Entrepreneurship as Design (Science)

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Agenda

1) What is Design Science?
2) Entrepreneurship as Design
3) Journal of Business Venturing Design
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Describing the Natural vs Designing the Artificial

Herbert A. Simon
The Sciences of the Artificial
Third Edition
Natural Things and Designed Artifacts

"The natural sciences are concerned with how things are."
Natural Things and Designed Artifacts

”The natural sciences are concerned with how things are.

Design is concerned with how things ought to be with devising artifacts to attain goals.”
(Simon 1996: 114).
“If natural phenomena have an air of ‘necessity’ about them in their subservience to natural law,
Natural andDesigned

“If natural phenomena have an air of ‘necessity’ about them in their subservience to natural law, artificial phenomena have an air of ‘contingency’ in their malleability by environment” (Ibid: xi)
Natural and Designed

“If natural phenomena have an air of ‘necessity’ about them in their subservience to natural law, artificial phenomena have an air of ‘contingency’ in their malleability by environment” (Ibid: xi)

“An artifact can be thought of as a meeting point an interface in today's terms between an inner environment (the substance and organization of the artifact itself) and an outer environment (the surroundings in which it operates)” (Ibid: 6).
Artifacts as Interfaces

”Whether a clock will in fact tell time depends on its internal construction and where it is placed."
“Whether a clock will in fact tell time depends on its internal construction and where it is placed. Whether a knife will cut depends on the material of its blade and the hardness of the substance to which it is applied.” (Ibid: 113)
A Science of Design?

“What can we say about it? What is there to study besides the boundary sciences those that govern the means and the task environment?” (Ibid: 113)
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1) What is Design Science?

2) Entrepreneurship as Design
   • Entrepreneurship as a Design Process
   • Entrepreneurship as a Design Science

3) Journal of Business Venturing Design
Entrepreneurship as a Design Process
Entrepreneurship as a Design Process

“design processes are frequently guided by quite abstract goals and vague notions of “interestingness” (Simon, 1996), which are themselves clarified with the aid of intermediate artifacts employed throughout the process.”

(Berglund et al. 2020: 827)
Entrepreneurship as a Design Process

“design processes are frequently guided by quite abstract goals and vague notions of “interestingness” (Simon, 1996), which are themselves clarified with the aid of intermediate artifacts employed throughout the process.” (Berglund et al. 2020: 827)
Abstract and Concrete

*abstract artifacts*, which are immaterial and sometimes quite vague concepts or ideas, and more

*concrete instantiations* of these abstract artifacts through which they are expressed and enacted
Software Artifacts

abstract artifacts, which are immaterial and sometimes quite vague concepts or ideas, and more

concrete instantiations of these abstract artifacts through which they are expressed and enacted
Product Artifacts

*abstract artifacts*, which are immaterial and sometimes quite vague concepts or ideas, and more

*concrete instantiations* of these abstract artifacts through which they are expressed and enacted
abstract artifacts, which are immaterial and sometimes quite vague concepts or ideas, and more concrete instantiations of these abstract artifacts through which they are expressed and enacted

“opportunity” (Shane and Venkataraman, 2000)
“new venture idea” (Davidsson, 2015)
“entrepreneurial theory” (Felin and Zenger, 2009)
“symbolic blueprint” (Dimov, 2011)
“business model ontology” (Osterwalder, 2004)
“business plan” (Gruber, 2007)
“venture narrative” (Lounsbury and Glynn, 2000)
“product prototype” (Bogers and Horst, 2013)
“MVP” (Ries, 2011)
“Landing Page” (Camuffo et al. 2019)
Individual – Artifact – Environment

“... a relation among three terms: the purpose or goal, the character of the artifact, the environment in which the artifact performs” (Simon, 1996: 5).
Individual – **Artifact** – Environment
(not Individual – Opportunity)

“... a relation among three terms: the purpose or goal, the character of the artifact, the environment in which the artifact performs” (Simon, 1996: 5).
Entrepreneurship as a Design Science
Design, Science, and Humanities
Knowledge is socially constructed. Knowledge represents reality. Is it 'true' or valid?

Science

Humanities

What does it mean?

Does it work?

Design

Knowledge is pragmatic & prescriptive

“An artifact can be thought of as a meeting point an interface in today's terms between an inner environment, the substance and organization of the artifact itself, and an outer environment, the surroundings in which it operates. If the inner environment is appropriate to the outer environment, or vice versa, the artifact will serve its intended purpose.” (1996: 111).

Design, Science, and Humanities
Science

Is 'true' or valid?

Science

Chicken metabolism, Nutritional science, Demography, Market research, ...

What does it mean?

Humanities

What is (a worthy) life? Is it morally defensible to treat sentient beings like this?

Design

Operations analysis, Financial optimization, Business modelling, Organizational design, ...

Does it work?
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Aims & Scope

“Journal of Business Venturing Design publishes original works that advance both theoretical understanding and the practice of entrepreneurship. JBVD does so by regarding entrepreneurship as a form of design to be studied as a design science.

Entrepreneurship as design is broadly defined as the iterative and uncertainty facing process of establishing a new "business" (or "opportunity", "venture", "startup" etc.), typically by working with various intermediate artifacts.”
Aims & Scope

“To illustrate, explanatory research seeking a general causal mechanism on the form 'X causes A under condition B' can be turned into an instrumental design principle if X can be manipulated with predictable results.”
Aims & Scope

“The instrumentality of design science highlights its ethical dimension. As opposed to purely descriptive or explanatory sciences, design science more directly helps manipulate the world in particular directions, suggesting that design scientists have a potential moral responsibility for the knowledge and tools developed.”
Junior Faculty Paper Development WS

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Design Science in Professional Schools

“...education and training for prospective or present practitioners in the profession and for persons wanting to do teaching and research in the professional school; research to advance knowledge relevant to the practice of the professions”
Design Science in Professional Schools

"The ‘practical’ segment of the faculty becomes dependent on the world of business as its sole source of knowledge inputs. Instead of an innovator, it becomes a slightly out-of-date purveyor of almost-current business practice"
"The ‘practical’ segment of the faculty becomes dependent on the world of business as its sole source of knowledge inputs. Instead of an innovator, it becomes a slightly out-of-date purveyor of almost-current business practice.”

“The discipline-oriented segment of the professional school faculty becomes dependent upon its disciplines of origin for goals, values, and approval. Sealed off from the practitioner’s environment, that environment becomes inaccessible and irrelevant to them as a source of data, of research problems, or of development and application of innovations.”
Professionally Oriented Institutions

Practice-oriented faculty

discipline-oriented faculty