

**Paper Title: Relating the Process of Becoming Entrepreneurial to the I↔NVC Dialogic**

**Lead Author:** Karen Williams-Middleton, Division of Management of Organizational Renewal and Entrepreneurship, Chalmers University of Technology, Gothenburg, Sweden;  
+46 31 772 1913, [karen.williams@chalmers.se](mailto:karen.williams@chalmers.se); [www.chalmers.se](http://www.chalmers.se)

**Co-Authors:** Mats Lundqvist, Pamela Nowell, Division of Management of Organizational Renewal and Entrepreneurship, Chalmers University of Technology, Gothenburg, Sweden

**ABSTRACT**

***Objectives***

Bruyat and Julien (2001) define entrepreneurship as an individual ↔ new value creation (I↔NVC) dialogic, where the individual (the entrepreneur) and the new value being created influence and shape one another. The question we care about involves understanding this co-construction when the individual is engaging in the process of entrepreneurship for the first time, i.e. nascent entrepreneurship. We ask: which aspects of becoming entrepreneurial stem from the individual relating to expectations around an entrepreneurial role, and which aspects of becoming entrepreneurial stem from the value creation.

***Approach***

To investigate the dialogic, seven nascent entrepreneurial teams pursuing an entrepreneurship education, each with three team members and located at a technology incubator, were studied over a nine-month period. The nascent teams were connected with intellectual property and put in the position of surrogate entrepreneurs developing the initial early-stage technologies into viable technology ventures. Almost two years after venture inception, six individuals from four of the initial seven teams were still running their ventures and therefore characterized as having become entrepreneurial. Secondary data and interview evidence from these individuals are accounted for in order to trace dialogic between the individual and new value creation (I↔NVC) individual and entrepreneurial role expectations (I↔ERE) as well as NVC↔ERE interaction.

***Results***

The six students more or less relate to entrepreneurial role expectations as well as new value creation. Over time, the ERE and NVC is increasingly interrelated into an individual entrepreneurial identity.

***Implications***

Understanding the processes which contribute to individuals becoming entrepreneurial through the I↔NVC dialogic, and the new I↔ERE dialogic, can enlighten educational design and incubation practice in which entrepreneurial competence and value creation are at focus. Educational arrangements including real value creation over time arguably offer entrepreneurial competence development not obtainable by other types of pedagogy.

***Value/Originality***

This is one of the first studies of nascent entrepreneurs becoming entrepreneurial. Insight into how the I↔NVC dialogic (and the new I↔ERE dialogic) impacts this process of becoming entrepreneurial can help improve entrepreneurship education and incubation support. The study also opens up for further study of how entrepreneurial identity developed in dialogic with a specific NVC can (or cannot) be translated into other settings.

***Keywords:*** *becoming entrepreneurial; I↔NVC dialogic; nascent; role*

## **Introduction**

The process of becoming entrepreneurial in nascent entrepreneurship lacks understanding and appreciation. Morris et al. urge us to “...move away from an instrumental view (e.g., entrepreneurs create ventures and ventures produce outcomes), and allow for the possibility that the venture emerges, in the process developing the entrepreneur [such that] The entrepreneur constructs and reconstructs both an identity and a venture by applying motivation, intention, and affective reactions to past and present experiences and the anticipated future.” (Morris et al. 2012, pg. 31). The instrumental main understanding of entrepreneurial behavior development in general, and in the realm of nascent entrepreneurship in particular, is not recognizing any such dialogic between the individual and the value created. Yet, this individual and new value creation (I↔NVC) dialogic is argued to be definitional for the whole field of entrepreneurship (Bryat and Julien 2001).

Striving beyond an instrumental view on nascent entrepreneurship, this study investigates over time the co-construction of value and entrepreneurial identity when the individual is engaging in the process of entrepreneurship for the first time, i.e. as a nascent entrepreneur (Davidsson 2006). We investigate the nascent's associations to entrepreneurial role expectations (I↔ERE) as well as to new value creation aspects (I↔NVC) and attempt to trace entrepreneurial identity development over time. We aim to deepen our understanding of the way in which an entrepreneurial dialogics (I↔NVC and I↔ERE) impact individuals becoming entrepreneurial, as this is an area which is still sparsely researched, in part due to difficulty in accessing individual (and value creation) in an emergent phase. We utilize unique access to a venture creation environment in which nascent (surrogate) entrepreneurs develop new value during a nine-month incubation period.

The paper proceeds as follows: first we will explore literature addressing the nascent entrepreneur (understood as the individual in the process of becoming, and thus constructing an entrepreneurial identity for the first time), entrepreneurial role, and new value creation. Building from the literature, we establish a framework with which we investigate a venture creation environment, analyzing primary and secondary data of nascent (surrogate) entrepreneurs over a nine-month period. We present and discuss our findings, and finalize with suggestions for future areas of study.

## **Theory**

There is limited investigation into ‘becoming’ the entrepreneur in existing literature. Rigg and O’Dwyer (2012) see becoming entrepreneurial as joining a community of practice, facilitated mainly through social (dialogic) interaction. Similarly, Williams Middleton (2013) explains that becoming entrepreneurial involves positioning and negotiated acceptance within the community of practice, notably in the nascent phase, with a sub-set of this community called the role-set (Carsrud and Johnson 1989). Central to becoming entrepreneurial is the nascent entrepreneur, as this is the individual positioned to ‘act as if’ (Gartner et al. 1992; Johannisson 2011) as s/he fulfills the entrepreneurial role. Next, we will address entrepreneurial identity and entrepreneurial role as pertains to the nascent entrepreneur in the process of becoming entrepreneurial.

### ***Entrepreneurial Role and Entrepreneurial Identity***

In the field of entrepreneurship, previous literature has not found strong direct correlation between traits and characteristics and successful completion of creating a new venture (Reynolds

2007), but instead emphasizes situational factors (Reynolds 1995). Due to this, and with our focus on the nascent, we take the perspective of the individual as s/he associates to the role of entrepreneur. In Kilby's 'Hunting the Heffalump' (Kilby 1971), the entrepreneurial role is reduced to decision-making under uncertainty. Kilby (1971) and Gartner (1988) set the ground for emphasizing the actions of the individual rather than individual characteristics. Current mainstream literature on the role of the entrepreneur basically adheres to such a functional and instrumental understanding of becoming entrepreneurial: you carry out certain activities and thus you become entrepreneurial. This perspective can be seen in research stemming from the Panel Study of Entrepreneurial Dynamics, and similar studies (see for example, Davidsson and Reynolds 2009; Liao and Welsch 2008; Reynolds 2007; Robb and Reynolds 2007), which itemize a set of activities that help to define the nascent phase of entrepreneur (the process of emergence).

However, the role of the entrepreneur is also portrayed symbolically, through myth and metaphor (Anderson 2005; Anderson and Warren 2011; Down and Warren 2008; Nicholson and Anderson 2005). It is shaped by current business and popular science literature and culture, and can be understood as a distinct from other roles and identities (Murnieks and Mosakowski 2007). Beyond an instrumental view of "you are what you do", there are more relationally oriented understandings of what it is to be (an) entrepreneur(-ial). The individual factor of role can be considered the static equivalent of the negotiated rights and duties determined through positioning (Davies and Harré 1990). Terms identified as titles are used to communicate a role or position, such as leader, manager, business developer, and entrepreneur.

Identity scholars point to the importance of differentiating identity from role; identity is specific to each individual as a set of self-conceptualized meanings that relate to a socially constructed role (Gecas 1982; Hytti 2003), whereas a role is a concept used to represent expected behaviors attached to a social status or position (Cast 2004; Murnieks and Mosakowski 2007). Entrepreneurial identity can be assumed to somehow be created through the on-going engagement in the process (including the future incorporation of the venture) (Ollila et al. 2012; Pittaway and Thorpe 2012; Rae 2005). The identity is primarily characterized by the individual being positioned (by him/herself and others) as a key person embodying, communicating, and/or representing the value creation, often seen in the form of a venture. This is often observed as a strong correlation between the individual and the object created, which resonates with Bruyat and Julien's  $\mathbb{K} \leftrightarrow \text{NVC}$  dialogic (Bruyat and Julien 2001). However, nascent entrepreneurs often lack efficacy associated to the experience as an entrepreneur (Dew et al. 2009). They are challenged to construct an entrepreneurial identity without experiential knowledge of what that identity entails.

### ***Nascent Entrepreneurship and Entrepreneurial Role Expectation (ERE)***

Entrepreneurial activity requires social legitimacy (Yu 2004), and the entrepreneurial role is contingent upon societal influence, as it is an emic construct (Farmer et al. 2010; Schaffer and Riordan 2003). Becoming entrepreneurial and taking on an entrepreneurial identity is thus related to "the extent to which the individual's self-description fit his or her perceptions of the entrepreneurial role." (Farmer et al. 2010, pg. 2). Establishing a new identity through role-emulation is grounded in identity literature as establishing 'provisional-selves' when engaging in the process of taking on a new identity in the workplace (Ibarra 1999; Ibarra and Barbulescu 2010): the individual wishing to adopt the new identity of (for example) manager, identifies a

role-model in the workplace while also constructing a new ‘transitional’ identity that is validated by the social environment in time. Establishing ‘provisional-selves’ is much more challenging for entrepreneurs (and nascent entrepreneurs in particular) as there is not an existing organizational form with individuals already established in the role one is trying to emulate. Instead, the entrepreneurial role is a hybrid of a set of functional activities (such as those depicted through PSED and similar studies) and myths and metaphors from society. To address this, we introduce the term entrepreneurial role expectation (ERE), and propose that, particularly for nascent entrepreneurs, there exists an  $I \leftrightarrow ERE$  dialogic that contributes to the individual defining their entrepreneurial identity.

### ***Entrepreneurship Education***

*“To successfully launch a new venture and see it grow, entrepreneurs must, among other things, be confident in their abilities and identify with their venture and role as an entrepreneur”* (Vanevenhoven and Liguori 2013, pg. 316). For the most part, entrepreneurship education is designed to prepare individuals for an entrepreneurial career, with approaches ranging from providing knowledge about entrepreneurship to action-based learning, in which students engage in creating real-world ventures (Blenker et al. 2011; Lackéus and Williams Middleton in press; Mwasalwiba 2010; Neck and Greene 2011; Vanevenhoven 2013; Winkel 2013). Entrepreneurship education, and particularly action-based approaches, thus addresses development of entrepreneurial competency (Chang and Rieple 2013; Mitchelmore and Rowley 2010; Morris et al. 2013; Rasmussen et al. 2011; Sánchez 2013), where competency is the knowledge, skills, and attitudes that affect the willingness and ability to perform a profession (Brophy and Kiely 2002; Rankin 2004). Action-based approaches to entrepreneurship education are argued to allow students to *“gain knowledge and understanding of what and who is important when attempting to act entrepreneurially, but adds to this, how one’s own actions can and perhaps should be carried out in order to achieve the desired effect.”* (Williams Middleton and Donnellon in press, pg. 7).

While there is growing consensus that learning for the practice of entrepreneurship benefits from an approach that involves experiential learning (Chang and Rieple 2013; Lackéus and Williams Middleton in press; Neck and Greene 2011; Vanevenhoven 2013), there is still limited empirical data on the impact of entrepreneurship education, beyond one-group students, to prove that entrepreneurship education does in fact produce entrepreneurship (Rideout and Gray 2013). Recent literature places increasing emphasis on the development of metrics and mechanisms for assessing the development of entrepreneurial competency (Chang and Rieple 2013; Duval-Couetil 2013; Lackéus 2013; Morris et al. 2013). Challenges mentioned include the need to design and effectively assess educations that enable development of entrepreneurial self-efficacy and attainment of an entrepreneurial identity which supports long-term behavior (Vanevenhoven 2013; Williams Middleton and Donnellon in press). Building on unique access to a venture creation program, we investigate the way in which students articulate their own understanding of becoming entrepreneurial through two dialogics:  $I \leftrightarrow NVC$  and  $I \leftrightarrow ERE$ , as well as interrelating between NVC and ERE.

### **Method**

As the questions we care about are explorative in nature, we apply a qualitative, localized and in-depth approach towards investigating the relationships between the nascent (surrogate) entrepreneurs and their new ventures and how this associates to the individual becoming

entrepreneurial. The research design involves a multiple case, longitudinal study, incorporating insider-action research (Coghlan 2001) and case study (Yin 2008) methodologies. The insider-action approach is recognized as facilitating access to a wide range of information that due to secrecy, sensitivity, time constraints, trust, articulation, or other contextual factors, would not be available to outside researchers (Brannick and Coghlan 2007; Coghlan 2007; Coghlan and Brannick 2005). The case study methodology includes data collected through participative observation, formal and informal interviews and access to team documentation. Being an insider-action researcher (one of the co-authors), or alternatively, as staff in the incubation environment (two additional co-authors) provided in-depth insight into the emergent process of becoming entrepreneurial through engagement in creating a new venture.

### ***Data Collection***

Data is collected in a venture creation program environment, in which students are formed into teams consisting of three members, are connected with intellectual property and put in the position of surrogate entrepreneurs developing the initial early-stage technologies into viable technology ventures (Lundqvist 2013). In this circumstance, the students are also nascent entrepreneurs, as they have no previous experience in new venture creation and engage in new venture creation within a specialized technology incubator.

**Table 1:** Selected venture status as of January 2014

<b>Name</b>	<b>Individuals</b>	<b>Venture status</b>	<b>Individual status</b>
<i>Venture Alpha</i>		Terminated	one is potentially continuing on his own in a service oriented start-up
<i>Venture Beta</i>		currently under incorporation process	recruiting an external CEO (none of the original team members involved)
<b>Venture Gamma</b>	Student 1 & Student 2	currently under incorporation process	two of the three original team members (Student 1 & 2) continuing
<b>Venture Delta</b>	Student 3	incorporated in December 2013	one original team member (Student 3) continuing
<i>Venture Omega</i>		development phase	last original team member leaving in January 2014, mainly due to lack of financing (the limited budget was allocated to technical verification activities)
<b>Venture Epsilon</b>	Student 4	development phase	one original team member (Student 4) continuing with plans for incorporation, but very dependent on financing
<b>Venture Zeta</b>	Student 5 & Student 6	development phase (mainly due to current financing structure)	two of the three original team members (Student 5 & 6) continuing and incorporation planned during 2014

An initial population of 27 nascent (surrogate) entrepreneurs, operating in nine teams, were studied over a nine-month period from September 2012 to May 2013. 41% of the nascent entrepreneurs were women. The population was interviewed at two intervals during the incubation period (November 2012 and February 2013). In addition to interviews, data about the nascent entrepreneurs was collected through written documentation, including material for team formation and idea selection, progress reports and business plans. In June 2013, teams had to

make the decision to continue towards intention to incorporate or to shut down. At that point, seven teams (listed in Table 1) with at least one original team member continued to engage towards intention to incorporate.

In January 2014, we contacted the business advisors of the ventures to obtain an updated status of the ventures and venture teams. Three of the ventures were incorporated or in the process of incorporation, one venture was being terminated, and the final three were still under development towards incorporation (Table 1). Data included in analysis was contingent on venture continuation or incorporation with at least one of the original team members, thus data from four ventures (Gamma, Delta, Epsilon and Zeta – in Table 1 in bold) are included.

### ***Data Analysis***

Transcribed interviews of individuals from four selected teams were analyzed from a dialogic perspective. Each author independently reviewed the interviews, identifying quotes exemplifying discussion of: ‘individual’ (who I am), ‘role’ (who I want to be/become), and ‘new value creation’ (what the venture needs). The independently determined quotes were compared for inter-subjectivity purposes, to reduce individual bias or interpretation of data. In addition, each author reviewed written documentation (as previously specified) from the individuals/teams to garner additional description of ‘individual’, ‘role’ and ‘new value creation’. For example, from the team formation documentation, this was text in which the student describes his/her background, skill-set and other contributions as s/he sees as valuable for the venture, as well as his/her personal preference of idea to work with during the incubation period. In the business plans, such text was role descriptions presented in the organizational section of the business plan.

### ***Results***

Evidence accounted for in the Findings section are extracted from a larger dataset found in the Tables 2, 3 and 4 in the Appendices. Table 2 presents the category individual from the written documentation. Table 3 presents the category role from the interviews and May business plan. Table 4 presents the category new value creation from both the interviews and the written documentation.

### ***Limitations***

The small data population (four teams, six individuals) limits the ability to draw generalizations. However, as the nature of the research is explorative and qualitative, value lies in the in-depth knowledge that studying a smaller sample provides, and is thus seen as viable for the nature of the study. Potential bias through interpretation of interview data is reduced through initial independent analysis conducted by the three authors, then discussed collectively, to test the concordance of the results.

### ***Findings***

In the following section, we address empirical evidence identified as relevant for the following categories: Examples of  $I \leftrightarrow NVC$  dialogic and how it changes over time; Examples of  $I \leftrightarrow ERE$  dialogic and how it changes over time; Instances where individuals interrelate NVC with ERE.

#### ***$I \leftrightarrow NVC$ dialogic***

Student 3 of Venture Delta related to NVC during team formation. The student has an educational background (BSc) in industrial engineering.

*“I am convinced that [Venture Delta] has great potential. I am excited about the field of application which aligns with my passion for healthcare. [Venture Delta] has a functioning technique and a confirmed market need - it could reach the market within a short period, an aspect I prioritize as I would probably not stay in a project with a 10+ year to market. Being part of a project that I can follow all the way to product launch would be awesome. I hope for continuation after the incubation period.”* (Student 3, team formation)

Student 4, with a business administration background related to NVC in the following way during team formation:

*“I have a major interest in environmentally sustainable energy. [Venture Epsilon] has an exciting development potential in renewable energy. I will do my utmost to be a part of bringing [Venture Epsilon] to commercial scale along with a team and collaborative partners. I have a personal interest in continuing with [Venture Epsilon] if the opportunity presents. I realize this will require hard work and persistence - I expect a great challenge, but that is why I am here and choose [Venture Epsilon].”* (Student 4, team formation)

One of the students in Venture Zeta related to NVC both during team formation and half a year later. The student has an educational background in industrial engineering.

*“Too technical and too long time to market for my taste. I don’t understand the technology.”* (Student 6 having ranked this venture her last choice in team formation)

*“One of the things that is a little bit tougher now, is that [...] I can never see confirmation of that what I spent the last two weeks on that was actually bringing value to the [Venture Zeta] because nobody has the rights or the wrongs so myself I have to decide that this was good for [Venture Zeta] or this was less efficient, there’s no right answers and there’s no reference at all, so you don’t know if you’re on the right track [...] but now I spent 12 hours working on this, 13, 14 hours working on this presentation and nobody’s going to tell me if it’s good or not. I can practice, practice, practice practice, and I can still stumble and say something wrong on the presentation. Did I fail, did I not, did I do a good job, I don’t know.”* (Student 6 from half-year interview)

### ***I↔ERE dialogic***

Student 1 of Venture Gamma made multiple references to ERE, both in team formation and in the half-year interview. The student’s bachelor education is biotechnology and in Venture Gamma is responsible for product development and large party relations, as stated in the business plan.

*“I want to learn and work hard to make the project successful and possible to continue with as a venture (post incubation period).”* (Student 1 from team formation)

*“I think what I was missing during the autumn was more structured roles and, leadership is a part of the role, maybe I didn’t think of that in particular because I think that we’re very driven all of us and we have pretty similar goals and ambitions so it’s not like, at least I don’t feel that I need a leader to set goals and I didn’t really feel that I was missing someone leading the way, but I missed some kind of structure so we could work more efficiently, so I don’t have to keep track of everything, I can just focus on my three different parts, but not everything, so lack of structure where leadership is one part of it.*

*[...] I think it would probably be good to make sure that everyone has an equal say, but it would probably be so that the person who is CEO has a bit more responsibility and also the ability, someone has to make quick decisions sometimes, and I think the result would be that someone does have a bit of additional power, and that's not strange.” (Student 1 after half a year)*

Both students (5 and 6) of Venture Zeta relate to ERE in the midst of the first venture year. Student 5 with a mechanical engineering background is made responsible for product development (as stated in the business plan written a year after team formation). Student 6 with an educational background in industrial engineering is responsible for finance and IP in the same business plan. Both students stand out in the sample by having initially de-valued the venture, as evidenced by their low rank of the venture idea (as either last or second to last preferred choice during team formation), whereas the students from the other ventures communicated high value for their venture ideas (listed as either first or second preferred choice during team formation):

*“I’m the representative of [Venture Zeta], and this is a very important task and everybody needs to focus, if you don’t have that role, or somebody taking that role, you need to talk more. [...] Usually the task we do, no one knows how to do them, so I think there is a higher chance of failing, usually, which makes it sometimes like, ok I’m responsible for this, like translating the patent, OK I’m responsible for this, and if I fail, the consequence is huge.” (Student 5 after half a year)*

*“Both [Student 5] and [our other team member] are very strong team members, not strong in their will but very solid and works hard and works a lot and gets things done. So there are a lot of situations where you feel sometimes, “did I do enough?” I mean did I pull my weight now? You don’t want to disappoint them, and you don’t want to [let them down], but yeah, so sometimes I feel like... What am I actually bringing to the table? [...] I think I am a little bit more, I want to get stuff done so I want to take like decisions and see that we’re making progress and, whereas [our other team member] is a little more, “wait, wait, let’s see all the alternatives” and analyze everything, is this actually the right decision and it could take a little bit longer time but he would analyze all the possible options, and sometimes we don’t have time with that, and sometimes that is the way to go, but I’m always pushing for let’s move forward and he would always push for let’s take it easy, so I think that’s a good complimentary. [...] Part of me is getting better at this skill, that I’m better at taking all these abstract things and making them more concrete.” (Student 6 after half a year)*

### **NVC↔ERE**

Interaction between NVC and ERE is identified in four of the half-year interviews. These interactions are not related to the individual per se, but capture how individuals interrelate NVC and ERE.

*“We all felt during all of autumn that it would be good to have more roles, but at the same time we didn’t know which roles we should take or who should take what role and technically if it would be better [...] what’s best for the project isn’t always what’s best for the learning experience. And I think we’re still struggling to get separated enough roles.” (Student 2 after half a year)*



*“I mean I haven’t applied for any jobs yet. It’s either continuing with this project or doing something quite similar. Finding some kind of innovation project that has maybe gone a bit further.”* (Student 3 after half a year)

*“... what I’m doing now here is valuable, I see the value in doing it, and then some activities are um, ok, we’re doing this but I cannot stand for what I’m doing is the opinion of some of us and that becomes like “ok, you don’t have um, you find it boring and you don’t see any value in doing it, but someone has to take the responsibility of doing it” and that’s kind of the root cause of everything.”* (Student 4 after half a year)

*“Yeah, I mean, right now, we haven’t been into a critical moment or situation where everything depends on making fast decisions and taking a lot of responsibility. I definitely see in the future that we could have responsibility areas and it’s starting to divide a little bit, but, yeah, I do think that we could benefit from that.”* (Student 6 after half a year)

## **Discussion**

In this paper, we explore aspects of becoming entrepreneurial that stem from the individual (I) relating to expectations around an entrepreneurial role (ERE), and to specific new value creation (NVC), understood as the I↔NVC and the I↔ERE dialogic.

In the Findings section, we accounted for evidence identifying I↔NVC as well as I↔ERE dialogics from some but not all of the individuals. The I↔NVC dialogic is most explicit in the early team formation stage where the students are forced to express preference towards all venture ideas offered. Some, but not all, then relate themselves to NVC. This dialogic is weaker in the half-year interviews. At this point, only one of the six students display the I↔NVC dialogic. Remarkably, this is from Student 6, whom together with another team member (Student 5) initially ranked the idea behind Venture Zeta very low, in terms of preference and perceived value (as compared to others students who ranked their initial venture high). In the half-year interview, Student 6 displays ambivalence and uncertainty around how to understand the value of Venture Zeta. A team member (Student 5), however, has no such concern at that point in time, as evidenced in the half-year interview. Given the strong commitment that both students (5 and 6) display around the venture today (end of January 2014), and the large legitimacy they have obtained in running the venture, it is remarkable how profound the transformation has been for both students (and in particular Student 6) from alienation to NVC, to being key venture representatives.

As regards the I↔ERE dialogic, there are several citations offered from the half-year interview. A common denominator in these is how much the individual, when relating to ERE, does so while also relating to other team members. The citations display ambivalence between taking on specific functional roles, while also staying responsible for the holistic venture development. Although all respondents communicate a more specialized role in the business plan (May version), they also display ERE that is holistic rather than specialized in the half-year interviews. This parts-to-whole tension seems worthy of further study.

Four citations are identified as illustrating interrelation between NVC and ERE. The link is primarily conceptual, rather than having to do with the individual personal identity development. However, there is, in some circumstances, clear career choice implications drawn from the

students more profound perceptions regarding which kind of NVC as well as ERE are attractive. Hence, enabling for such NVC-ERE interrelating seems to, at least indirectly, help the students to develop more anchored individual entrepreneurial identity.

## **Conclusions**

This paper explores how nascent entrepreneurs (I) relate to new value creation (NVC) and entrepreneurial role expectations (ERE). Most research into becoming entrepreneurial applies an instrumental – you are what you do – perspective. The current study identifies how individuals having become entrepreneurial applied I↔NVC and I↔ERE dialogics in the early phases of their ventures. The evidence suggests that I↔NVC is most intense in the early stages whereas I↔ERE is more at focus as the nascent phase progresses towards incorporation. I↔ERE dialogic is also occurring in interplay with role expectations of other team members and thus not in individual isolation, thus fitting our proposed description of the ERE for nascent entrepreneurship. Finally, the evidence indicates interrelation between NVC and ERE, i.e. that expectations on the entrepreneurial role are impacted by concrete NVC experiences and not only by e.g. popular descriptions (in media, etc.) or by examples or theories set by others.

This study is the first of its kind. Although it includes six nascent entrepreneurs and four ventures, there is still a scarcity of qualitative evidence helping to substantiate a dialogic view of I↔NVC as well as I↔ERE in the nascent phase. Nevertheless, the evidence does suggest that a perspective beyond the functional instrumental view is relevant. Hence, there is probably much more to be found in the individual relating to NVC as well as to ERE (while relating to his/her role set of entrepreneurial team member) than only to activities carried out, as regards becoming entrepreneurial.

A main implication from the present study is that NVC introduced to entrepreneurial education does add new learning and identity construction not possible to obtain otherwise, such as I↔NVC dialogic as well as NVC-ERE interrelating. Further studies need to substantiate these tentative conclusions. Furthermore, if NVC is crucial for becoming entrepreneurial, then further studies also need to investigate what and how NVC can make such a difference. Given the dramatic transformation of some of the students – from initial alienation to becoming lead entrepreneurs of a recognized promising technology venture (for example, the venture was awarded in business competitions), there are apparently strong forces at play. A question remaining to be answered, however, is how these forces occur and what is required to enable them.

## Appendices

Table 2. Individual – *Who I am*

ID	Team Formation May 2012	Business Plan October 2012	Interviews Feb. 2013	Business Plan May 2013
Student 1	Biotechnology, good at calculations and modeling.	BSc. Biotechnology; expertise from process industries; technology interest; social; open minded		MSc. Entrepreneurship & Business Design (June 2013); BSc. Biotechnology. Experienced in business idea evaluations and large-scale processing, which supports product development activities and large party relations in the venture.
Student 2	Analytical mindset. Perform well in complex situations; utilize network of friends in order to solve problems faster. Possess good social skills; able to quickly jump into different scenarios and perform well. Often take a leadership role, getting each individual to perform at their best. Goal driven, structured, effective multi-tasker.	BSc. Industrial engineering and management; management consulting experience; experience of marketing and sales; curious; analytical		MSc. Entrepreneurship & Business Design (June 2013); BSc. Industrial Engineering & Management. Work experience includes management consultancy as well as experience from marketing and sales which allows for efficient approach towards sales and customer relationship in the venture.
Student 3	Visionary; enthusiastic about ideas that I want to realize. Lose motivation if not moving forward. Like to look upon things from an overall perspective. Not into the nitty-gritty details.	BSc. Industrial Engineering and Management		Part of the business development team. MSc. Entrepreneurship & Business Design (June 2013). BSc. Industrial Engineering and Management. The team is highly motivated to make this innovation reach the market.
Student 4	Very strong analytical person. Ability to structure, organize and lead. Can-do attitude; strong drive to pursue goals; optimistic (sometimes over optimistic); detail-oriented; committed. Knowledgeable in technology and science within biotech & chemistry.	BSc. Industrial Engineering & Management, minor in Chemical Engineering. Experience in organizational development, strategy and finance. Intl. working experience from Norway, Japan and Singapore.	Quote 18	BSc. Industrial Engineering and Management; MSc. Entrepreneurship & Business Design (June 2013). Intl working experience in business development in IT-firms and within the maritime sector (Japan, Singapore & South East Asia).
Student 5	Dedicated, contributing with a positive attitude under pressure. Organized; push productivity. Experience from military career. Background in mechanical engineering. I do not mind digging into fields where I have no knowledge. Enjoy contacting different kinds of people. Work is often structured and focused towards a deadline.			BSc. Mechanical Engineer; MSc. Entrepreneurship & Business Design (June 2013). Winner of the world's largest competition for engineering students 2013.
Student 6	Energetic, take initiative; positive and accommodating. Like things stated in black and white; like to focus on quantifying abstract ideas. Work experience in economics, accounting and financing (Sweden and US).		Quote 7, Quote 8, Quote 13, Quote 14	BSc. Industrial Engineering & Mathematics; MSc. Entrepreneurship & Business Design (June 2013). Former European gold medalist in professional gymnastics

Table 3. Role – *Who I want to become*

<b>ID</b>	<b>Team Formation May 2012</b>	<b>Business Plan October 2012</b>	<b>Interviews February 2013</b>	<b>Business Plan May 2013</b>
Student 1	Quote 1a: Student 1: Want to learn and work hard to make the project successful and possible to continue with as a venture (post incubation period).		Quote 39; Quote 40	Excerpt 1b: Product development & large party relations
Student 2			Quote 34; Quote 35; Quote 37	Excerpt 2b: Sale and customer relationship
Student 3			Quote 22; Quote 24; Quote 25; Quote 28	Excerpt 3b: Sales and Finance
Student 4			Quote 18; Quote 19	Excerpt 4b: Communication, financing and fundraising
Student 5	Quote 5a: Balance personal strict military approach to ensure that teammates do not feel stressed by deliverables or deadlines. I have been told I often have valuable input and should speak my mind more often. I aim to be honest towards people and give feedback on their actions for various reasons.	The management team consists of three individuals which hold the operational responsibility to drive the project forward on a daily basis. All three individuals are current students at Chalmers School of Entrepreneurship and they have previously worked together successfully.	Quote 3; Quote 4; Quote 9	Excerpt 5b: Product development
Student 6		The management team consists of three individuals which hold the operational responsibility to drive the project forward on a daily basis. All three individuals are current students at Chalmers School of Entrepreneurship and they have previously worked together successfully.	Quote 10; Quote 15	Excerpt 6b: Finance and IP

Table 4. New Value Creation – *What the venture needs*

<b>ID</b>	<b>Team Formation May 2012</b>	<b>Business Plan October 2012</b>	<b>Interviews Feb. 2013</b>	<b>Business Plan May 2013</b>
Student 1	Quote A: Ranked high (2 <sup>nd</sup> choice): I believe that [an idea] like this will be a part of the future medical system. I see many benefits [as it will] be a very good tool. Most focus would be to connect all pieces, communicating the value and creating a user--friendly interface. A competitive field.	Venture Gamma will provide patients with an empowering product and service to increase medical knowledge, compliance and improve health outcomes. The vision is to lead the transformation of the health care system by putting the patient in the center and deliver the best personalized care.	Quote 41	Venture Gamma will be developing the product together with a key partner to improve the solution as technology changes within the adherence area are happening at an increasing rate. The electronic GSM module will be developed. Multiple POC studies will be conducted to establish product benefits and gain adoption. Focus on creating strong and good relations with pharmaceutical producers in order to realize the business plan.
Student 2	Quote B: Ranked high (1 <sup>st</sup> choice): An extremely interesting case with great potential. I would like to work with [Venture Gamma] due to the fact that one is able to work in a start-up format closely tied to a big firm. Furthermore I believe that my experience from working with big firms and challenging cases would come in useful when understanding the approach to the idea.	Venture Gamma will provide patients with an empowering product and service to increase medical knowledge, compliance and improve health outcomes. The vision is to lead the transformation of the health care system by putting the patient in the center and deliver the best personalized care.	Quote 36	Venture Gamma will be developing the product together with a key partner to improve the solution as technology changes within the adherence area are happening at an increasing rate. The electronic GSM module will be developed. Multiple POC studies will be conducted to establish product benefits and gain adoption. Focus on creating strong and good relations with pharmaceutical producers in order to realize the business plan.
Student 3	Quote C: Ranked high (1 <sup>st</sup> choice): I am convinced that [Venture Delta] has great potential. I am excited about the field of application which aligns with my passion for healthcare. [Venture Delta] has a functioning technique and a confirmed market need - it could reach the market within a short period, an aspect I prioritize as I would probably not stay in a project with a 10+ year to market. Being part of a project that I can follow all the way to product launch would be awesome. I hope for continuation after the incubation period.	Venture Delta aims to increase the awareness of the harm caused by this ventilation process by developing a monitoring device and provide healthcare personnel with direct feedback and data for documentation and analysis. Venture Delta will provide the market with a web-based platform to access the data and give researchers the opportunity for data analysis and knowledge sharing.		Venture Delta needs to find strategic alliances for production and distribution and to use international medical networks, key opinion leaders and clinical training centers for market penetration. Critical actions prior to making any alliances: continued product development, clinical trials for regulatory approval, prototype feedback and market verification.

<b>ID</b>	<b>Team Formation May 2012</b>	<b>Business Plan October 2012</b>	<b>Interviews Feb. 2013</b>	<b>Business Plan May 2013</b>
Student 4	Quote D: Student 4: Ranked high (1st choice): I have a major interest in environmentally sustainable energy. [Venture Epsilon] has an exciting development potential in renewable energy. I will do my utmost to be a part of bringing [Venture Epsilon] to commercial scale along with a team and collaborative partners. I have a personal interest in continuing with [Venture Epsilon] if the opportunity presents. I realize this will require hard work and persistence - I expect a great challenge, but that is why I am here and choose [Venture Epsilon].		Quote 20	A complete installation of several [Venture Epsilon] units will require a significantly large degree of infrastructure development, including site installation and energy transfer.
Student 5	Quote E: Student 5: Ranked low (2nd to last choice): It might because it is high tech, but I am not sure about the possibility to find an area of use where this product is applicable and valuable enough for someone to finance the development.		Quote 5; Quote 11	Prototype testing has been initiated together with financiers and industry partners. [Venture Zeta's] key activities are product and customer development, market verification, and prototype testing. Goal is have a product on the market in 2015.
Student 6	Quote F: Student 6: Ranked low (last choice): Too technical and too long time to market for my taste. I don't understand the technology.			Prototype testing has been initiated together with financiers and industry partners. [Venture Zeta's] key activities are product and customer development, market verification, and prototype testing. Goal is have a product on the market in 2015.

## References

- Anderson, A. (2005), "Enacted Metaphor: The Theatricality of the Entrepreneurial Process" *International Small Business Journal*, 23, 6, 587-603.
- Anderson, A. R. and Warren, L. (2011), "The entrepreneur as hero and jester: Enacting the entrepreneurial discourse" *International Small Business Journal*, 29, 6, 589-609.
- Blenker, P., Korsgaard, S., Neergaard, H. and Thrane, C. (2011), "The questions we care about: paradigms and progression in entrepreneurship education" *Industry and Higher Education*, 25, 6, 1-11.
- Brannick, T. and Coghlan, D. (2007), "In Defense of Being "Native": The Case for Insider Academic Research" *Organizational Research Methods*, 10, 1, 59-74.
- Brophy, M. and Kiely, T. (2002), "Competencies: a new sector" *Journal of European Industrial Training*, 26, 2/3/4, 165-176.
- Bruyat, C. and Julien, P.-A. (2001), "Defining the field of research in entrepreneurship" *Journal of Business Venturing*, 16, 2, 165-180.
- Carsrud, A. L. and Johnson, W. R. (1989), "Entrepreneurship: a social psychological perspective" *Entrepreneurship & Regional Development*, 1, 1, 21-31.
- Cast, A. D. (2004), "Well-being and the transition to parenthood: An identity theory approach" *Sociological Perspectives*, 47, 1, 55-78.
- Chang, J. and Rieple, A. (2013), "Assessing students' entrepreneurial skills development in live projects" *Journal of Small Business and Enterprise Development*, 20, 1, 225-241.
- Coghlan, D. (2001), "Insider Action Research Projects: Implications for Practising Managers" *Management Learning*, 32, 1, 49-60.
- Coghlan, D. (2007), "Insider action research: opportunities and challenges" *Management Research News*, 30, 5, 335-343.
- Coghlan, D. and Brannick, T. (2005), *Doing action research in your own organization*, Sage, London, UK.
- Davidsson, P. (2006), "Nascent entrepreneurship: empirical studies and developments." *Foundations and Trends in Entrepreneurship*, 2, 1, 1-76.
- Davidsson, P. and Reynolds, P. D. (2009), "PSED II and the Comprehensive Australian Study of Entrepreneurial Emergence [CAUSEE] New Firm Creation in the United States" in: Curtin, R. T. and Reynolds, P. D. (eds.) Springer New York, 263-278.
- Davies, B. and Harré, R. (1990), "Positioning: The Discursive Production of Selves" *Journal for the Theory of Social Behaviour*, 20, 1, 43-63.
- Dew, N., Read, S., Sarasvathy, S. D. and Wiltbank, R. (2009), "Effectual versus predictive logics in entrepreneurial decision-making: Differences between experts and novices" *Journal of Business Venturing*, 24, 4, 287-309.
- Down, S. and Warren, L. (2008), "Constructing narratives of enterprise: clichés and entrepreneurial self-identity" *International Journal of Entrepreneurial Behaviour & Research*, 14, 1, 4-23.
- Duval-Couetil, N. (2013), "Assessing the Impact of Entrepreneurship Education Programs: Challenges and Approaches" *Journal of Small Business Management*, 51, 3, 394-409.
- Farmer, S. M., Yao, X. and Kung-Mcintyre, K. (2010), "The Behavioral Impact of Entrepreneur Identity Aspiration and Prior Entrepreneurial Experience" *Entrepreneurship Theory and Practice*, 9999, 9999.

- Gartner, W. B. (1988), "'Who is an Entrepreneur?' Is the Wrong Question" *Entrepreneurship Theory and Practice*, 12, 4, 11-32.
- Gartner, W. B., Bird, B. J. and Starr, J. A. (1992), "Acting As If: Differentiating Entrepreneurial From Organizational Behavior" *Entrepreneurship Theory and Practice*, 16, 3, 13-31.
- Gecas, V. (1982), "The self-concept" *Annual Review of Sociology*, 8, 1-33.
- Hytti, U. (2003), *Stories of Entrepreneurs: Narrative Construction of Identities*. Turku University.
- Ibarra, H. (1999), "Provisional Selves: Experimenting with Image and Identity in Professional Adaptation" *Administrative Science Quarterly*, 44, 4, 764-791.
- Ibarra, H. and Barbulescu, R. (2010), "Identity as Narrative: Prevalence, effectiveness, and consequences of narrative identity work in macro work role transitions" *Academy of Management Review*, 35, 1, 135-154.
- Johannisson, B. (2011), "Towards a practice theory of entrepreneuring" *Small Business Economics*, 36, 2, 135-150.
- Kilby, P. (1971), "Hunting the Heffalump" in: Kilby, P. (ed.) *Entrepreneurship and Economic Development*. Free Press, New York, 1-40.
- Lackéus, M. (2013), *Developing Entrepreneurial Competencies: An Action-Based Approach and Classification in Education*. Licentiate, Chalmers University of Technology.
- Lackéus, M. and Williams Middleton, K. (in press), "Venture Creation Programs: bridging entrepreneurship education and technology transfer" *Education + Training*, 1-26.
- Liao, J. and Welsch, H. (2008), "Patterns of venture gestation process: Exploring the differences between tech and non-tech nascent entrepreneurs" *The Journal of High Technology Management Research*, 19, 2, 103-113.
- Lundqvist, M. A. (2013), "The importance of surrogate entrepreneurship for incubated Swedish technology ventures" *Technovation*.
- Mitchelmore, S. and Rowley, J. (2010), "Entrepreneurial competencies: a literature review and development agenda" *International Journal of Entrepreneurial Behaviour & Research*, 16, 2, 92-111.
- Morris, M. H., Kuratko, D. F., Schindehutte, M. and Spivack, A. J. (2012), "Framing the Entrepreneurial Experience" *Entrepreneurship Theory and Practice*, 36, 1, 11-40.
- Morris, M. H., Webb, J. W., Fu, J. and Singhal, S. (2013), "A Competency-Based Perspective on Entrepreneurship Education: Conceptual and Empirical Insights" *Journal of Small Business Management*, 51, 3, 352-369.
- Murnieks, C. Y. and Mosakowski, E. (2007), "Who am I? Looking inside the "Entrepreneurial Identity"" *Frontiers of Entrepreneurship Research*, 27, 5.
- Mwasalwiba, E. S. (2010), "Entrepreneurship education: a review of its objectives, teaching methods, and impact indicators" *Education + Training*, 52, 1, 20-47.
- Neck, H. and Greene, P. (2011), "Entrepreneurship Education: Known Worlds and New Frontiers" *Journal of Small Business Management*, 49, 1, 55-70.
- Nicholson, L. and Anderson, A. R. (2005), "News and Nuances of the Entrepreneurial Myth and Metaphor: Linguistic Games in Entrepreneurial Sense-Making and Sense-Giving" *Entrepreneurship Theory and Practice*, 29, 2, 153-172.
- Ollila, S., Williams-Middleton, K. and Donnellon, A. (2012), *Entrepreneurial Identity Construction - what does existing literature tell us?* Institute for Small Business and Entrepreneurship. Dublin, Ireland.
- Pittaway, L. and Thorpe, R. (2012), "A framework for entrepreneurial learning: A tribute to Jason Cope" *Entrepreneurship & Regional Development*, 24, 9-10, 837-859.



- Rae, D. (2005), "Entrepreneurial learning: a narrative-based conceptual model" *Journal of Small Business and Enterprise Development*, 12, 3, 323-335.
- Rankin, N. (2004), "The new prescription for performance: the eleventh competency benchmarking survey" *Competency & Emotional Intelligence Benchmarking Supplement*, 2005, 181-191.
- Rasmussen, E., Mosey, S. and Wright, M. (2011), "The Evolution of Entrepreneurial Competencies: A Longitudinal Study of University Spin-Off Venture Emergence" *Journal of Management Studies*, 48, 6, 1314-1345.
- Reynolds, P. D. (1995), Who starts new firms? Linear additive versus interaction based models. *Babson College/Kauffman Foundation Entrepreneurship Research Conference*. London Business School.
- Reynolds, P. D. (2007), "New Firm Creation in the United States: A PSED I Overview" *Foundations and Trends in Entrepreneurship*, 3, 1, 1-150.
- Rideout, E. C. and Gray, D. O. (2013), "Does Entrepreneurship Education Really Work? A Review and Methodological Critique of the Empirical Literature on the Effects of University-Based Entrepreneurship Education" *Journal of Small Business Management*, 51, 3, 329-351.
- Rigg, C. and O'Dwyer, B. (2012), "Becoming an entrepreneur: researching the role of mentors in identity construction" *Education + Training*, 54, 4, 319-329.
- Robb, A. and Reynolds, P. (2007), "PSED II and the Kauffman Firm Study" in: Reynolds, P. and Curtin, R. T. (eds.) *New Firm Creation in the United States: Initial Explorations with the PSED II Data Set*. Springer, New York, NY USA, 279-302.
- Sánchez, J. C. (2013), "The Impact of an Entrepreneurship Education Program on Entrepreneurial Competencies and Intention" *Journal of Small Business Management*, 51, 3, 447-465.
- Schaffer, B. S. and Riordan, C. M. (2003), "A review of cross-cultural methodologies for organizational research: A best-practices approach" *Organizational Research Methods*, 6, 2, 169-215.
- Vanevenhoven, J. (2013), "Advances and Challenges in Entrepreneurship Education" *Journal of Small Business Management*, 51, 3, 466-470.
- Vanevenhoven, J. and Liguori, E. (2013), "The Impact of Entrepreneurship Education: Introducing the Entrepreneurship Education Project" *Journal of Small Business Management*, 51, 3, 315-328.
- Williams Middleton, K. (2013), "Becoming entrepreneurial: gaining legitimacy in the nascent phase" *International Journal of Entrepreneurial Behaviour & Research*, 19, 4, 404-424.
- Williams Middleton, K. and Donnellon, A. (in press), "Personalizing Entrepreneurial Learning: A Pedagogy for Facilitating the Know Why" *Entrepreneurship Research Journal*, 4, 2.
- Winkel, D. (2013), "The Changing Face of Entrepreneurship Education" *Journal of Small Business Management*, 51, 3, 313-314.
- Yin, R. K. (2008), *Case Study Research: Design and Methods*, Sage Publications, London, UK.
- Yu, T. F. L. (2004), "Extraordinary versus ordinary discoveries. The case of American and Chinese entrepreneurship" in: Butler, J. E. (ed.) *Opportunity identification and entrepreneurial behavior*. Information Age, Greenwich, CT, 163-189.