risk taking propensity is one of the main recognised traits of an entrepreneur (Kets de Vries, 1985; Nicolaou, Shane, Cherkas, & Spector, 2008; Schmitt-Rodermund, 2004; Stewart Jr, Watson, Carland, & Carland, 1999; Stewart Jr & Roth, 2001), but there is no agreement on the level of risk: moderate, calculated or simply a gut feeling. In addition to the uncertainty of the level of risk, Tjan, Harrington and Hsieh (2012) note that the line between risk takers and risks tolerators is blurry. It is one of the seven most researched psychological traits in entrepreneurship among need for achievement, need for power, need for affiliation, internal locus of control, desire for autonomy, and tolerance of uncertainty.

Less studied is the fact that a significant numbers of entrepreneurs go through ups and downs (Kets de Vries, 1985). Common as well in the practitioner literature, but rarer in the academic, is the notion of following a dream for which some archetypical

entrepreneurs such as Bill Gates and Mark Zuckerberg are ready to sacrifice their Harvard degree (Tjan et al., 2012). Other traits are less studied: creative entrepreneurs demonstrate great degrees of energy (Kets de Vries, 1985; Schmitt-Rodermund, 2004), a high level of perseverance (Brockhaus & Horwitz, 1986) and imagination (Essers & Benschop, 2007), coupled with an aversion for “repetitive, routine” activities. Also, luck or serendipity is studied only by a few academics. However, in more common terms, it is about “making your own luck happen” (Tjan et al., 2012 p. 251). Entrepreneurs build themselves a network of people and opportunities and they are ready to leverage them when an opportunity arise.

The least researched traits, according to Kets de Vries (1985), is that “entrepreneurs somehow know how to lead an organisation and give it momentum.” They infuse a great enthusiasm in start-up organisations. Their leadership capability derives from their “seductiveness, gamesmanship, or charisma” (Kets de Vries, 1985; Pink, 2009). They use their passion to transform their purpose into reality that others follow (Stewart, 1996; Tjan et al., 2012). Schmitt-Rodermund emphasises autonomy (2004) while Kets de Vries adds that entrepreneurs have a difficult time in working for someone else (1985), which a later psychological approach by Stuart seems to corroborate (Stewart, 1996).

It is to be noted that several researchers are trying to discourage research in the area of traits of

Entrepreneurship (Gatewood, Shaver, & Gartner, 1995), since no study proves at the 100% level the link between these traits and becoming an Entrepreneur. However, this review of the traditional area of traits and attributes of entrepreneurs shows that there has been a variety of research undertaken. Further research is required to study if the psychological approach of traits applies to the category of Studentpreneurs.

Can Psychological Testing Approach be Applied to Studentpreneurs?

Even though the traits mentioned previously are contested, they constitute a starting point in the identification of entrepreneurs. The next logical step to predict Entrepreneurship is the use of psychological tests. Attempts at testing for Entrepreneurship go back as far as 1965 (McClelland), leveraging the previous traits and characteristics identified. There are several issues that arise in applying psychological tests to entrepreneurs as Caird (1993) encapsulates. The first issue is that the population of entrepreneurs is heterogeneous. They differ widely by the type of business they are running, their motivation, their use of technology, and the list goes on. It naturally links to the second issue that there are a multitude of definitions of entrepreneurs along with the various characteristics with which they are labelled. The latter, according to Caird, justifies why some tests look at the traits and characteristics while others focus on “the nature of the entrepreneurs”.

Throughout the existing Entrepreneurship literature is the

knowledge of different types of people (Jung 1965; Meyer & Meyer 1980; Keirsey 1998) (Jung & Jaffe, 1963; Keirsey, 1998; Myers & Myers, 1980). A series of tests and instruments exist to test for personality traits (Myers-Briggs Type Indicator, DISC, Enneagram, and StrengthFinders). If existing tests relate to generic types of people, only a paucity of tests (Abraham, 2011) for types of entrepreneurs appear to exist in spite of “the fact that Entrepreneurship is affected by numerous factors” (Kalkan & Kaygusuz, 2012).

One of the earliest tests on the nature of the entrepreneur is Edwards' Personal Preference Schedule (Edwards, 1954). This personality test requires the respondent to rank needs. Edwards demonstrates that entrepreneurs have a "high Need for Achievement, autonomy, change and a low need for affiliation". However, as demonstrated by Watkins, results can be manipulated by changing the content and the range of the needs (1976).

Another personality test is McClelland's use of the Thematic Apperception Test (TAT) for measuring NACH, power and affiliation. He designed a specific setting (or set of pictures) of the TAT to assess these traits (1965). He found that entrepreneurs have "high NACH, high needs for power and low affiliation needs". However further studies, such as Roberts (1989), showed that the results varied according to the type of entrepreneur.

Comparative studies have demonstrated different results with

different types of entrepreneurs, but there seems to be a commonality on thinking and intuition (Roberts, 1989). If existing tests relate to generic types of people, only a paucity of tests (Abraham, 2011) for types of entrepreneurs appear to exist in spite of “the fact that Entrepreneurship is affected by numerous factors” (Kalkan & Kaygusuz, 2012).

In any of the tests mentioned, young entrepreneurs or student entrepreneurs have never been mentioned. There is an opportunity to study if these tests, standalone or in any configuration, could be used to test for student entrepreneurship. If so, student entrepreneurs could be identified not only at university but also potentially prior to choosing a university; that is, while in high school.

Can Dynamic Capability Theories be applied to Studentpreneurs?

Dynamic capabilities are typically labelled as an elusive concept or an abstract “black box” (Pavlou & El Sawy 2011, p. 239). Dynamic capabilities are a basis for competitive advantage (Lawton & Rajwani 2011; Sirmon et al. 2010) and are at the heart of an organisation’s competences (Zahra et al. 2006). Dynamic capabilities include making key decisions to help the growth of the start-up. Entrepreneurs evolve in an inconstant and unstable environment and they need to be able to adapt to changes very quickly. The literature shows that when executives perform dynamic capability they are able to efficiently improve resource productivity and competitiveness (Chiou 2011; Adeniran &

Johnston 2012) and create market differentiation (Fang et al. 2010; Lee 2008; Lee et al. 2011; Helfat & Peteraf 2003). In his seminal article on dynamic capability, Teece (1997) focuses the research at a firm level by defining dynamic capability as “the firm’s ability to integrate, build, and reconfigure internal and external competences to address a rapidly changing environment”. Other literature now focuses on dynamic capabilities at the individual level, such as the identification of personality traits of entrepreneurs (Dollingers 2003) or the interpretation of the influence of social backgrounds on business decisions (Ucbasaran et al., 2001; Chang, 2012). The personality traits are defined as “the ability to renew, augment, and adapt competencies over time” (Marcus & Anderson 2006, p. 19). We believe that students are conscious that they do not have to master all the skills to build and run a business. As a consequence, they are more flexible and they are not as emotionally attached to their venture as are seasoned entrepreneurs. They can change their business model quickly. Moreover, dynamic capability can be acquired (Mulders et al. 2010). Studentpreneurs, who know their business knowledge is limited, know where to find help. They ask their professors, they attend presentations from professionals from the industry and meet up with them at the end. Finally, they talk to their peers. They are skilled at maximising serendipity. They have mastered the art of networking. However, there is no study that shows that Studentpreneurs already demonstrate dynamic capabilities.

From the literature, three sets of capabilities (at the individual level) that make up the components of dynamic capability have the potential to be applied to Studentpreneurs. The first model, from Kindstrom (2012) comprises Sensing Capabilities, Learning Capability, Integrating Capability, and Coordinating Capability. Agarwal and Selen (2009) combine five capabilities: Entrepreneurial Alertness, Customer Engagement, Collaborative Agility, Collaborative Innovative Agility, and Collaborative Organisational Learning. Finally, Chang (2012) identifies four capabilities specifically applicable to IT entrepreneurs: “Market-oriented Sensitivity, Ability to Absorb Knowledge, Social-networking capability and the integrative ability to communicate and negotiate”. There is an opportunity to see if Dynamic Capabilities can be identified on the category of Studentpreneur and by doing so further the understanding of the phenomenon of Student Entrepreneurship. The second opportunity is to study Studentpreneurs as an exemplary case, with incredible examples and extraordinary conditions. Two themes are suggested for the research agenda: Identity Construction and management of Multiple Identity.

Studentpreneurs to be Studied as an Exemplary Case

Identity Construction in Student Entrepreneurship Requires Further Research

Research in identity construction is a highly debated topic, but academics

agree on one thing: identity is not simply the personality of the individual but is constructed via interactions between “the individual, society, and culture” (Down & Warren, 2008). The mainstream literature on Entrepreneurship rarely mentions identity (Essers & Benschop, 2007). However, in the area of identity construction in Entrepreneurship there is a growing interest in treating it as part of the entrepreneurial process (Nielsen & Lassen, 2012). Downing’s work on the social construction of Entrepreneurship (2005) describes “how notions of individuals and collective identity and organisation are co-produced over time”. He highlights that further knowledge on interactions between entrepreneurs and stakeholders focusing on how they co-produce their identities is needed as this is currently “unclear”.

Shepherd and Haynie (2009) add that such social construction has a cost for entrepreneurs. In the pursuit of satisfying the need to be different and unique, which is present in all individuals (Brewer, 1991), entrepreneurs incur the risk of not belonging anymore and, as a result, experiencing the “dark-side” of mental health. The authors call for a model to manage multiple identities, to balance both needs. Shepherd and Haynie offer their own model that requires entrepreneurs to separate themselves from their venture, but it is only one attempt at identity management.

Nielsen and Lassen (2012) claim that Studentpreneurs are the perfect group to investigate identity construction in the entrepreneurial process. One of the reasons is that while young people are

getting ready to join adulthood, there is a high level of identity reflection (Erikson, 1968). This is a complex time for young people as there are no clear answers to “who am I” and “who am I going to become” (Moshman, 2005). Another reason, according to Nielsen and Lassen (2012), is that Studentpreneurs do not have a stable sense of identity. The reasoning is that they do not have the business knowledge, networking skills, and experience to understand the entrepreneurial process.

Multiple Identity in Student Entrepreneurship Requires Further Research

“Identity is fluid, depends on the environment, and is in constant change” (Harraway, 1991). From a constructionist perspective, identity can also be seen as a “discourse, socially constructed through language and embedded in power relations” (Essers & Benschop, 2007). It is on this theoretical ground that Essers and Benschop (2007) studied the “multiple identity construction” of Female Entrepreneurs of Moroccan or Turkish Origin in the Netherlands. They demonstrate the existence of complex processes of identity construction in female ethnic minority entrepreneurs. A key finding is that these identities are produced through communication /discussion with stakeholders, so the identities “become” instead of “are” (Essers & Benschop 2007). (2005) Downing (2005) comes to the same conclusion: “the becoming [of their identities] is negotiated with various constituencies”. This study from Essers and Benschop calls for “attention

to entrepreneurial identities” (Steyaert & Hjorth, 2003). A justification for this study is given by Essers and Benschop (2007): “There is a lack of research on identities of entrepreneurs whereas organisational identity is a mature topic”.

After studying the narrative of 10 Studentpreneurs, Nielsen and Lassen (2012) find that “identity is multiple and not coherent and that this influences the entrepreneurial process”. Entrepreneurship challenges the cognitive process of young people to create multiple identities: “when old meets new, multiple and hybrid identities may be created” (Nielsen & Lassen, 2012). At this stage of the research it seems that Nielsen and Lassen’s article on “Identity in Entrepreneurship effectuation theory” is the only one mentioning the multiple identities in Studentpreneurs in the entrepreneurial process. This is an opportunity to further the knowledge on Student Entrepreneurship in the areas of management of Multiple Identity.

Conclusion

The area of Student Entrepreneurship is an emerging phenomenon. Two opportunities have been described: using the category of Studentpreneurs to identify theories that have been developed at the Entrepreneur meta category level and studying Studentpreneurs as an exemplary case. Five research avenues have been highlighted that range from testing the dynamic capabilities on Studentpreneurs to studying how they manage their multiple identity.

References

- Abraham, J. (2011). *Entrepreneurial DNA*. Columbus, OH: McGraw Hill.
- Ajzen, I. (1991). Theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50(2), 179-211.
- Baghai, M., Coley, S., & White, D. (2000). *The alchemy of growth*. New York, NY: Basic Books.
- Begley, T. M., & Boyd, D. P. (1988). Psychological characteristics associated with performance in entrepreneurial firms and smaller businesses. *Journal of Business Venturing*, 2(1), 79-93.
- Bercovitz, J., & Feldman, M. (2008). Academic entrepreneurs: Organizational change at the individual level. *Organization Science*, 19(1), 69-89.
- Brewer, M. B. (1991). The social self: On being the same and different at the same time. *Personality and Social Psychology Bulletin*, 17(5), 475-482.
- Brockhaus, R., & Horwitz, P. (1986). The art and science of entrepreneurship. *The Psychology of the Entrepreneur*. Ed. DSR Smilor. Cambridge, MA: Ballinger, , 25-48.
- Bruyat, C., & Julien, P. (2001). Defining the field of research in entrepreneurship. *Journal of Business Venturing*, 16(2), 165-180.
- Caird, S. P. (1993). What do psychological tests suggest about entrepreneurs? *Journal of Managerial Psychology*, 8(6), 11-20.
- Cantillon, R. (1755). *Essai sur la nature du commerce*. London, UK: Fletcher Gyles.
- Davidsson, P. (2013). *ACE research vignette 027: Is entrepreneurship a matter of personality?* (ACE research vignette No. 63369). Brisbane, Australia: Queensland University of Technology.
- Dell, M., & Fredman, C. (1999). *Direct from dell: Strategies that revolutionized an industry*. New York, NY: Harper Business.
- Down, S., & Warren, L. (2008). Constructing narratives of enterprise: Clichés and entrepreneurial self-identity. *International Journal of Entrepreneurial Behaviour & Research*, 14(1), 4-23.
- Downing, S. (2005). The social construction of entrepreneurship: Narrative and dramatic processes in the coproduction of organizations and identities. *Entrepreneurship Theory and Practice*, 29(2), 185-204.
- Edwards, A. L. (1954). *Edwards personal preference schedule*.

- Oxford, England: Psychological Corp.
- Erikson, E. (1968). *Youth, identity and crisis*. New York, NY: Norton.
- Essers, C., & Benschop, Y. (2007). Enterprising identities: Female entrepreneurs of moroccan or turkish origin in the netherlands. *Organization Studies*, 28(1), 49-69.
- Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention and behavior: An introduction to theory and research*. Reading, Mass: Addison-Wesley Pub. Co.
- Gatewood, E. J., Shaver, K. G., & Gartner, W. B. (1995). A longitudinal study of cognitive factors influencing start-up behaviors and success at venture creation. *Journal of Business Venturing*, 10(5), 371-391.
- Google Inc. (2014). Google's income statement information. Retrieved from <http://investor.google.com/financial/tables.html>
- Hansemark, O. C. (2003). Need for achievement, locus of control and the prediction of business start-ups: A longitudinal study. *Journal of Economic Psychology*, 24(3), 301-319.
- Harraway, D. (1991). *Simians, cyborgs and women: The reinvention of nature*. London, UK: London: Free Association Books.
- Henderson, R., & Robertson, M. (2000). Who wants to be an entrepreneur? young adult attitudes to entrepreneurship as a career. *Career Development International*, 5(6), 279-287.
- Henry, C., Hill, F., & Leitch, C. (2005). Entrepreneurship education and training: Can entrepreneurship be taught? part I. *Education Training*, 47(2), 98-111.
- Hisrich, R., Langan-Fox, J., & Grant, S. (2007). Entrepreneurship research and practice. *American Psychologist*, 62(6), 575-589.
- Hornaday, J. A., & Aboud, J. (1971). Characteristics of successful entrepreneurs. *Personnel Psychology*, 24(2), 141-153.
- Hudnut, P., & DeTienne, D. R. (2010). Envirofit international: A venture adventure. *Entrepreneurship Theory and Practice*, 34(4), 785-797.
- Isaacson, W. (2011). *Steve jobs*. New York, NY: Simon and Schuster.
- Jung, C. G., & Jaffe, A. (1963). *Memories, dreams, reflections* [Erinnerungen, Träume, Gedanken.English] (Rev ed.). New York, NY: Vintage Books.
- Kalkan, M., & Kaygusuz, C. (2012). The psychology of entrepreneurship. In T. Burger-Helmchen (Ed.), *Entrepreneurship - born, made and educated* () InTech.

- Kauffman Foundation. (2013). Entrepreneurship education comes of age on campus. *Kauffman Foundation*,
- Keirsey, D. (1998). *Please understand me II: Temperament, character, intelligence* (Fir ed.). Del Mar, Calif.: Prometheus Nemesis Book Co.
- Kets de Vries, M. (1985). The dark side of entrepreneurship. *Harvard Business Review*, 63(6), 160-167.
- Lüthje, C., & Franke, N. (2003). The 'Making' of an entrepreneur: Testing a model of entrepreneurial intent among engineering students at MIT. *R&D Management*, 33(2), 135-147.
- Mars, M. M. (2006). The emerging domains of entrepreneurship education: Students, faculty, and the capitalist academy.
- Mars, M. M., Slaughter, S., & Rhoades, G. (2008). The state-sponsored student entrepreneur. *The Journal of Higher Education*, 79(6), 638-670.
- McClelland, D. C. (1965). N achievement and entrepreneurship: A longitudinal study. *Journal of Personality and Social Psychology*, 1(4), 389.
- McStay, D. (2008). *An investigation of undergraduate student self-employment intention and the impact of entrepreneurship education and previous entrepreneurial experience* (Doctor of Philosophy).
- Moshman, D. (2005). *Adolescent psychological development: Rationality, morality, and identity* Psychology Press.
- Myers, I. B., & Myers, P. B. (1980). *Gifts differing: Understanding personality type*. Palo Alto, Calif.: Davies-Black Pub.
- Nicolaou, N., Shane, S., Cherkas, L., & Spector, T. D. (2008). The influence of sensation seeking in the heritability of entrepreneurship. *Strategic Entrepreneurship Journal*, 2(1), 7-21. doi:10.1002/sej.37
- Nielsen, S. L., & Lassen, A. H. (2012). Identity in entrepreneurship effectuation theory: A supplementary framework. *International Entrepreneurship and Management Journal*, 8(3), 373-389.
- Pink, D. (2009). The surprising truth about what motivates us. *Riverhead*,
- Pittaway, L., Rodriguez-Falcon, E., Aiyegbayo, O., & King, A. (2011). The role of entrepreneurship clubs and societies in entrepreneurial learning. *International Small Business Journal*, 29(1), 37-57.
- Politis, D., Winborg, J., & Dahlstrand, Å L. (2011). Exploring the resource logic of student entrepreneurs. *International Small Business Journal*, , 0266242610383445.
- Purewal, S. (2001). This entrepreneur makes you laugh. *The Tribune India*,

- Rasmussen, E. A., & Sørheim, R. (2006). Action-based entrepreneurship education. *Technovation*, 26(2), 185-194.
- Roberts, E. B. (1989). The personality and motivations of technological entrepreneurs. *Journal of Engineering and Technology Management*, 6(1), 5-23.
- Rothaermel, F. T., Agung, S. D., & Jiang, L. (2007). University entrepreneurship: A taxonomy of the literature. *Industrial and Corporate Change*, 16(4), 691-791.
- Schmitt-Rodermund, E. (2004). Pathways to successful entrepreneurship: Parenting, personality, early entrepreneurial competence, and interests. *Journal of Vocational Behavior*, 65(3), 498-518.
- Schumpeter, J. A. (1951). *Essays: On entrepreneurs, innovations, business cycles, and the evolution of capitalism* Transaction Books.
- Searle, J. R. (1983). *Intentionality: An essay in the philosophy of mind* Cambridge University Press.
- Shepherd, D. A., & DeTienne, D. R. (2005). Prior knowledge, potential financial reward, and opportunity identification. *Entrepreneurship Theory and Practice*, 29(1), 91-112.
- Shepherd, D., & Haynie, J. M. (2009). Birds of a feather don't always flock together: Identity management in entrepreneurship. *Journal of Business Venturing*, 24(4), 316-337. doi:<http://dx.doi.org.ezproxy.lib.uts.edu.au/10.1016/j.jbusvent.2007.10.005>
- Souitaris, V., Zerbinati, S., & Al-Laham, A. (2007). Do entrepreneurship programmes raise entrepreneurial intention of science and engineering students? the effect of learning, inspiration and resources. *Journal of Business Venturing*, 22(4), 566-591.
- Stanford University's Entrepreneurship Corner. (2015). Entrepreneurial thought leaders. Retrieved from <http://ecorner.stanford.edu/podcasts.html>
- Statistica. (2014). Number of monthly active facebook users worldwide from 3rd quarter 2008 to 2nd quarter 2014 (in millions). Retrieved from <http://www.statista.com/statistics/264810/number-of-monthly-active-facebook-users-worldwide/>
- Stewart Jr, W. H., & Roth, P. L. (2001). Risk propensity differences between entrepreneurs and managers: A meta-analytic review. *Journal of Applied Psychology*, 86(1), 145.
- Stewart Jr, W. H., Watson, W. E., Carland, J. C., & Carland, J. W. (1999). A proclivity for entrepreneurship: A comparison of entrepreneurs, small business owners, and corporate managers. *Journal of Business Venturing*, 14(2), 189-214.

- Stewart, W. H. (1996). *Psychological correlates of entrepreneurship* Garland New York, NY.
- Steyaert, C., & Hjorth, D. (2003). *New movements in entrepreneurship*. Massachusetts, USA.: Edward Elgar Publishing.
- Tart, N. (2011). 10 world-class companies started by college students. Retrieved from <http://14clicks.com/company-started-college-student/>
- Tjan, A. K., Harrington, R. J., & Hsieh, T. (2012). *Heart, smarts, guts and luck: What it takes to be an entrepreneur and build a great business* Harvard Business Press.
- Torenberg, E. (2012,). Find your inner entrepreneur. *The Michigan Daily*
- Vise, D. A. (2008). *The google story* Pan Macmillan.
- Wallace, J., & Erickson, J. (1993). *Hard drive: Bill gates and the making of the microsoft empire* Harper Business.
- Walter, S., Parboteeah, P., & Walter, A. (2011). University departments and self-employment intentions of business students: A cross-level analysis. *Entrepreneurship: Theory and Practice*, doi: 10.1111/j.1540-6520.2011.00460.x, 1-26.
- Watkins, D. S. (1976). *Entry into independent entrepreneurship: Toward a model of the business imitation process* Manchester Business School and Centre for Business Research.
- Welch, L. (2014, The way I work: Matt Mullenweg. *Inc.*, 114-117.
- Xavier, S., Kelley, D., Kew, J., Herrington, M., & Vorderwulbecke, A. (2013). *GEM 2012 global report*. (). United Kingdom: Global Entrepreneurship Monitor.
- Yadav, S. (2006). Facebook–The complete biography. *Mashable Social Networking News*,