



# Developing Entrepreneurial Graduates

Briefing Note 2  
January 2008



## Modelling the Entrepreneurial Life-world in Learning

### Defining entrepreneurship

For this project we have taken entrepreneurship “as being concerned with the personal attributes, behaviours and skills associated with the creation of value by applying resources in order to innovate”. What are the implications (inclusions and exclusions effected) of making this definition on potential learning outcomes?

### Exploring effectual thinking

There is a substantial body of literature<sup>1</sup> on entrepreneurship and its development that concerns the differences between effectual and causal thinking, and the importance of the former in the life-world of the entrepreneur. Effectual thinking, it is argued, is critically important in the creation, development and execution of entrepreneurial opportunities. This matches recent cases studied by the project team<sup>2</sup>. Accordingly, we considered that the issues raised by a study of this literature<sup>3</sup>, and particularly the way in which they contrast with the conventional pedagogy of business management, should be deliberately considered by the expert panel in this project.

In (1) Sarasvathy states:

*“Causal rationality begins with a pre-determined goal and a given set of means, and seeks to identify the optimal – fastest, cheapest, most efficient, etc. – alternative to achieve the given goal. The make-vs-buy decision in production, or choosing the target market with the highest potential return in marketing, or picking a portfolio with the lowest risk in finance, or even hiring the best person for the job in human resources management, are all examples of problems of causal reasoning. A more interesting variation of causal reasoning involves the creation of additional alternatives to achieve the given goal. This form of creative causal reasoning is often used in strategic thinking. Effectual reasoning, however, does not begin with a specific goal. Instead, it begins with a given set of means and allows goals to emerge contingently over time from the varied imagination and diverse aspirations of the founders and the people they interact with.”*

#### Produced by:

Philip Ternouth  
Associate Director  
Keith Herrmann  
Deputy CEO

#### The Council for Industry and Higher Education

Studio 11, Tiger House  
Burton Street, London  
WC1H 9BY

Tel: 020 7383 7667  
Fax: 020 7383 3433  
Email: [cihe@cihe-uk.com](mailto:cihe@cihe-uk.com)  
Web: [www.cihe-uk.com](http://www.cihe-uk.com)

© CIHE, 2008

A company limited by Guarantee,  
registered in England and Wales  
No. 3465914  
Registered Charity No.1066956

<sup>1</sup> Key examples from the literature may be found on <http://www.effectuation.org/>

<sup>2</sup> Including an unpublished PhD thesis studying the origins of The Transitive Corporation which specifically identifies and describes the effectual behaviour of the founder, and which has been reviewed by a member of the project team in the context of an interviewee in the research.

<sup>3</sup> In ‘What makes Entrepreneurs Entrepreneurial’ (1) <http://www.effectuation.org/ftp/What%20makes%20entrs%20entl%20note.pdf> and (2) ‘Causation and Effectuation: Towards a Shift from Economic Inevitability to Entrepreneurial Contingency’, The Academy of Management Review, Apr 2001, Vol.26, No.2, ABI/INFORM Global pg. 243 <http://fp.tu.nl/ecis/EcisA12004/sarasvathy.pdf>

## Effectual reasoning: the process

All entrepreneurs begin with three categories of means: (1) Who they are – their traits, tastes and abilities; (2) What they know – their education, training, expertise, and experience; and, (3) Whom they know – their social and professional networks. Using these means, the entrepreneurs begin to imagine and implement possible effects that can be created with them. Most often, they start very small with the means that are closest at hand, and move almost directly into action without elaborate planning. Unlike causal reasoning that comes to life through careful planning and *subsequent* execution, effectual reasoning lives and breathes execution. Plans are made and unmade and revised and recast through action and interaction with others on a daily basis. Yet at any given moment, there is always a meaningful picture that keeps the team together, a compelling story that brings in more stakeholders and a continuing journey that maps out uncharted territories. Through their actions, the effectual entrepreneurs' configuration of means and consequently the set of possible effects are changed and even possibly reconfigured. Eventually, the emerging effects coalesce into clearly achievable and desirable goals.

In (3) Sarasvathy<sup>4</sup> finds from a study of successful entrepreneurs that “74% of the participants in the study behaved in accordance with the effectuation model at least 63% of the time, and 44% of them, at least 85% of the time”.

However “... in our classrooms, we teach potential entrepreneurs an extremely causal process – the sequential progression from idea to market research, to financial projections, to team, to business plan, to financing, to prototype, to market, to exit, with the caveat, of course, that surprises will happen along the way. Seasoned entrepreneurs, however, know that surprises are not deviations from the path”.<sup>5</sup>

The causal process is arguably much easier to incorporate into formal taught curricula than an effectual process. To what extent should/can the challenge of embracing effectuation in the pedagogy of entrepreneurship be met? What should the desired learning outcomes be, either in the form of (a) the development of the entrepreneur or (b) the understanding of entrepreneurship? How might formal taught material be combined with experiential learning in positioning causal and effectual reasoning with each other? How might we learn from the experience of the KaosPilots<sup>6</sup>?

Venkataraman's definition of entrepreneurship – “*entrepreneurship is concerned with understanding how, in the absence of markets for future goods and services, these goods and services manage to come into existence*” appears somewhat narrower than the one adopted for this project. If we examine the types of entrepreneurial opportunity characterised by Venkataraman and Sarasvathy<sup>7</sup> et al in (4), then of the three types of opportunity described:

- *Opportunity Recognition* (supply and demand exist but need a deliberate effort to connect them);
- *Opportunity Discovery* (one exists and the entrepreneur creates the other);
- *Opportunity Creation* (if neither supply nor demand exist in an obvious manner, both have to be “created”) ...

it is the third that fits most easily with the narrower definition and it is also the third that is argued to be most susceptible to effectual reasoning to the exclusion of causal reasoning. This suggests that a positioning of the types of opportunity should be included in the desired learning outcomes. Furthermore, since there is a strong suggestion in the literature and in

<sup>4</sup> ‘Entrepreneurship as a Science of the Artificial’, (3) Journal of Economic Psychology Vol. 24, 2003, pp203–220  
www.effectuation.org/ftp/joep.pdf

<sup>5</sup> See Sarasvathy (1) above

<sup>6</sup> [http://users.homebase.dk/~awi/Publications/Breaking\\_the\\_Waves.pdf](http://users.homebase.dk/~awi/Publications/Breaking_the_Waves.pdf)

<sup>7</sup> ‘Three views of entrepreneurial opportunity’ (invited book chapter in the Entrepreneurship Handbook, ed Acs et al)  
www.darden.edu/batten/pdf/WP0013.pdf

particular in a technical paper by Sarasvathy<sup>8</sup> (5) that types of reasoning relate to personal characteristics and preferences, then an effective positioning of the types of opportunity should include an element of personal discovery for the intended entrepreneurial graduate. The resources possessed and accessible to the entrepreneur (1) Who they are – their traits, tastes and abilities; (2) What they know – their education, training, expertise, and experience; and, (3) Whom they know – their networks might perhaps be a key feature of the starting point of this personal learning. How might this be achieved?

Aside from considering the incorporation of models of effectuation into the design of the specification to be developed in this project, there are also other theories and approaches which the panel may wish to consider. What of the use of models on emotional intelligence and the EI quotient which explores the ability, capacity, or skill to perceive, assess, and manage the emotions of one's self, of others, and of groups? How relevant is this to the domain of entrepreneurship education? What about the role of self-efficacy<sup>9</sup> in instilling the required degree of confidence in an individual's belief about their skills and abilities to have not only the desire to start their own business but also the determination to successfully undertake all the stages of the venture creation process? Cooper and Lucas (pg80) argue that the work of the CMI project demonstrates that self-efficacy is central to the willingness of individuals to act in an entrepreneurial way, to identify and seize opportunities. *“Highly efficacious people are likely to possess greater confidence in their abilities to embark on challenging courses of action, and to persist in the face of obstacles which appear between them and their goal”*.

### Using experiential methods of learning?

This introduces some further challenges; “Innovation Ecologies”, as for example described by Hague and Holmes<sup>10</sup> are intensely localised. Should the curriculum include the practise and development of the skills of resource investigation as part of the experiential learning process?

To develop this further, Sarasvathy et al<sup>11</sup> (6) positions strategic management against entrepreneurship, and in doing so, considers the respective roles of each in the life of the firm against each other. There would appear to be a clear overlap between the two schools of thought in terms of encouraging creativity in existing firms. Sarasvathy further argues that effectual thinking can work best in existing firms where they are partially decomposable, i.e. where it is possible for parts of the firm to appear to other parts as composite ‘black boxes’. In order to accommodate the application of effectual thinking in existing firms how far should our curriculum also include the conventional theories and practice of strategic management in order for graduates to understand the respective positioning of these models of thinking, and how should the boundary be described?

Finally the literature includes material on the relationship between the entrepreneur and the firm, in (7) Sarasvathy<sup>12</sup> deliberately separates the role of the entrepreneur from that of the firm which s/he has been instrumental in forming or at least (in the context of creativity in an existing firm) and positions the firm in part at least as an instrument of the entrepreneur in reaching his or her personal aspirations. This has very particular challenges in marshalling a newly formed team behind a flag which may very well be marching towards an unclear and perhaps moving target. Should we address this issue specifically – entrepreneurial team building – in the scope of our learning outcomes? And if so, how might this be done?

<sup>8</sup> ‘The Affordable Loss Principle’, Sarasvathy, 2006, Technical Paper, University of Virginia Darden School Foundation, [www.effectuation.org/ftp/Affordable%20Loss%20Note.pdf](http://www.effectuation.org/ftp/Affordable%20Loss%20Note.pdf)

<sup>9</sup> Sarah Cooper and William Lucas: ‘Enhancing Self-efficacy for Entrepreneurship and Innovation: an educational approach’, in Good et al, ‘University Collaboration for Innovation – lessons from the Cambridge-MIT Initiative’, 2007

<sup>10</sup> ‘Oxford Entrepreneurs’ by Hague and Holmes, 2006, CIHE and Said Business School

<sup>11</sup> ‘Strategy and Entrepreneurship: Outlines of an Untold Story’ (6) Venkataraman and Sarasvathy, 2000, an invited book chapter in the Strategic Management Handbook, ed Hitt et al, [www.effectuation.org/ftp/Hittbook.doc](http://www.effectuation.org/ftp/Hittbook.doc)

<sup>12</sup> ‘Making it Happen - Beyond Theories of the Firm to Theories of Firm Design’ (7) Sarasvathy, 2002, presented at the Entrepreneurial Cognition Conference at the University of Victoria [www.effectuation.org/ftp/ETPconf.doc](http://www.effectuation.org/ftp/ETPconf.doc)