

Creativity, innovation and cluster policy

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References

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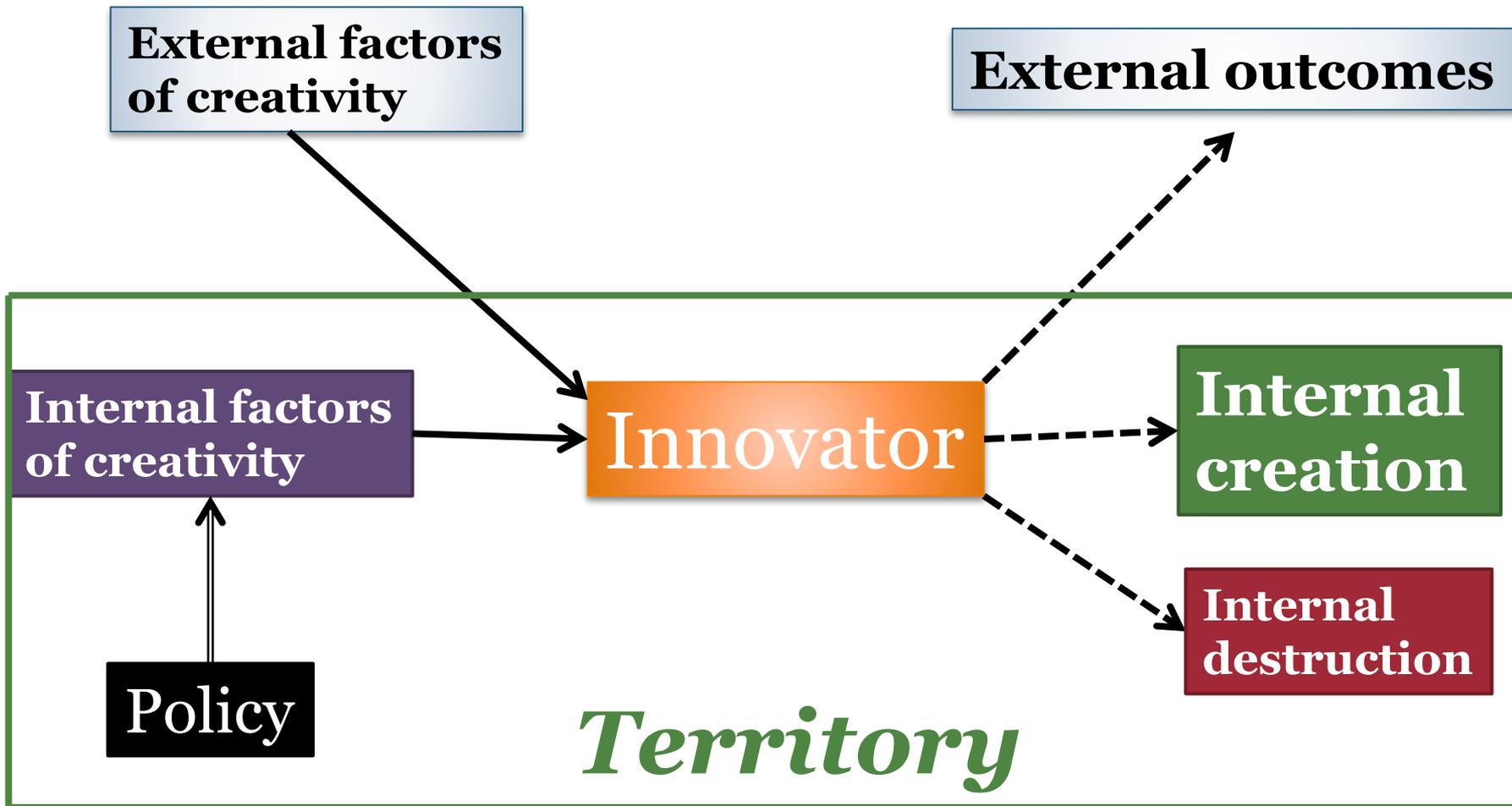
Innovation as a central strategy for firms and other organizations

- Creating and developing new products, processes and/or markets is *at least an opportunity* for the development of micro and macro entities (firms, institutions, cities, regions).
- It is even sometimes *a necessity for survival* in a globalized, ever-changing world (typically for developed countries if they intend to keep high living standards...)
- Nevertheless only a minority of entrepreneurs consider creative/innovative activities as day-to-day business: it is a secondary concern because operational business issues claim the entrepreneur's full attention
- Therefore many ideas « stay on the shelf » due to lack of time, money, partners or knowledge
- Transforming “ideas” into “innovations” is an act of **creativity**

Issues of development

- For a firm, creativity in various fields (new ideas of products, processes, markets, organization...) can be a source of added value and growth. It is also a potential danger (losses, organizational disruptions...)
 - > does creativity lead to innovation, with globally positive results?
- For a territory, the additional issue is: where do appear respectively the opportunities and risks? (inside or outside the territory)
 - > does innovation (if any) lead to territory development?

« Creative destruction » and the development of the territory



Since the term was popularized by Richard Florida, many cities and other territories have tried to develop *creativity* policies in order to boost local economic development, sometimes to reinvent a collective vision after a crisis



- Richard Florida (2002): *The rise of the creative class*
- To sum up:
 - in the knowledge-based, innovative world – contextual situation of the developed countries -, **creative people** are the most important asset.
 - **Jobs follow creative people:** economic development crucially depend on them, for designing, producing and even consuming innovative products or services.
 - If you have not enough of them, try to **attract** them!
 - **People's climate:** they need many sorts of urban amenities, but - most important - they like cultural variety and places where their talents can develop with few constraints. Be **tolerant!**

Richard Florida's 3T's

- *Talent, Technology, and Tolerance represent what I call the 3T's of economic development.*
- *The 3T's approach represents a comprehensive strategy for organizations, cities, regions and countries to compete and prosper in the creative age.*
- **Talent:** People, especially top creative talent, move around a lot. A community's ability to attract and retain top talent is the defining issue of the creative age.
- **Technology:** Technology and innovation are critical components of a community or organization's ability to drive economic growth. (...) Universities are paramount to this, and provide a key hub institution of the creative age.
- **Tolerance:** Economic prosperity relies on cultural, entrepreneurial, civic, scientific, and artistic creativity. Creative workers with these talents need communities, organizations, and peers that are open to new ideas and different people. Places receptive to immigration, alternative lifestyles, and new views on social status and power structures will benefit significantly in the creative age.

Examples of « creative cities »

- « Creative **Baltimore** » initiative and « Cool cities » of Michigan
- **Memphis** has hired Florida as well (bike paths and night clubs were recommended)
- **Hamburg**: Florida helped developing the *Hafencity* (urban renewal)
- Authentic successes (not necessarily hiring Florida!) of cities like **Montreal** and **Barcelona**
- There may be resistance: “no to gentrification!” (**Berlin**,...)

Measuring creativity

People to be included in the « creative class »

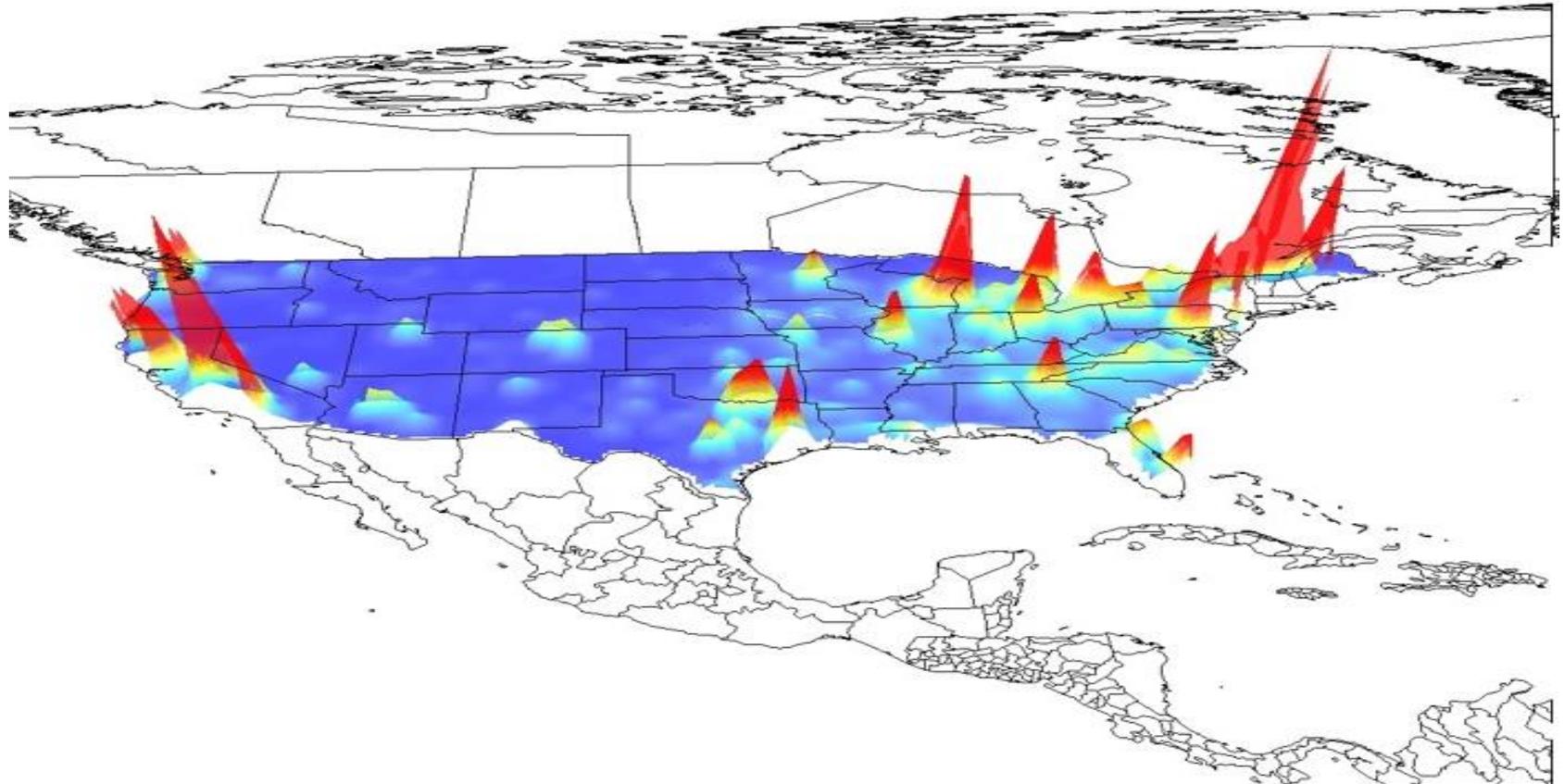
- Scientists
- Entrepreneurs
- Managers
- Consultants
- Designers
- Writers
- Artists
- etc.

Creative class typology

Creative Core	Directly involved in creative and innovation processes créatifs	R&D Intellectual Supply
Creative Pro	Manage and foster change and innovation	Entrepreneurs B to B Management
Bohemians	Directly involved in artistic productions	Arts, Culture Design Medias

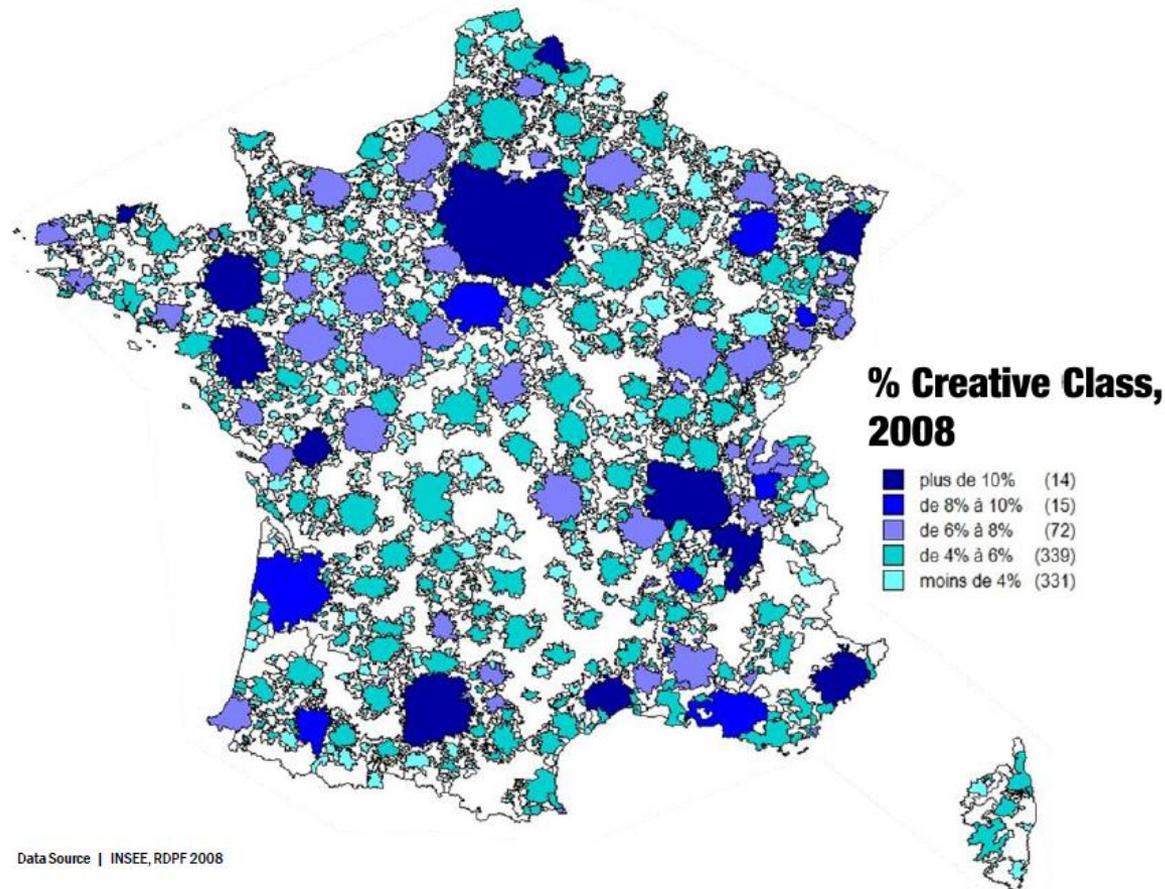
Source: S. Chantelot

Geography of talents (Richard Florida)



Creative class density in France

Urban Mapping



Data Source | INSEE, RDPF 2008

Source: Chantelot (2013)

1. Definition

Let us try a more analytical approach

The academic vision of creativity

- Florida's model has been extensively criticized
 - For instance, the sense of causality is not certain: do cities develop because they have a creative class, or do they attract those wonderful people because they develop? Other questionable hypothesis: depending on the countries/regions, it is not certain that all creative people are very mobile, etc. OK for attracting talents, but why not rising them as well? Or revealing potential creative communities within the territory?
- The concept of creativity needs more analytical work (in various contexts: individual *vs* organizational; scientific *vs* cultural;....) for becoming the basis of sound private strategies and public policies

A very basic and widely accepted definition of creativity

- Creativity corresponds to a positive mental attitude towards anything that is new.
- "*Creativity is the ability to produce work that is both :*
 - *novel (i.e., original, unexpected)*
 - *and appropriate (i.e., useful, adaptive concerning task constraints).*" (Sternberg & Lubart: *Handbook of Creativity* (1999, 2008))
- (*) • But, as far as innovation is concerned, something is lacking in this definition: the entrepreneurial (schumpeterian) dimension

« *Novel and appropriate* » ?

« Before you build a better mousetrap, it helps to know if there are any mice out there »

Mortimer B. Zuckerman, quoted by Williams&Yang in Sternberg *et al.* (2008) in the chapter on *organizational creativity*

Comments:

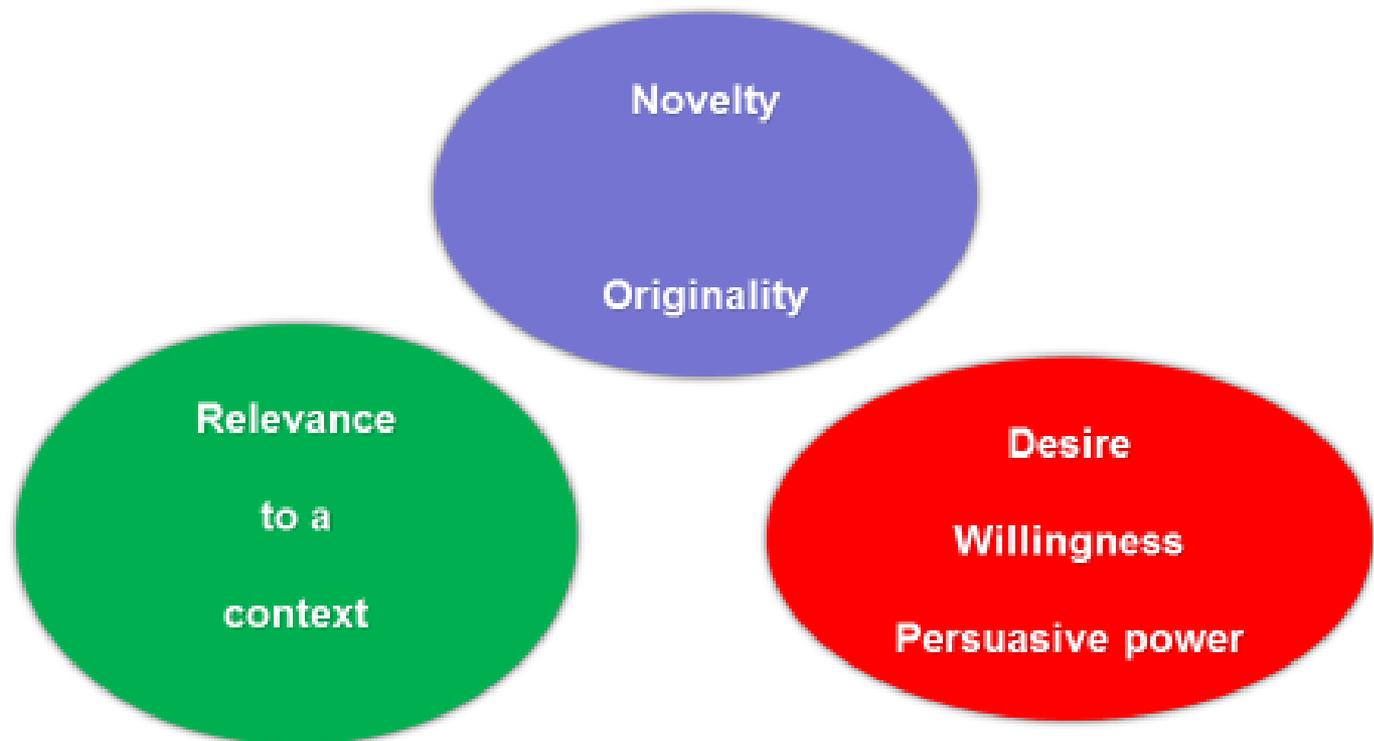
- If you invent a better mousetrap, you can patent it (this is *technological creativity*)
- But if there is little or no use of it, you will never get an innovation in the sense of Schumpeter (*economic creativity*)

From idea to innovation (or not)

<p>Idea</p>	<p>Not relevant for anything known</p>	<p>Relevant for something</p>
<p>Not new</p>	<p>/</p>	<p>Business as usual</p> <p><i>Nothing to be ashamed of: you can earn money and/or help people!</i></p>
<p>New</p>	<p>Not interesting (yet) for economy and society</p> <p><i>Can be interesting for science, philosophy, arts...</i></p>	<p>Creative idea</p> <p><i>Could lead to innovation if « allies » can be found</i></p>

A step further towards a complete theory of innovation

The creativity triangle



2. Economics

Back to basics:

- Economics of innovation, evolutionary economics
- Knowledge economics

Paradigmatic issues

- Mainstream (neoclassical) economic models: OK for short term description, and « business as usual » issues:
 - We can more or less rely on individual optimization attitudes and global market mechanisms.
- But not for long term qualitative change:
 - Here the model is an evolutionary one, based on relatively erratic creative attitudes plus some selection process.

Joseph A. Schumpeter
(1883-1950)

Innovation mechanism as the
result of entrepreneurial spirit:
the role of **individual innovators**
(in relationship with the global
system)



Joseph A. Schumpeter

(1883-1950)

the father of innovation theories
and evolutionary economics

- Principle of “**creative destruction**” (*schöpferische Zerstörung*)
- Main works: *Business Cycles: A theoretical, historical and statistical analysis of the Capitalist process* (1939); *Capitalism, Socialism and Democracy* (1942)
- Innovations according to Schumpeter:
 - **New markets or products**
 - **New equipment**
 - **New sources of labor and raw materials**
 - **New methods of organization or management**
 - **New methods of transportation or communication**
 - **New methods of advertising and marketing**
 - ...

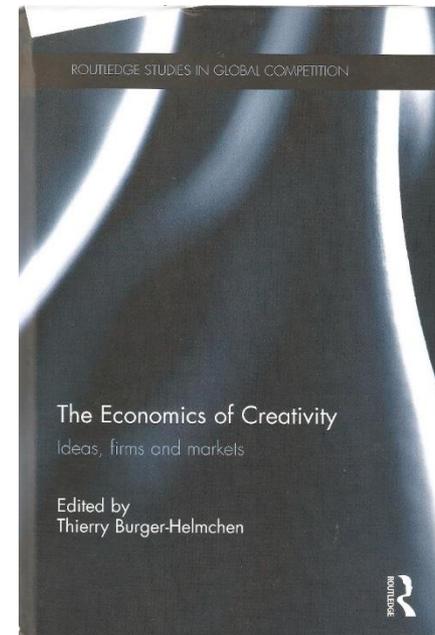
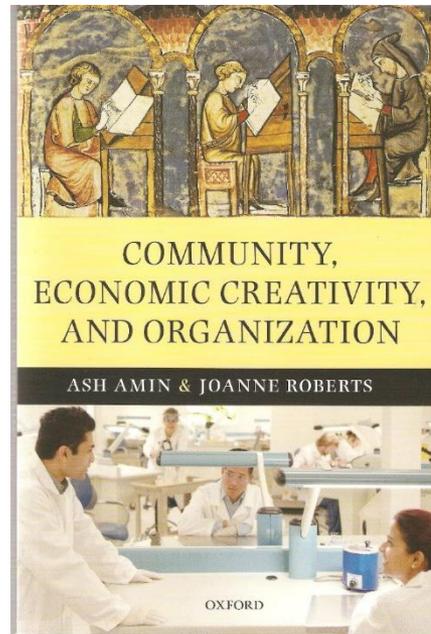
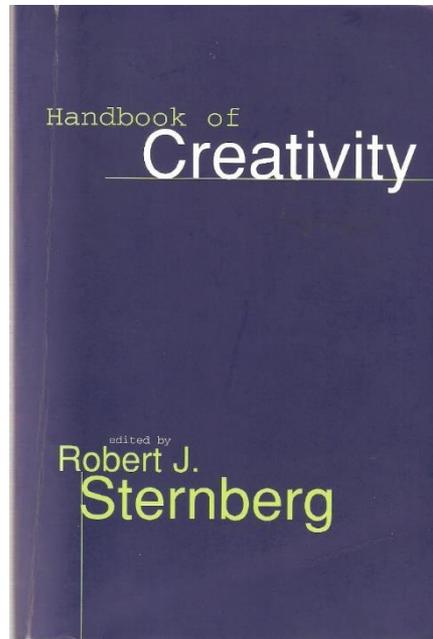
Three different domains of creativity

Field	Activity	Result	Measure
Science	Basic research	Discovery	Publications
Technology	Applied research	Invention	Patents (other IP rights)
Economy/ society	Industrial and commercial development	Innovation	Sales, profits, jobs

Evolution of focus in innovation studies

- Economics of technology (1970s)
- Economics of innovation (1980s)
- Economics of knowledge (1990s)
- Economics of creativity (2000s)

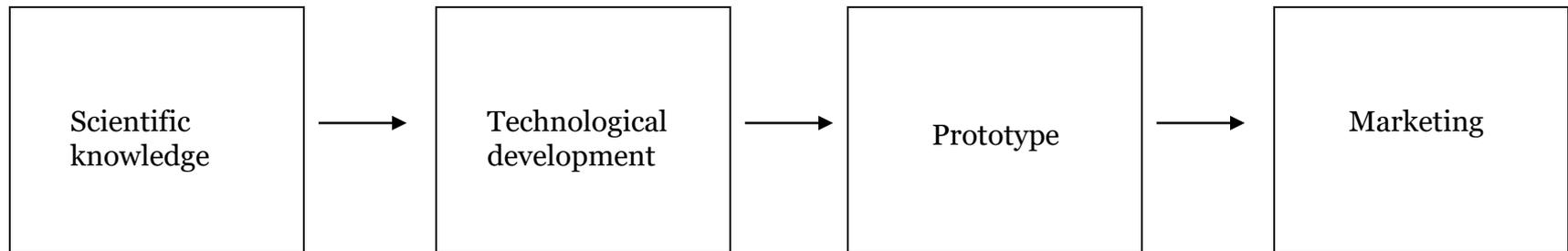
Exemples de publications on creativity



Innovation models:

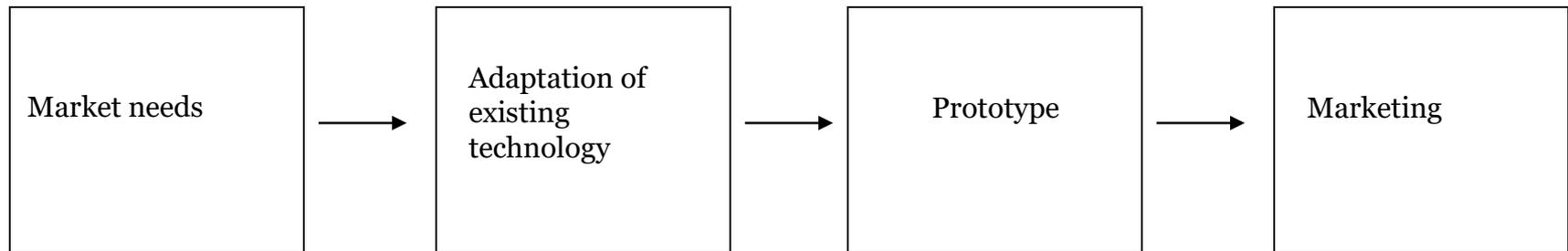
« technology push » vs « demand pull »

- Science & technology driven innovation process



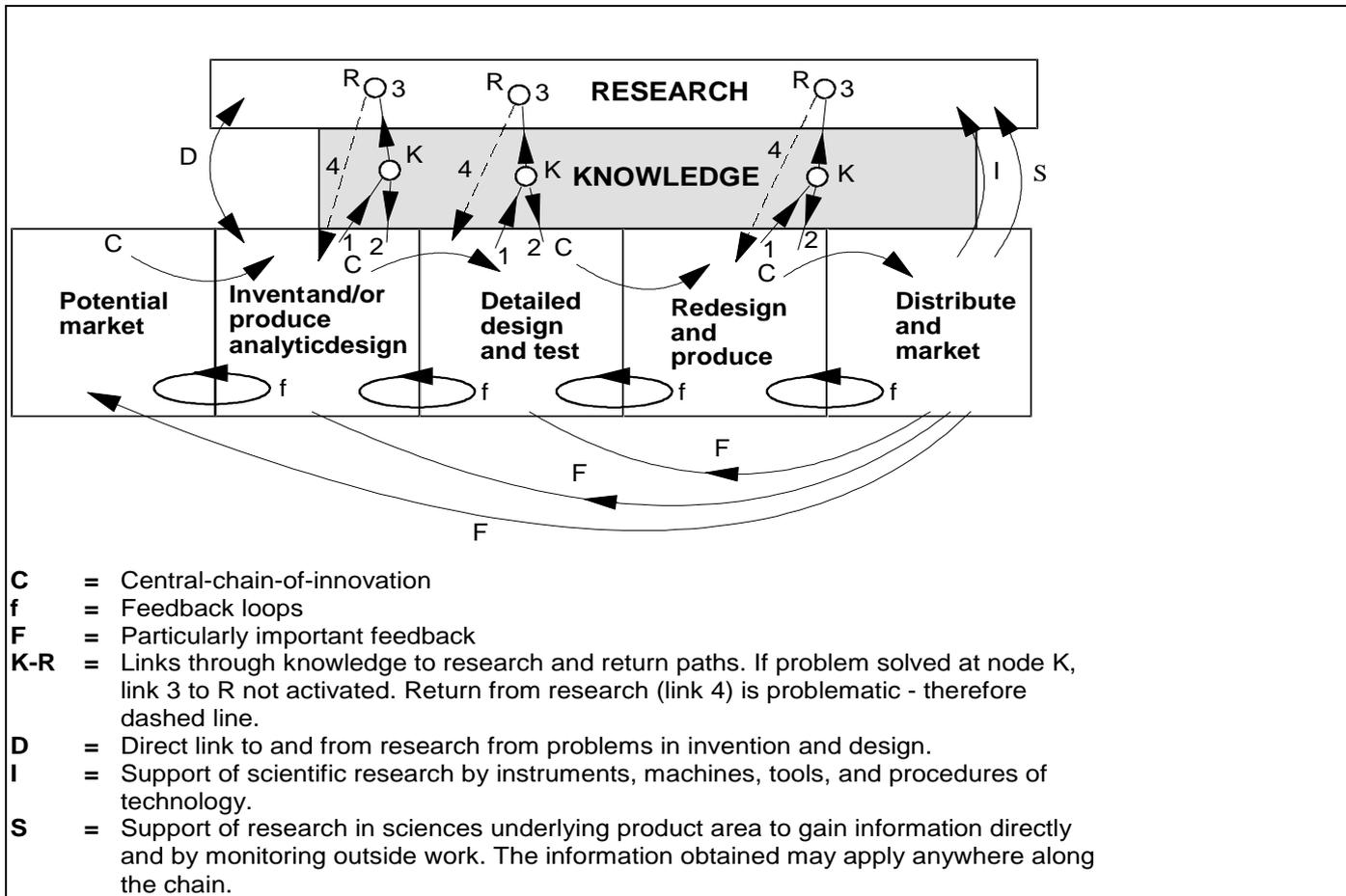
Schumpeter.1

- Market driven innovation



“Chain-linked model”

(Kline & Rosenberg, 1986)



Conclusion

- Knowledge creation and knowledge circulation are at the core of innovation processes, but not only, not necessarily, at the upstream end (R&D)
- Knowledge is not enough; an engine is necessary to move it, translate it, recombine it... This is the role of organizations : firms, institutions, cities...
- Every sort of knowledge can reveal useful, formal knowledge (*know what*) as well as tacit knowledge (*know-how*).

3. Management

Creation is not exactly the job of economists and managers, but *creativity* (context and conditions leading to creation) definitely is

Why creativity is essential

Quiz:

When you hire a CEO, will you mainly look for:

- 1) A pleasant person?
- 2) A learned person?
- 3) A creative person?

Answers

(quoting Sternberg & Lubart)

- 1) « it's hard to be perceived as pleasant when you may have to fire 20% of the company »
- 2) « they use computers or subordinates to remember the details for them »
- 3) **Please hire them « for their creative vision* of how to turn a company around »**

* Schumpeter insisted on the difference between a *manager* and an *entrepreneur*. The latter has a vision; he wants to change the world.

Remarks

- 1) Remember that innovation is a *creative destruction*: be prepared for destruction...
- 2) * For *incremental innovation*, it's good to know a lot and to accumulate know-what and know-how.
* But for *radical innovation* the question is more to *forget* the old way of knowing.
Real creative innovations imply the destruction of knowledge routines (*de-learn*)
- 3) To be creative means to « *think out of the box* ». → Problem for the management: the organization is almost by definition (Herbert Simon) a set of routines... and now you ask people to get rid of the routines?



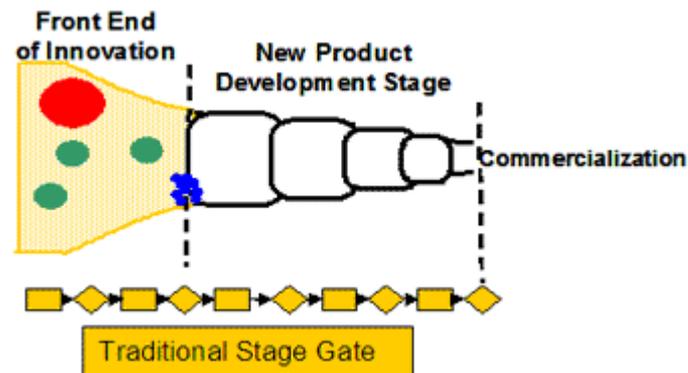
Now the point is:

Creative boss does not automatically mean a creative organization

- The main thing he/she should be creative at is innovative management: *organizational creativity*
- The boss is not the only one who can have ideas, but he/she is the one who makes the “go-no go” decision at the end of any creative project
- The principle is to be *tolerant* with any new idea (internal/external) as long as it is not lethal for the organization
- Many ideas come from **outside the hierarchical system**: to let them cross the boundaries, “knowledge brokers”, “*passeurs*” (smugglers), “knowledge angels” (*) are needed

What is Front End of Innovation ?

FEI means all the activities that come before the "formal and well structured" New Product Development (NPD) Portion.



Source:

Different ways and culture of management

- NPD (New Product Development) or NPPD (New Product and Process Development) is the more classical activity. R&D departments are used to do that
- FEI (Front End of Innovation) is more creative in both senses: concerns the real creative step; needs creativity in the management itself.
 - Some authors (Koen et al (2001) for instance) use the expression Fuzzy Front End (FFE)

The role of communities in FFE of Innovation (Cohendet et al., 2013)

- First step of the process: **Discovery** (*sensing the opportunity*)
 - Collective invention phase; Connectivity between heterogeneous items required; role of *knowing communities* for the generation of *absorptive capacities*.
- Second step of the process: **Translation/Seduction** (*seizing the idea*)
 - Finding allies in other communities; codification and communication; bringing the knowledge to the management hierarchy (pushing the idea towards the evaluation phase); involves some « delearning » activities (mental creative destruction).
- Third step of the process: **Appropriation** (*reconfiguring the concept*)
 - Harmonization with the « firm's grammar » ; transforming a concept into a project. After that it is possible to enter the NPPD phase.

4. Territories

How territories, like other forms of organizations, can manage creativity

Which are the typical territories for creative activities?



Source: S. Chantelot

Communities of knowledge

Knowledge is produced in communities:

Case of scientific communities (but also artistic communities):
Epistemic communities (David, Cowan, Foray, Cohendet...)

Very general case of *Communities of practice* (Wenger)

Communities overlap institutionnal borders.

Individuals can therefore work as "boundary spanners" of their organization or "knowledge brokers" between organizations, with the help of the communities they belong to.

First case study: Montréal (French Canada)



Ubisoft

Cirque du Soleil



The anatomy of the creative city

Cohendet et al. (2010) explain the complex process of creation linking three levels :

- The *underground* where relatively loose communities **explore** possible new concepts in various fields of knowledge or cultural spheres;
- the *upperground* formed of explicit organizations (firms and institutions), focusing on the **exploitation** of the new knowledge and therefore possibly performing the relevant innovations;
- and the *middleground* (composed of specific actors, places or spaces...) which is essential for **catalyzing the transmission** of novel opportunities between underground and upperground.

Examples

- **Underground** : artistic milieus, cultural communities, internet groups...
- **Middleground** : intermediary groups, platforms for exchange, events and festivals, *idea's labs*...
→ *places and spaces*
- **Upperground**: firms and institutions

Various forms of *middleground*

- **Places**: the realm of near, intimate, and bounded relations, physically established
- **Spaces**: the realm of far, impersonal, and fluid relations, cognitive constructions (Amin 2004)
- **Projects** : engage local communities in conversations and common working
- **Events**: open the small local worlds to new global influences (Bathelt et al. , 2004).

The Cohendet *et al.* (2010) model

