Dynamics of digital ecosystems in Canada: The case of the video game industry in Montreal

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HEC Montréal Mosaic

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The video game industry: a flagship of creative industries

Creative industries (Caves, 2000; Asheim & Gertler, 2005; Asheim & Vang, 2005) are at the crossroads of…

- Arts and culture

  → Symbolic knowledge: highly context-specific, strong local component

- Science and technology

  → Analytical knowledge: weakly context-specific, highly global

- Business and economics

  → Synthetic knowledge: only partially context-specific

Video game industry: about 50% artistic/symbolic 50% analytical/synthetic.

On video games

Industry trends in video games

- Several radical transformations following the increased globalization of markets, the digitalization of the economy, the disaggregation of value chains and the worldwide dispersion of their activities.

- Greater complexity, accompanied by a greater commodification of the various elements that make up for a game (art, music, software, etc.)

- Opening of new markets (new platforms, new game types, new audiences, etc.)
    → Tension between niche markets vs. global markets

Many specialized clusters…

"Shanghai? They do animals!"…

"Kiev, it's all about PC… Programming."

"For vehicules, we have guys in Newcastle…"

"Vietnam: they just want all the middle segments of the value chain"

"Singapore: the waves in oceans !"

"You need Mystique Rooms? : go to Budapest!"

# … but, only a handful of core creative clusters!

- Beyond, the myriad of specialized clusters, there is a very limited number of clusters (Los Angeles, San Francisco, London, Montréal, Tokyo), which "make the industry"

  - "A heterarchy of core creative clusters" (there is no cluster dominating)

  - Each of these creative nodes has been successful in coupling artistic disciplines (which exhibit strong local embeddedness) with science and technology ones (which require important global connections).

  - "These nodes are the loci of emergence and formation of most of the breakthroughs of this industry, they are the testbeds for conducting rigorous and replicable testing of new tendencies, new business models, new computational tools, and new technologies".

Understanding the development of core creative clusters

- Lorenzen and Mudambi (2013) have provided a broader theory of cluster connectivity, highlighting that connectivity appears in two generic forms:

    i. Global pipelines (organization-based), Bathelt et al. (2004), Bathelt (2007)

    ii. Personal relationships (personal affinity, social proximity and membership to the same communities).

- In the discussion of their article, they underline the need to look at the interdependence between personal relationship and pipelines, suggesting that two analytical categories "may coexist and reinforce each other" (Lorenzen, Mudambi, 2013: 524).

Hypotheses

- These local hubs articulate both formal/informal and local/global. They are mere "fabrics of ideas" as bricks of foundation of the entire industry.

- These creative nodes offer, thanks to their rich local middleground, favorable conditions for creative ideas to move from the underground to the upperground, and vice versa.

- As they transit through the middleground, ideas can be nurtured, developed, enhanced, strengthened and valorized.

- The local ability to generate ideas and equip them with sufficient knowledge to make them economically viable cannot be obtained through virtual platforms.
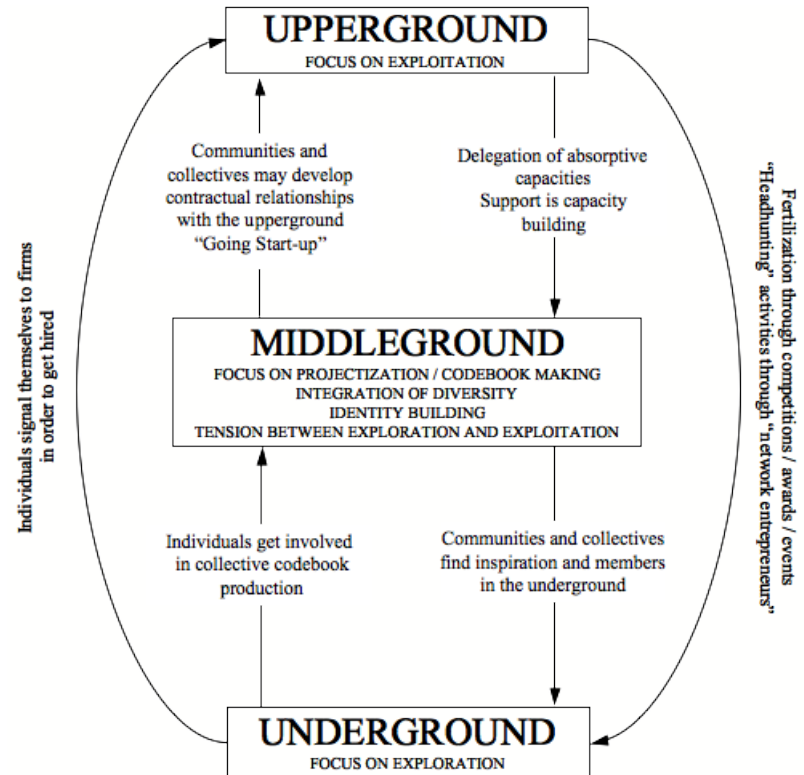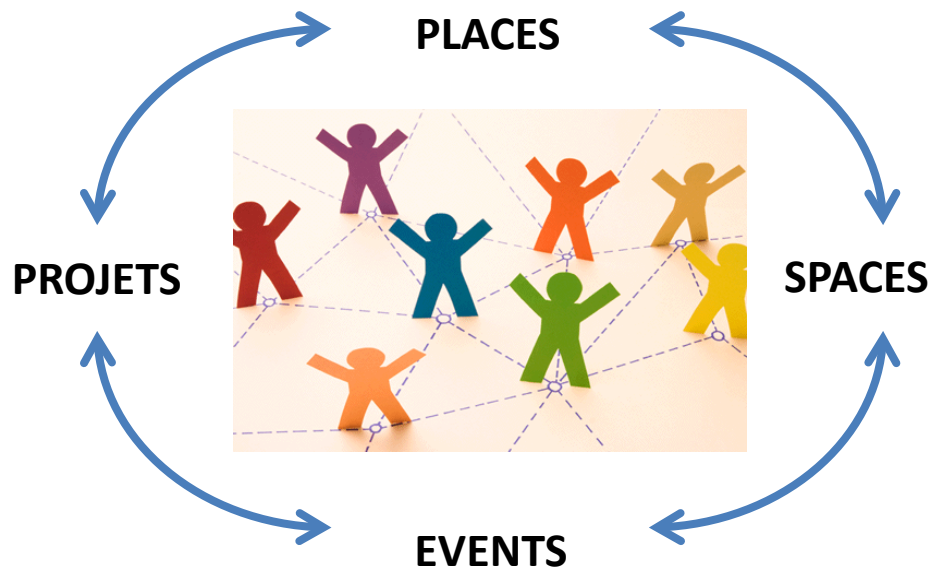

Cohendet, Grandadam, Simon (2010, 2013)

Dynamics of the middleground

Places: the realm of near, intimate, and bounded relations, physically established.
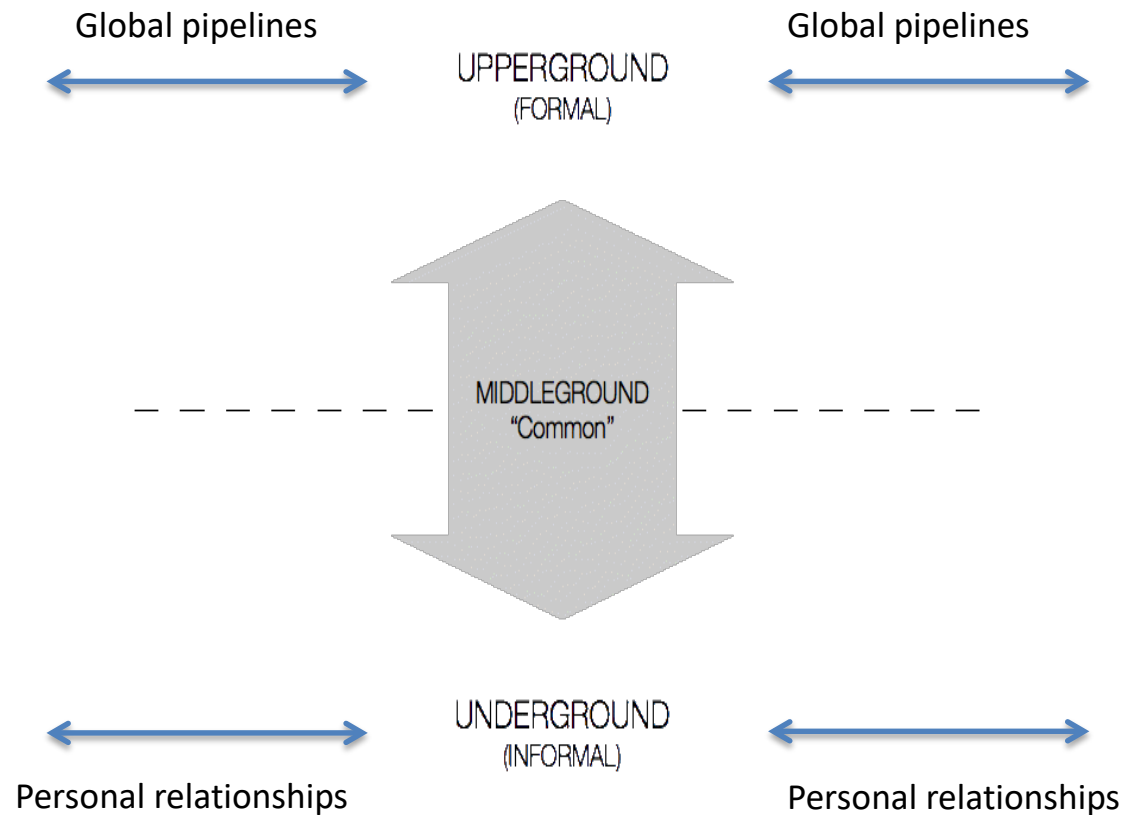
Spaces: the realm of far, impersonal, and fluid relations, cognitive constructions.


PLACES

PROJETS

SPACES

EVENTS

Projects: engage local communities in conversations and work together.

Events: open the small local worlds to new global influences.

Local dynamics of innovation in a core creative cluster

Global pipelines

Global pipelines

UPPERGROUND
(FORMAL)

MIDDLEGROUND
"Common"

UNDERGROUND
(INFORMAL)

Personal relationships

Personal relationships

Local dynamics of innovation in a core creative cluster connecting with other creative industries

UPPERGROUND
(FORMAL)

MIDDLEGROUND
"Common"

UNDERGROUND
(INFORMAL)
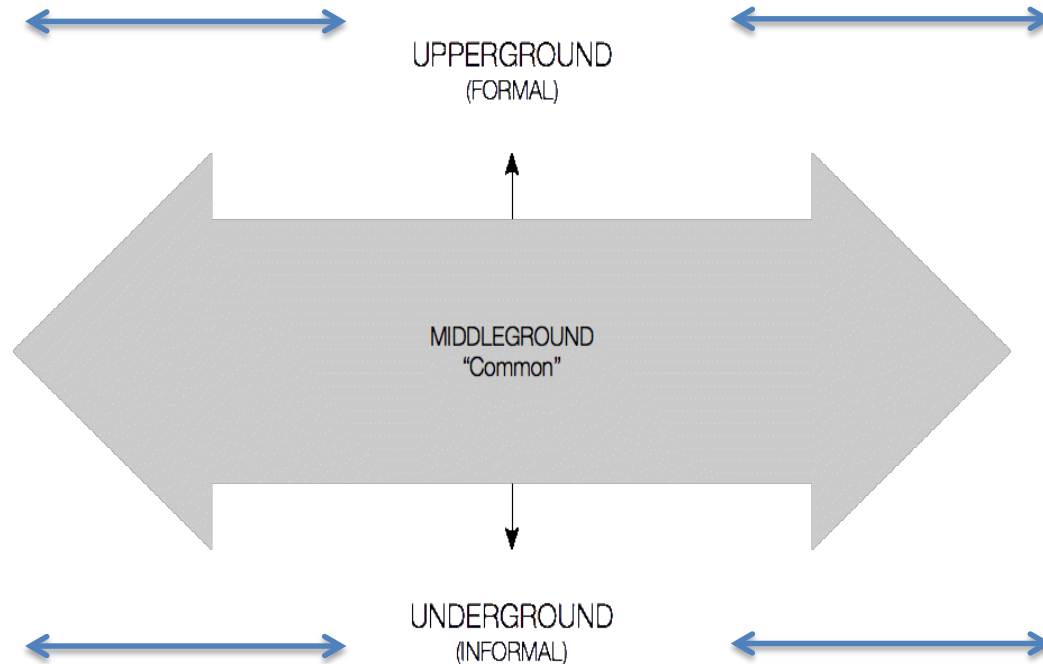
- Film industry
- Performing arts
- Advertising
- Design
- Fashion
- TV and radio
- Music industry
- Etc.

The case of Montréal

Video game companies in Montréal

(More than 11,000 direct jobs)

UBISOFT Montréal – 3,000 employees
EA Montréal – 500 employees
WARNER – 400 employees
GAMELOFT Canada – 370 employees
Behaviour Interactive – 350 employees
EA Mobile – 300 employees
EIDOS Montréal – 280 employees
BEENOX – 275 employees
FRIMA Studio – 200 employees
FUNCOM – 150 employees
AIRBORNE Mobile – 70 employees
Etc.

Some of the "blockbusters" developed in Montréal

Since 2013, the turnover of the video game industry in the world (US$101,62 billion) is larger than the turnover of the movie industry (US$88.3 billion)…

The key role of public policy: fiscal measures (1)

- Since 1997, video game developers have benefited from an extensive tax credit program for the production of multimedia titles:

    - Titles intended for commercialization (excluding vocational training titles): 30% (24%) of labor costs + 7.5% (6%) of labor costs if in French language version
    - Other titles: 26.25% (21%) of labor costs

- Such a tax credit "costs" up to $100 million per year

The key role of public policy: advances and recoupments (2)

- In 2010, the Canada Media Fund decided to help independent developers by offering repayable advances or investment recoupments destined to fund the various stages of video game making:

  - For development (repayable advances): maximum contribution of the lesser of 75% of the project's eligible costs or $300,000.

  - For production (recoupment investment): maximum contribution of the lesser of 75% of the project's eligible costs or $1 million.

  - For marketing (repayable advances): maximum contribution of 75% of the project's eligible costs or $400,000, whichever is less.

The key role of public policy: venture capital and investment funds (3)

- In 2014, the Government of Quebec considered reducing the tax credits granted to the industry.

- However, faced with an unprecedented mobilization ("It's the entire ecosystem that will disappear!") and after an extended consultation with key players in the video game industry and various experts groups, the government finally pulled back…

  - The tax credit program for the production of multimedia titles was maintained.

  - The government added $15 million in investment funding for the development of Québec intellectual property in video games: maximum contribution equal to 35% of eligible project expenditures ($175,000 to $3 million per project up to a maximum of $5 million per company for all of its projects).
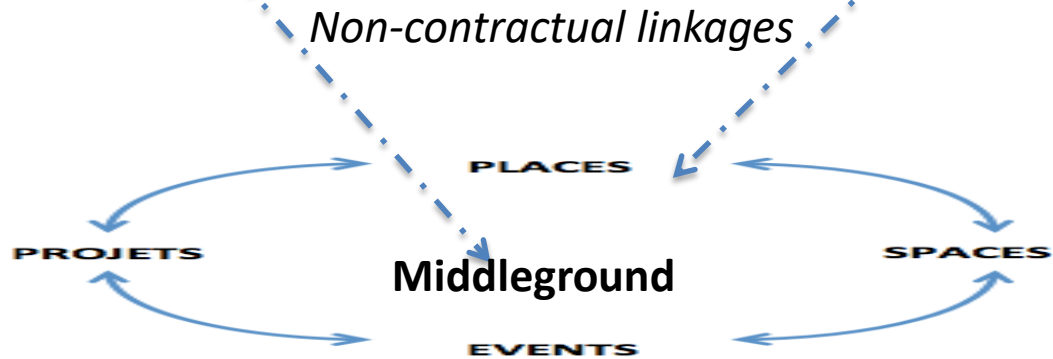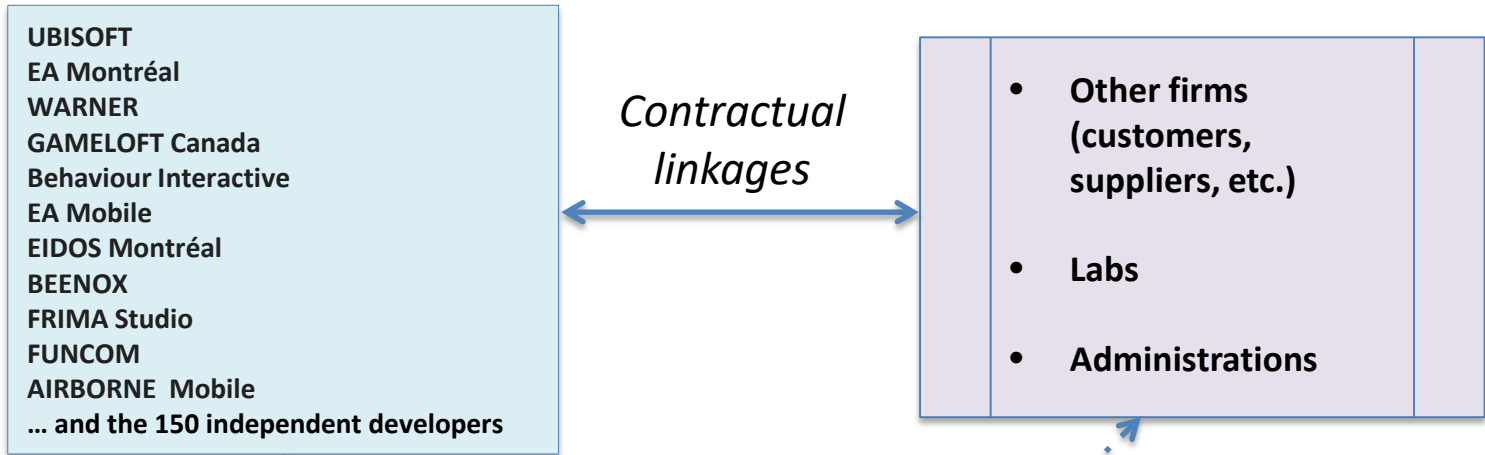
Original titles developed in Québec
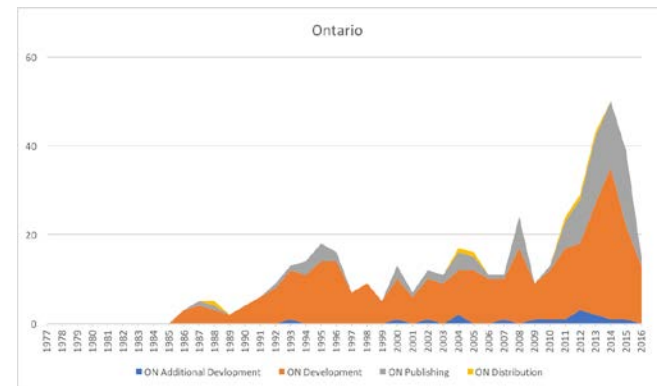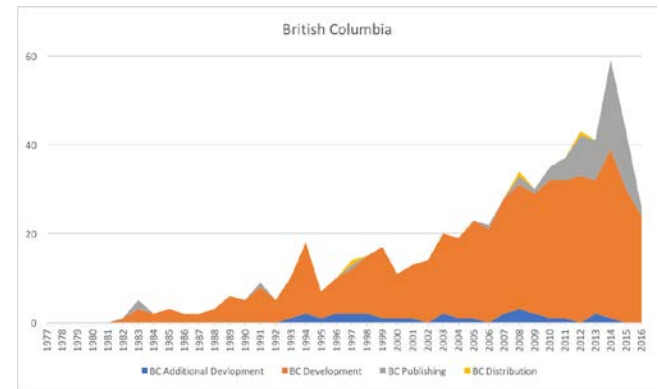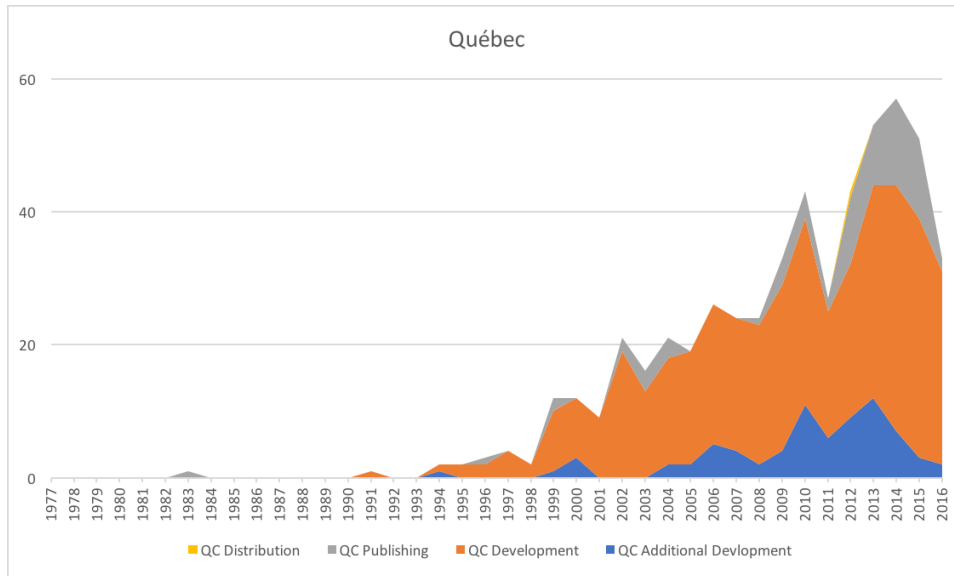
More than 150 independent studios in 2017 (between 10 and 100 employees)

The video game ecosystem of Montréal

LOCAL SYSTEM

UBISOFT
EA Montréal
WARNER
GAMELOFT Canada
Behaviour Interactive
EA Mobile
EIDOS Montréal
BEENOX
FRIMA Studio
FUNCOM
AIRBORNE Mobile
… and the 150 independent developers

Contractual linkages

- **Other firms (customers, suppliers, etc.)**
- **Labs**
- **Administrations**

Non-contractual linkages

PLACES

PROJETS **Middleground** SPACES

EVENTS

Underground

Examples of elements of the video game middleground in Montréal

SAT (Society of Technological Arts)

OpenDoor Workshops

Jazz Festival of Montréal

Fantasia Festival

DemoNight

Marché des Possibles

Pop Montréal

National School of Theater

CODEX (program to support students)

Alliance Numérique

La Guilde des Développeurs Indépendants

GamePlay Space (co-working space)

Execution Labs

IGDA

Building the "indie" ecosystem

- **The Guilde** is a non-profit organization that regroups video game developers as well as creators and entrepreneurs from similar domains established in Quebec. The Guilde's mission is:

  - To allow the video game developer community to exchange and to structure itself.
  - To encourage and facilitate the development of emerging studios.
  - To support sustainability and facilitate the expansion of established game developers.
  - To enable a stronger commercial, media, and political representation.

- **Execution Labs** helps independent studios developing downloadable titles for mobile, PC, and consoles and using both premium and free-to-play business models, by providing funding and often bringing the first professional external capital to a studio or project.
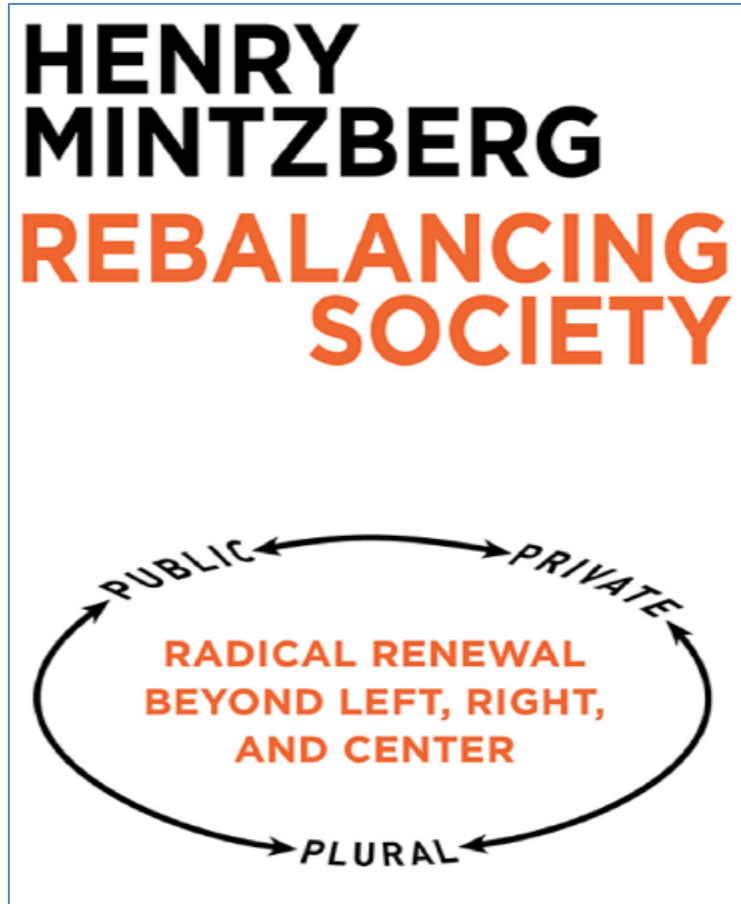
Theoretical perspectives (1)

- Analyzing the characteristics of a local ecosystems (such as the local ecosystem of video games in Montréal): "self generating" dynamics, power of attraction, resilience (Crespo *et al.*, 2013; Boschma, 2015).

- Analyzing the non-contractual mechanisms of the middleground. E.g. Each of these mechanisms highlights a "friction" between different forms of knowledge.

  - Events: Local buzz/global pipelines" (Bathelt *et al.*, 2004), "organized anarchies" (Bathelt & Gibson, 2015), "field configuring" events (Lampel & Meyer, 2012)

  - Places: Serendipity from unexpected encounters between the usual suspects and "the foreigners": "Third-places" (co-working spaces, fab labs, living labs, etc.) (Suire, 2015; Capdevila, 2015)

  - Spaces: Cognitive building of new knowledge through "new manifesto"

  - Projects: Formation of new practices and new form of tacit knowledge.

Theoretical perspectives (2)

- Questioning Moore's vision of ecosystems:

  - "*Managed by one or more leaders, the ecosystem is a project that is both deliberate and co-evolutive, leading to the value enhancing alignment of actors, through the process of collective innovation. Governed democratically, simultaneously competitive and cooperative, it is a modular layout of firms sharing a community of destiny*" (Moore, 1993)
  - To this "systemic" vision, we propose to add the constant interactions (and transformations) between the formal and the informal (in particular between firms and communities).

- The analysis in terms of ecosystems reorients the traditional concerns (how institutions shape actions), shifting the focus to understand how action affects institutions.

Mintzberg: "Rebalancing society"

(2014)

Merci, Thanks