

Can Universities *Really* Develop Entrepreneurs and Innovators?

2011 Nebraska Summit on Entrepreneurship



Richard Cantillon

Essay On the Nature of Commerce in General
1730

There are none but the Prince and the Proprietor of Land who live independent; all other Classes and Inhabitants are hired or are Undertakers.



“Higgs (1931) translates *entrepreneur* as ‘undertaker.’ Cantillon's usage, in which an entrepreneur is an independent risk-taking businessman, marked a major conceptual innovation which has passed via J.B. Say into modern economics. It has, however, come into modern economics untranslated —we now talk of an ‘entrepreneur’ and not of an ‘undertaker.’”



Jean-Baptiste Say

- Successful textiles entrepreneur
- First professor of *political economy* in France 1830
- *A Treatise on Political Economy* 1803
- The entrepreneur launches and manages an enterprise by combining the means of production - labor, land, capital, natural agents, and knowledge.
- “ ... this kind of labour requires a combination of moral qualities that are not often found together. Judgment, perseverance, and a knowledge of the world, as well as of business ... there are abundance of obstacles to be surmounted, of anxieties to be repressed



T R E A T I S E

The knife-grinder's craft requires no occupancy of land; he carries his stock in trade upon his shoulders, and his skill and industry at his fingers' ends; being at the same time adventurer, (a) capitalist and labourer.

OR THE

PRODUCTION, DISTRIBUTION AND CONSUMPTION

(a) The term *entrepreneur* is difficult to render in English; the corresponding word, *undertaker*, being already appropriated to a limited sense. It signifies the master-manufacturer in manufacture, the farmer in agriculture, and the merchant in commerce; and generally in all three branches, the person who takes upon himself the immediate responsibility, risk, and conduct of a concern of industry, whether upon his own or a borrowed capital. For want of a better word, it will be rendered into English by the term *adventurer*.

JEAN - BAPTISTE SAY

Joseph Schumpeter

- *The Theory of Economic Development* 1911
- The entrepreneur or the entrepreneurial function
 - introduces *new* combinations of the means of production – innovations – to a market
 - new product, process, supply, organization, ...
 - not a “small adjustment” even if associated with growth
 - not just the invention or new knowledge
- Not all “independent businessmen”, small business owners, managers, inventors, nor capitalists
- Innovations transform supply and demand in a market



Joseph Schumpeter

- “the leader type appears only when new possibilities present themselves”
- “Leadership ... is ... a special kind of function ... and in contrast with a mere difference in rank”
- There is a “reaction of the social environment against one who wishes to do something new”
- “Surmounting this opposition is always a special kind of task which does not exist in the customary course of life, a task which requires a special kind of conduct.”
- “... to carry any improvement into effect is a task, entirely different from the inventing of it, and a task, moreover, requiring entirely different kinds of apt



Peter Drucker

- *Innovation and Entrepreneurship* 1985
- “Innovation is the specific tool of entrepreneurs, the means by which they exploit change as an opportunity ... It is capable of being presented as a discipline, capable of being learned, capable of being practiced.”
- “Entrepreneurship is a distinct feature whether of an individual or of an institution, but it is not a personality trait.”
- “Systematic innovation consists of the purposeful and organized search for changes, and in the systematic analysis of the opportunities such changes might offer for economic and social innovation.”



Clayton Christensen

- *The Innovator's Dilemma* 1997
- “ ... about the failure of companies to stay atop their industries when they confront certain types of technological and market change.”
- *Disruptive* innovations as opposed to *sustaining* improvement or *sustaining* innovations
- “ ... planning better, working harder, becoming more customer driven, and taking a longer term perspective – all *exacerbate* the problem.”



Larry Keeley

- “Most people equate *innovation* with *new products*.”
- “Larry has identified nine other types, and innovators overlook them at their peril.”
- “Product innovation alone has the lowest return on innovation investment.”



The Ten Types of Innovation ®

Finance		Process		Offering			Delivery		
business model	networking	enabling process	core process	product performance	product system	service	channel	brand	customer experience





**World-class business
innovation and leadership
through honors education**

- Computer science and management curriculum
 - Multidisciplinary
 - Teach both with added value relative to mission
 - Interdisciplinary
 - Make connections between topics
 - Integrative
 - Blur the boundaries between topics
- Residential College Model
- Honors Program



Sophomore Year

- Multidisciplinary courses
 - Algorithms , Software engineering, Computer architecture
 - Business logistics, Managerial accounting
 - Leadership and Communications,
- Interdisciplinary connections
 - Business Logistics & Computer Science Algorithms
- Integrative project
 - Transportation system modeling, optimization, planning
 - Defined and evaluated by faculty and Union Pacific experts
 - Computer science
 - Business
 - Leadership and Communications



Design Studio

- Capstone learning experience for juniors and seniors
- Year long, sponsored application software projects
 - Objective is prototype or beta solution
 - 6 students per team
- Learning threads
 - Development process
 - Application architecture and technology
 - Application design
 - Database and data (business) analytics
 - Management relative to leadership, projects, teams, and innovation



Nebraska Sponsors

- Mutual of Omaha (9)
- Fiserv ITI (6)
- Lincoln Electric (5)
- State of Nebraska (3)
- University of Nebraska (3)
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- Nanonation (2)
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- Ameritas
- City of Lincoln
- Crete Carrier
- Design Data
- Duncan Aviation
- Interact
- GIS Workshop
- Software Technology
- Nelnet
- Senior Technologies
- NU Foundation
- Nebraska Global
- Speedway Motors
- Teammates
- Agile Sports / Hudl
- Penlink
- Madonna
- Univ of Nebraska Press
- NE Rural Initiative



Perspective of Graduates

- Colby Thomson
 - UNL / Raikes School BCS, MBA
 - Co-Founder & CEO, Allied Strategy
- Brian Kaiser
 - UNL / Raikes School BSCE, ~MBA
 - Co-Founder & CTO, Agile Sports Technology
- Nick Ebert
 - UNL / Raikes School BSCE
 - Software Engineer, Nebraska Global

