Institut Mines-Télécom
Business School

Management sciences and the Anthropocene:

Towards socially responsible scholarship?

Cédric GOSSART

Professeur en Sciences de gestion

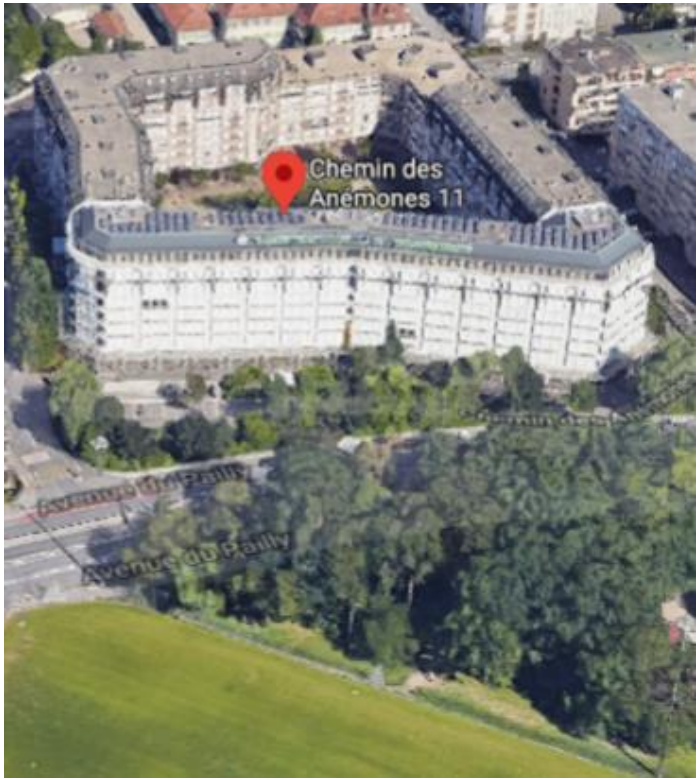
Université Paris-Saclay, Univ Evry, IMT-BS, LITEM, 91025, Evry, France

Institut Mines-Télécom Business School
9 rue Charles Fourrier 91011 Évry Cedex
Tél : 01 60 76 40 40
www.imt-bs.eu

Institut Mines-Télécom Business School
ITEM
Laboratoire en Innovation, Technologies, Economie et Management
université evry val-d'essonne
université PARIS-SACLAY

uniting skills`

WHY DID I CHOOSE THIS TOPIC?



UN environment programme

Geneva, July 1994
Framework Convention on Climate Change

WHY DID I CHOOSE THIS TOPIC?

ICT & SD

(Green ICT, Rebound effects, EcoInfo book)

Firms' environmental behaviour (PhD)

University of Sussex Business School
SPRU - Science Policy Research Unit

ECOPATENTS

UNE ANALYSE QUANTITATIVE DES STRATÉGIES D'ÉCOINNOVATION POUR RÉDUIRE LES DEEE

Septembre 2012

get

Institut National Télécom
9, rue Charles Fourier
91 011 EVRY cedex

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Business School

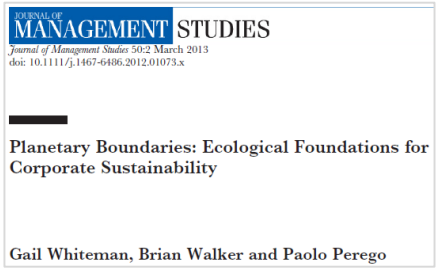
ICT Innovations for Sustainability pp 435-448 | Cite as

Rebound Effects and ICT:

Rockstrom et al. (2009)

Steffen et al. (2011)

Whiteman et al. (2013)



Tsui (2013)

Management sciences and the Anthropocene:

Towards socially responsible scholarship?

(focus on MS research)

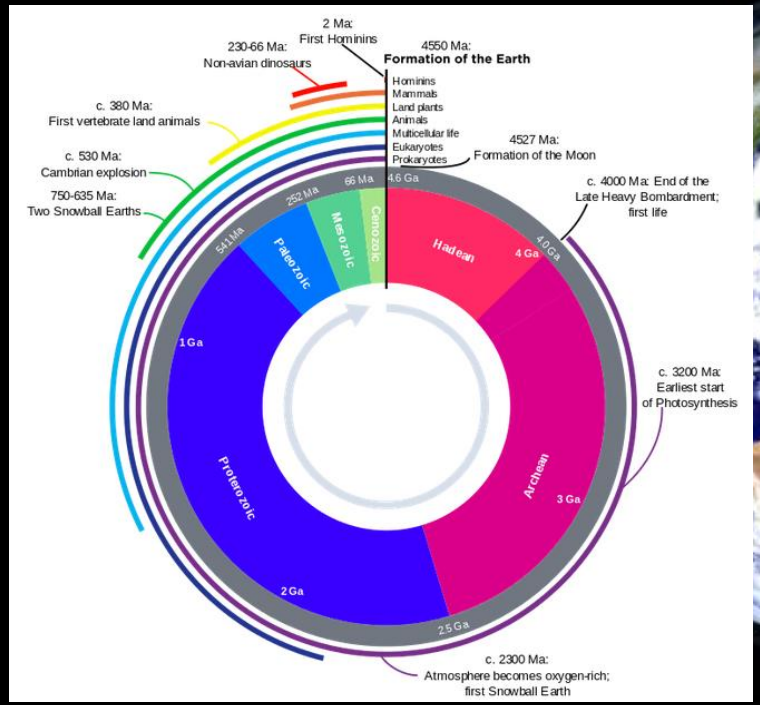
ANTHROPOCENE
THE HUMAN EPOCH

1. A word on the context

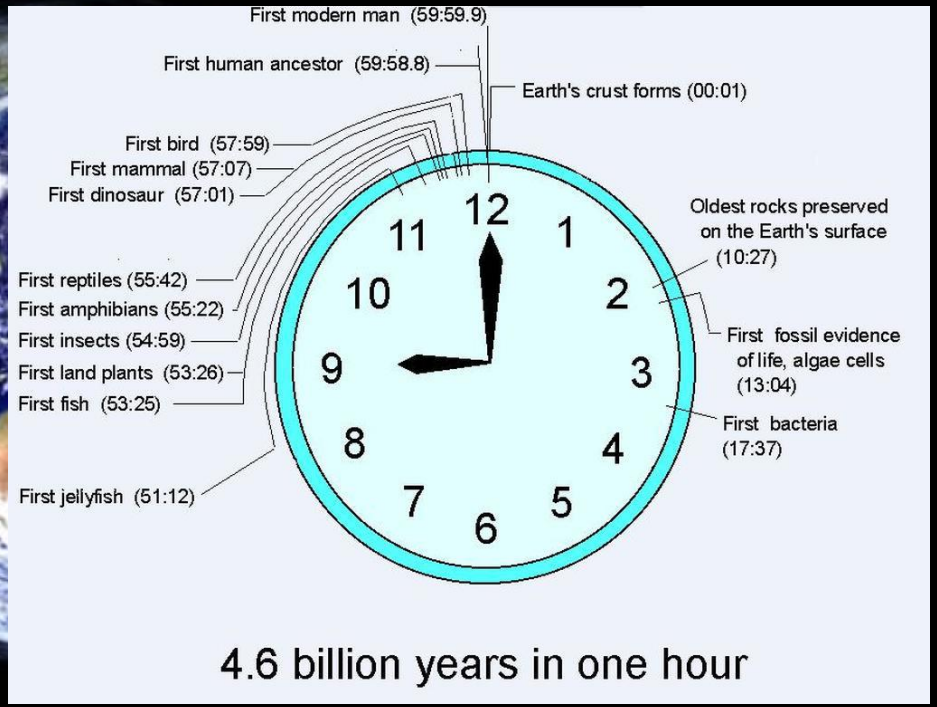
2. MS & grand challenges

3. Academic practices & the Anthropocene

1. A word on the context



https://en.wikipedia.org/wiki/History_of_Earth



http://jan.ucc.nau.edu/lrm22/lessons/timeline/24_hours.html

SAPIENS: A LONG HISTORY OF HUNTERS-GATHERERS

Homo sapiens

-300 000

https://en.wikipedia.org/wiki/Hunter-gatherer

-10 000

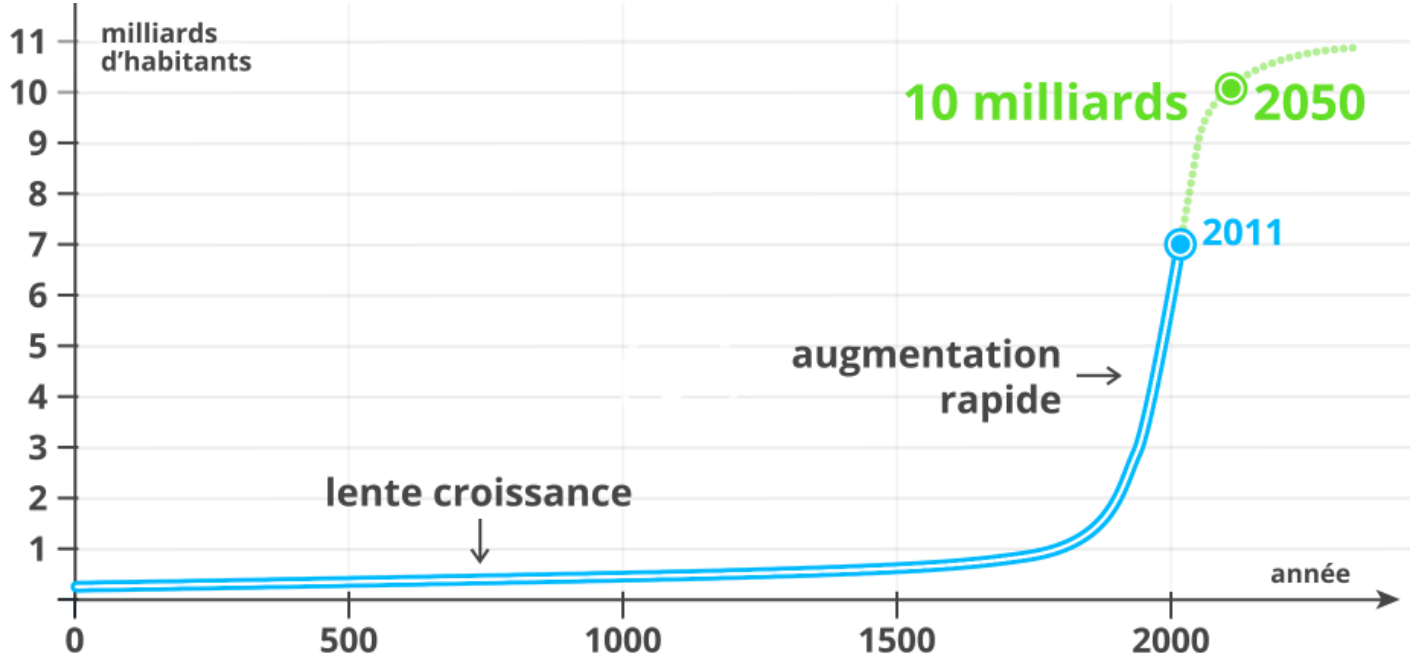
https://fr.wikipedia.org/wiki/Histoire_de_l'agriculture

1782

https://en.wikipedia.org/wiki/Watt_steam_engine

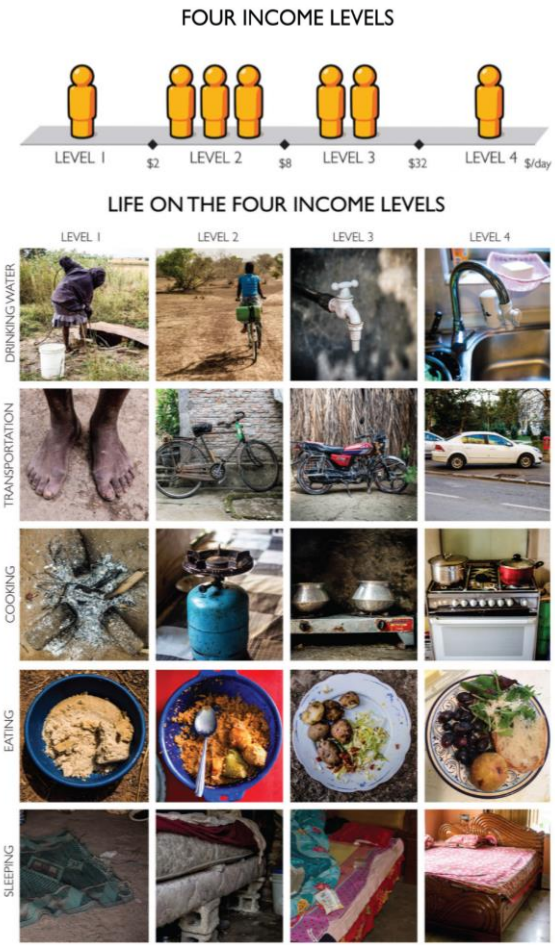
https://en.wikipedia.org/wiki/Industrial_Revolution

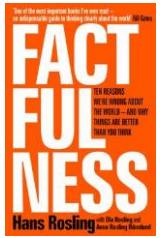
DRAMATIC CHANGES: DEMOGRAPHY



https://www.ined.fr/fr/tout-savoir-population/jeux/la-population-mondiale/

DRAMATIC CHANGES: LIFESTYLES

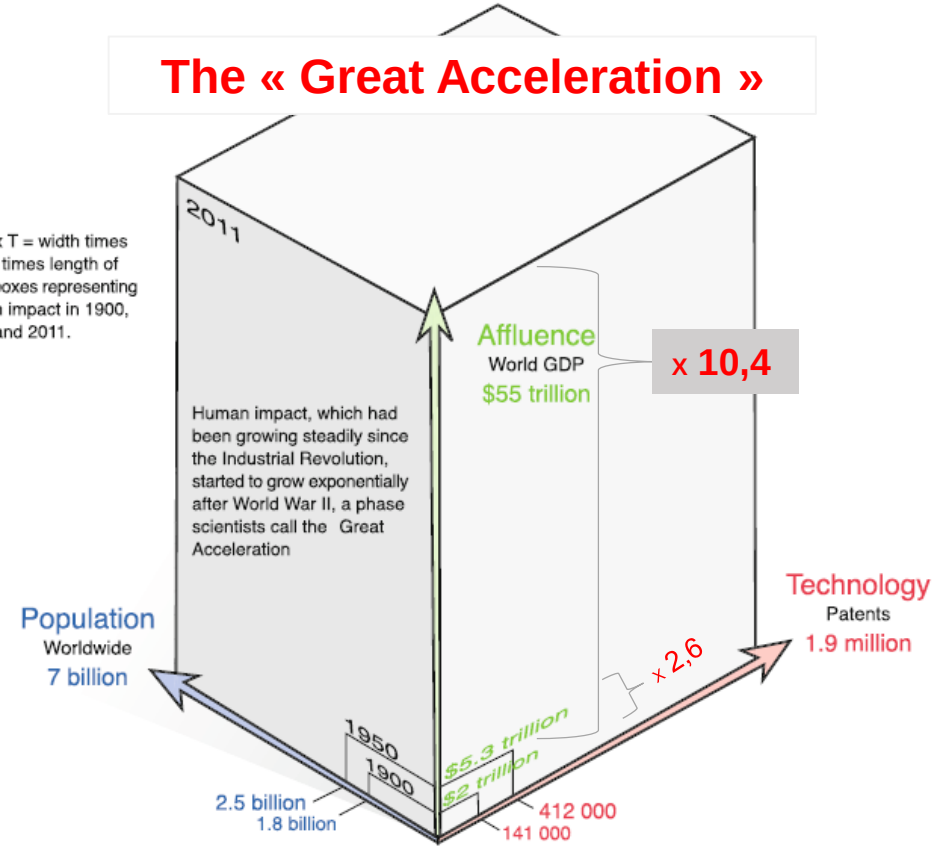




https://www.gapminder.org/factfulness

The « Great Acceleration »

P x A x T = width times height times length of three boxes representing human impact in 1900, 1950 and 2011.



Source : Steffen W. et al. (2011). The anthropocene: from global change to planetary stewardship. *Ambio* 40(7): 739-761.

Waves of technological development

"gales of creative destruction"

Early mechanization
Textiles
Waterpower
Canals

Steam power +railways
Steam engines
Machine tools
Railways
Steamships

Electrical + heavy engineering
Electrical+ Heavy engineering
Synthetic dyes
Electricity

Fordist mass production
Autos
Airlines
Consumer durables
Petro-chemicals
Process plant
Plastics
Highways
Armaments
Aluminium

Information+ communications technology
Computers
Telecommunications
Software
CIM
New materials
ISDN
IT services

Biotechnology
Space/satellite
Environmental technologies

Key 'Carrier' sectors

1770 | 1840 | 1890 | 1940 | 1990 | ?

Key production factors

Cotton, pig iron | Coal, transport | Steel | Energy (especially oil) | Microelectronics

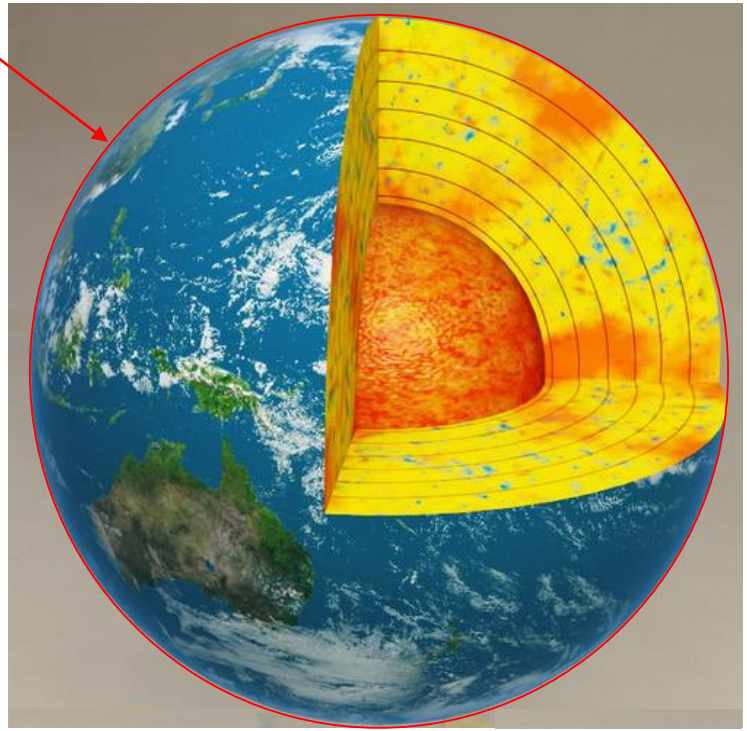
Key factor industries

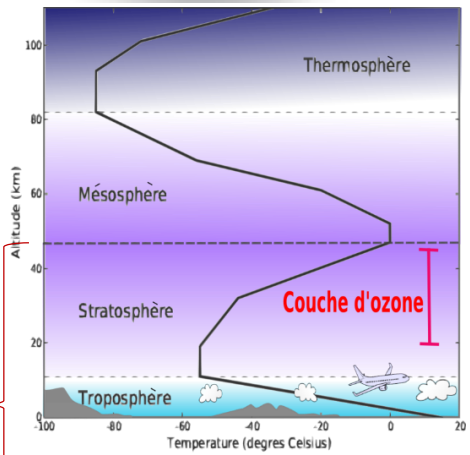
Source: Dodgson et al. (2008). *The Management of Technological Innovation.* Oxford University Press, 2d ed., p. 27, Fig. 2.1.

THE THIN LAYER OF LIFE ON EARTH…

Where we find the biosphere [-11000 m. → +6000 m.]

(Vernadsky, 1929)



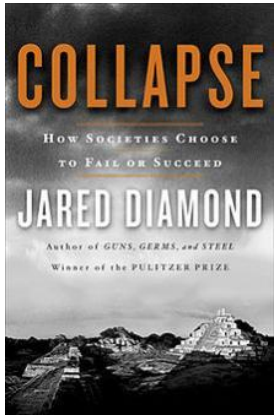


Ecosphere

(L.C. Cole, 1958)

http://www.bruno-latour.fr/node/754

RISK OF ECOLOGICAL COLLAPSE ?

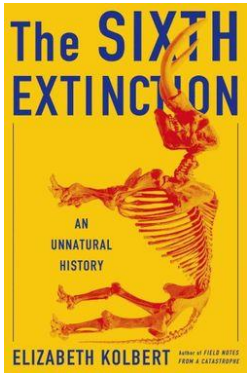


Source: http://en.wikipedia.org/wiki/Collapse:_How_Societies_Choose_to_Fail_or_Succeed

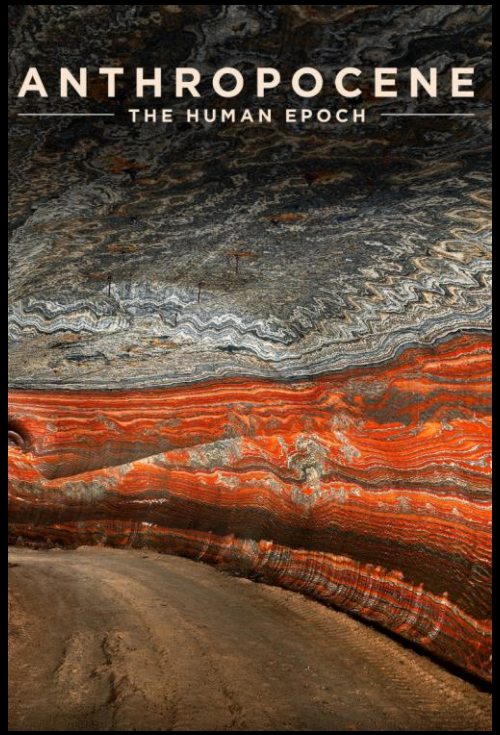
Source: http://www.ted.com/talks/jared_diamond_on_why_societies_collapse
(18 minutes; 2,6 million views)

https://www.newyorker.com/magazine/2019/05/20/climate-change-and-the-new-age-of-extinction

https://en.wikipedia.org/wiki/Elizabeth_Kolbert

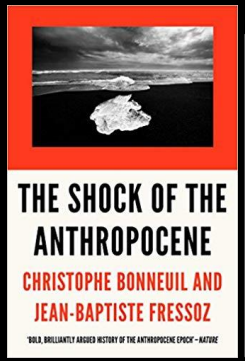


Anthropocene?

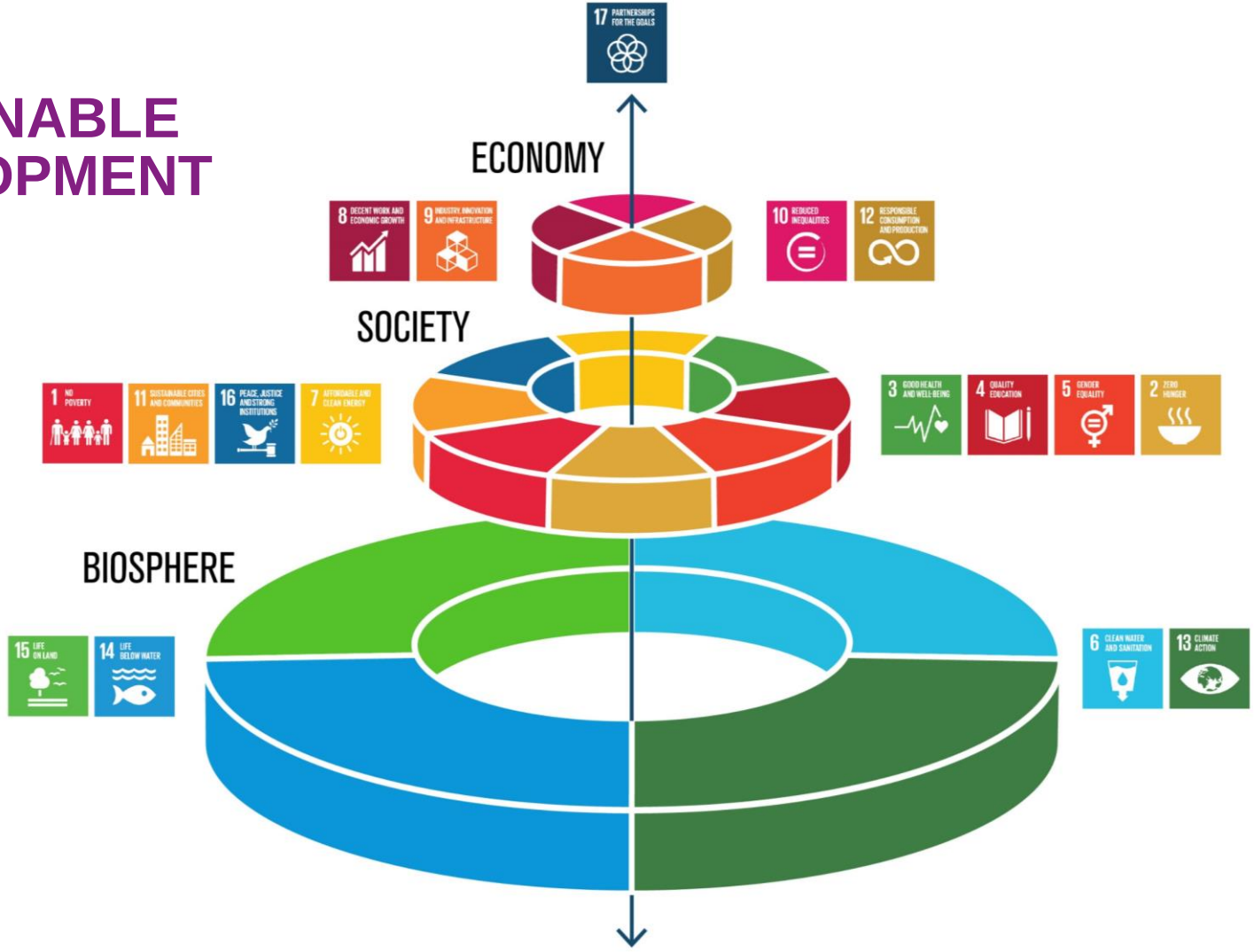


http://www.metropolefilms.com/index.php/filmlink?id=30638a26-6f1d-e811-9449-0ad9f5e1f797

The Anthropocene is the geological epoch when humans have pushed the planet out of its ecological limits.



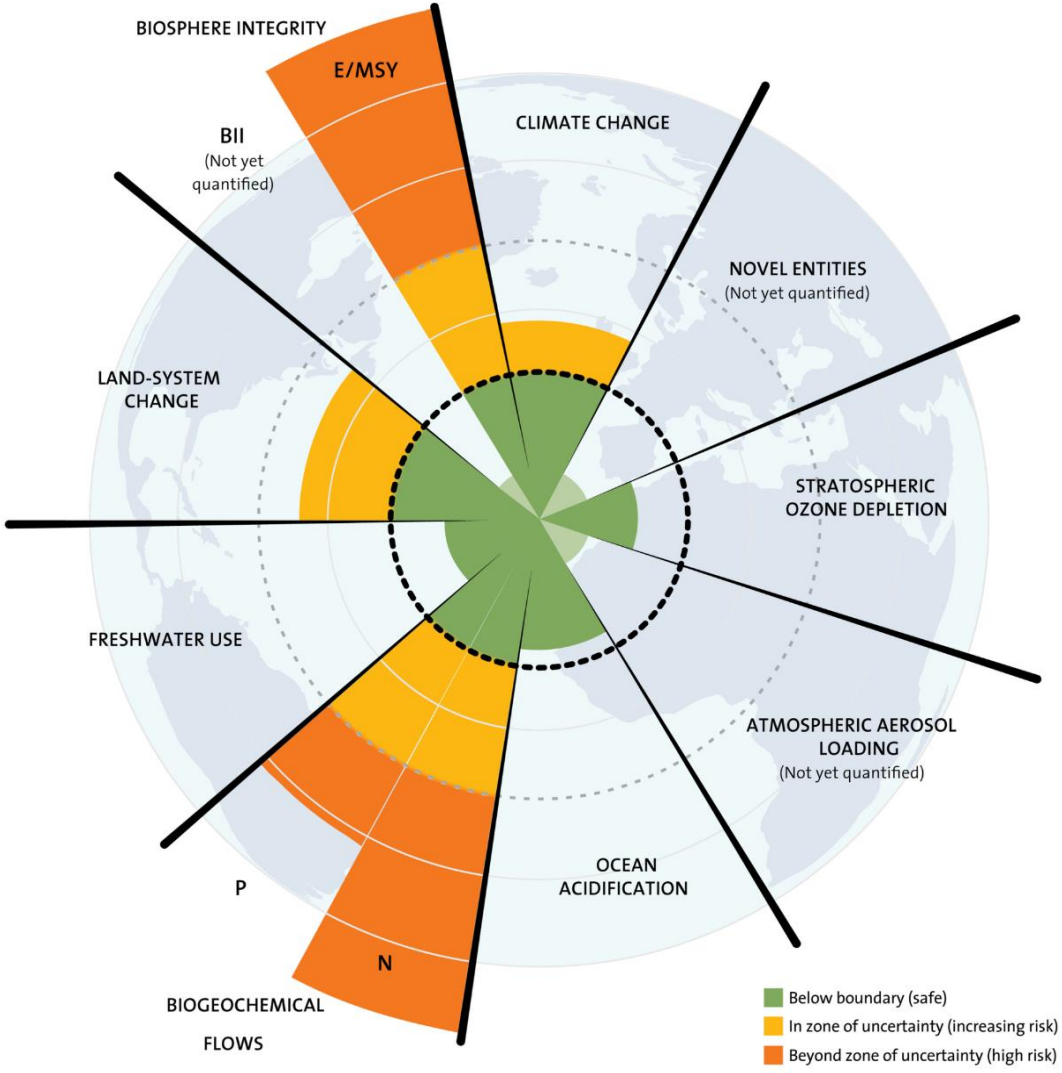
17 SUSTAINABLE DEVELOPMENT GOALS



Source : http://www.stockholmresilience.org/research/research-news/2016-06-14-how-food-connects-all-the-sdgs.html

PLANETARY BOUNDARIES

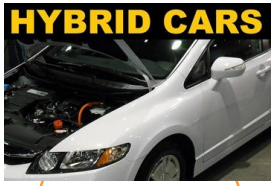
"The planetary boundaries framework defines a **safe operating space for humanity** based on the intrinsic biophysical processes that regulate the stability of the Earth System."



Source: http://www.stockholmresilience.org/research/planetary-boundaries.html

ANTHROPOCENE
THE HUMAN EPOCH

CALLING FOR SYSTEM INNOVATIONS



Improvement of environmental efficiency

factor 10 or more

factor 5

factor 2

system optimization

system redesign

system innovation

5

10

20

Time horizon (years)

Source: Tukker, A. and M. Butter (2007). Governance of sustainable transitions: about the 4(0) ways to change the world. *Journal of Cleaner Production* 15(1): 94-103.

2. MS & grand challenges

Do management scientists take the Anthropocene seriously?

ANTHROPOCENE
THE HUMAN EPOCH

A WORD ON TEACHING & GRAND CHALLENGES

J Bus Ethics (2016) 139:737–754
DOI 10.1007/s10551-015-2896-6

Beyond the Curriculum: Integrating Sustainability into Business Schools

Mollie Painter-Morland[1,2] · Ehsan Sabet[3] · Petra Molthan-Hill[4] · Helen Goworek[5] · Sander de Leeuw[3,6]

	Existing Structures	*New Structures*
Narrow curricula	*Quadrant I* Piggybacking Integration of sustainability within existing structures by adding sustainability to individual sessions of courses or modules	*Quadrant II* Digging deep Integration of sustainability through new stand-alone modules
Broad curricula	*Quadrant III* Mainstreaming Integration of sustainability within existing structures but with the emphasis on a broader cross-curricular perspective (entire curriculum)	*Quadrant IV* Focusing Integration of sustainability through new cross-disciplinary offerings such as sustainability-related courses which are required for all business school students and new programmes

Développement durable & Responsabilité sociale des organisations

Institut Mines-Télécom Business School

Innovation Game_

ANTHROPOCENE
THE HUMAN EPOCH

A WORD ON SCIENCE *IN* SOCIETY

World Scientists' Warning to Humanity: A Second Notice

FREE

William J. Ripple, Christopher Wolf, Thomas M. Newsome, Mauro Galetti, Mohammed Alamgir, Eileen Crist, Mahmoud I. Mahmoud, William F. Laurance, 15,364 scientist signatories from 184 countries

BioScience, Volume 67, Issue 12, December 2017, Pages 1026–1028, https://doi.org/10.1093/biosci/bix125

Published: 13 November 2017

CONFÉRENCE DES GRANDES ÉCOLES

CPU CONFÉRENCE DES PRÉSIDENTS D'UNIVERSITÉ

cdefi Conférence des Directeurs des Écoles Françaises d'Ingénieurs

Le 08 juillet 2019

TRIBUNE

Urgence climatique : universités et grandes écoles mobilisées aux côtés des étudiants pour la réalisation des 17 Objectifs de Développement Durable

In the Face of the Ecological Crisis, Rebellion is Necessary

Recognising governmental inaction in the face of the ecological and climatic emergency, more than 1,000 scientists from all disciplines call for citizens' civil disobedience and their development of alternatives in (top French newspaper) Le Monde. They urge political leaders to radically change our economic and production model and to take the proposals of the Citizens' Convention on Climate Change seriously.

This call is inspired by similar initiatives in The Guardian and Le Temps.

ANTHROPOCENE
THE HUMAN EPOCH

MS ORGANISATIONS

egos

35th EGOS Colloquium

ENLIGHTENING the FUTURE
35th EGOS Colloquium
JULY 4-6 2019, EDINBURGH, UK

Sub-Plenary 1-2: **Grand Challenges: Organizations and the Anthropocene ---> FULLY BOOKED!**

- *Panelists:* P. Devereaux (Dev) Jennings [Chair], University of Alberta School of Business, Canada; Andrew (Andy) Hoffman, University of Michigan, USA; Gail Whiteman, Lancaster University School of Management, UK; Judith Walls, University of St. Gallen, Switzland

67 Critical Organizational Anthropocene Studies

Hervé Corvellec | Alison Stowell | Steffen Böhm

Session VI: Saturday, July 06, 09:00 to 10:30, Organizational Practices I/II

Chair: Hervé Corvellec
Marcus Wagner
Governance and institutions in new public environmental management: An international and intertemporal comparison of voluntary standards' impacts
Discussant(s): Alexandre Monnin, Emmanuel Bonnet and Diego Landivar
Alexandre Monnin, Emmanuel Bonnet and Diego Landivar
What the Anthropocene does to organizations
Discussant(s): Cédric Gossart
Cédric Gossart
Organisational practices and grand challenges: The case of large digital firms
Discussant(s): Marcus Wagner

36th EGOS COLLOQUIUM
JULY 2-4, 2020
HAMBURG
ORGANIZING FOR A SUSTAINABLE FUTURE:
RESPONSIBILITY, RENEWAL & RESISTANCE

Proposal for a Standing Working Group (2021-2024)
European Group for Organization Studies

ORGANIZATION STUDIES IN THE ANTHROPOCENE: SYSTEM CHANGE, NOT CLIMATE CHANGE

Paul S. Adler, University of Southern California, USA (Lead Coordinator):
padler@marshall.usc.edu

Sub-theme 41: Organizing Innovation and Entrepreneurship in and for a Sustainable Society

Digital technologies and sustainable development: How do digital social innovations scale up?

Müge Ozman [1] & Cédric Gossart [2]

RRBM Responsible Research in Business & Management
https://rrbm.network/

Principle 1. Service to Society: Business research aims to develop knowledge that benefits business and the broader society, locally and globally, for the ultimate purpose of creating a better world.

ACADEMY OF Management

UNDERSTANDING THE INCLUSIVE ORGANIZATION
BOSTON • MA • 2019

IMPROVING LIVES
CHICAGO ILLINOIS 2018

European Academy of Management
EURAM

EURAM 2012 12th
SOCIAL INNOVATION FOR COMPETITIVENESS, ORGANISATIONAL PERFORMANCE AND HUMAN EXCELLENCE
6TH - 8TH JUNE 2012, ROTTERDAM | ROTTERDAM SCHOOL OF MANAGEMENT, ERASMUS UNIVERSITY

EURAM 2014 14th
WAVES AND WINDS OF STRATEGIC LEADERSHIP FOR SUSTAINABLE COMPETITIVENESS
4-7 JUNE 2014
VALENCIA, SPAIN. VALENCIA CONFERENCE CENTRE
www.euram2014.org

MANAGEMENT SCIENCES & THE ANTHROPOCENE: GRAND CHALLENGES

CSR =
Business as usual

Future imaginings: organizing in response to climate change

Organization
20(5) 647–658
© The Author(s) 2013
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/1350508413489821
org.sagepub.com
SAGE

Christopher Wright
The University of Sydney Business School, Australia

Daniel Nyberg
Nottingham University Business School, UK

Christian De Cock
Essex Business School, University of Essex, UK

Gail Whiteman
Rotterdam School of Management, Erasmus University, Netherlands

"In relation to climate change for instance, some **corporations uphold an illusion of compromise** between the environment and the market by adapting the meaning of concepts such as 'CSR' and 'sustainability' to fit existing corporate agendas and expand the capitalist imaginary."

MANAGEMENT SCIENCES & THE ANTHROPOCENE: A FOCUS ON GRAND CHALLENGES

© Academy of Management Journal
2017, Vol. 60, No. 5, 1633–1661.
https://doi.org/10.5465/amj.2015.0718

ANTHROPOCENE
THE HUMAN EPOCH

AN INCONVENIENT TRUTH: HOW ORGANIZATIONS TRANSLATE CLIMATE CHANGE INTO BUSINESS AS USUAL

CHRISTOPHER WRIGHT
University of Sydney

DANIEL NYBERG
University of Newcastle

- “corporate actions often regress to a business-as-usual approach”.
- “corporations are particularly ill-suited to address climate change, since their **short-term objectives** and **reliance on growth** and political interventions inflate the superwickedness of the issue”.
- “business leadership on climate change alone is insufficient”.

CSR DISCONNECTED FROM EARTH SYSTEMS

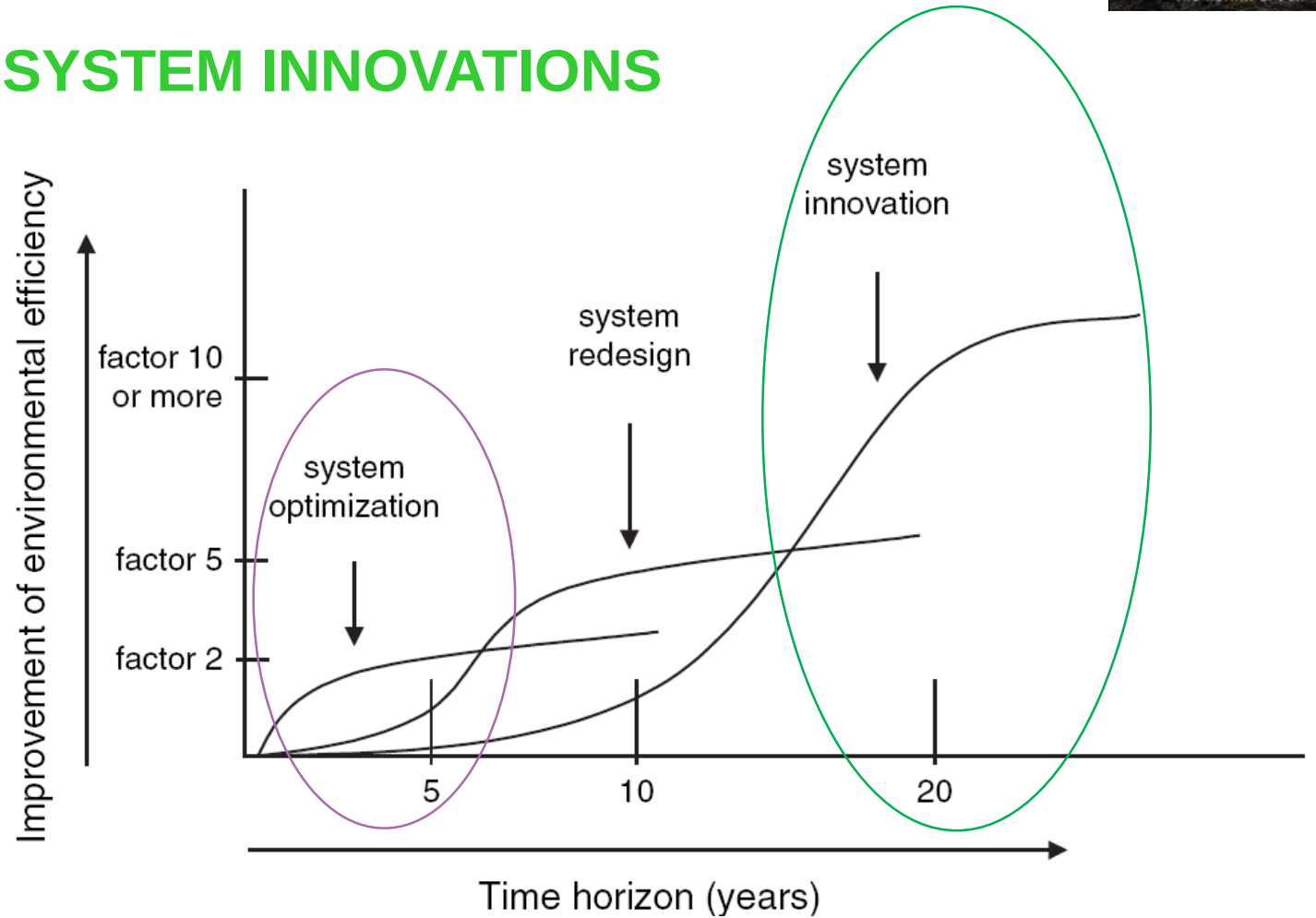
JOURNAL OF MANAGEMENT STUDIES
ANTHROPOCENE THE HUMAN EPOCH
Journal of Management Studies 50:2 March 2013
doi: 10.1111/j.1467-6486.2012.01073.x

Planetary Boundaries: Ecological Foundations for Corporate Sustainability

Gail Whiteman, Brian Walker and Paolo Perego

Due to the centrality of corporations within modern economies and societies, multinationals have long been conceptualized as important sources of environmental degradation (Hart, 1995). Yet studies on corporate sustainability continue to remain disconnected from the declining state of Earth systems. In this paper, we argue that the scientific framework of Planetary Boundaries provides us with a rich and detailed foundation for management studies on corporate sustainability.

A LACK OF SYSTEM INNOVATIONS



Source: Tukker, A. and M. Butter (2007). Governance of sustainable transitions: about the 4(0) ways to change the world. *Journal of Cleaner Production* 15(1): 94-103.

EXAMPLE: ECO-INNOVATIONS

J Evol Econ (2014)
DOI 10.1007/s00191-014-0381-5

REGULAR ARTICLE

Lock-in and path dependence: an evolutionary approach to eco-innovations

Grazia Cecere · Nicoletta Corrocher · Cédric Gossart · Muge Ozman

Rennings (2013):

*"consist of new or modified processes, techniques, practices, **systems** and products to avoid or to reduce environmental harms."*

EXAMPLE: ECO-INNOVATIONS

J Evol Econ
DOI 10.1007/s00191-014-0381-5

REGULAR ARTICLE

Lock-in and path dependence: an evolutionary approach to eco-innovations

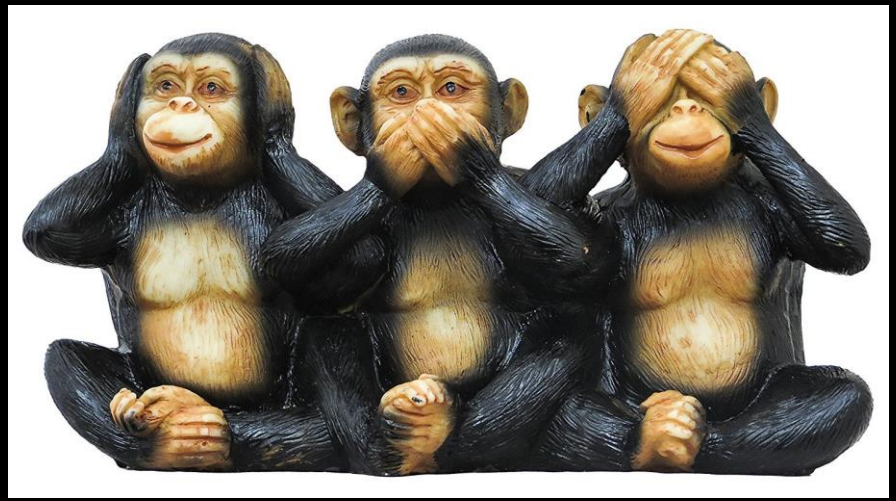
Grazia Cecere · Nicoletta Corrocher · Cédric Gossart · Muge Ozman

Continuous improvements in a given technology strengthens its market => lock-in.

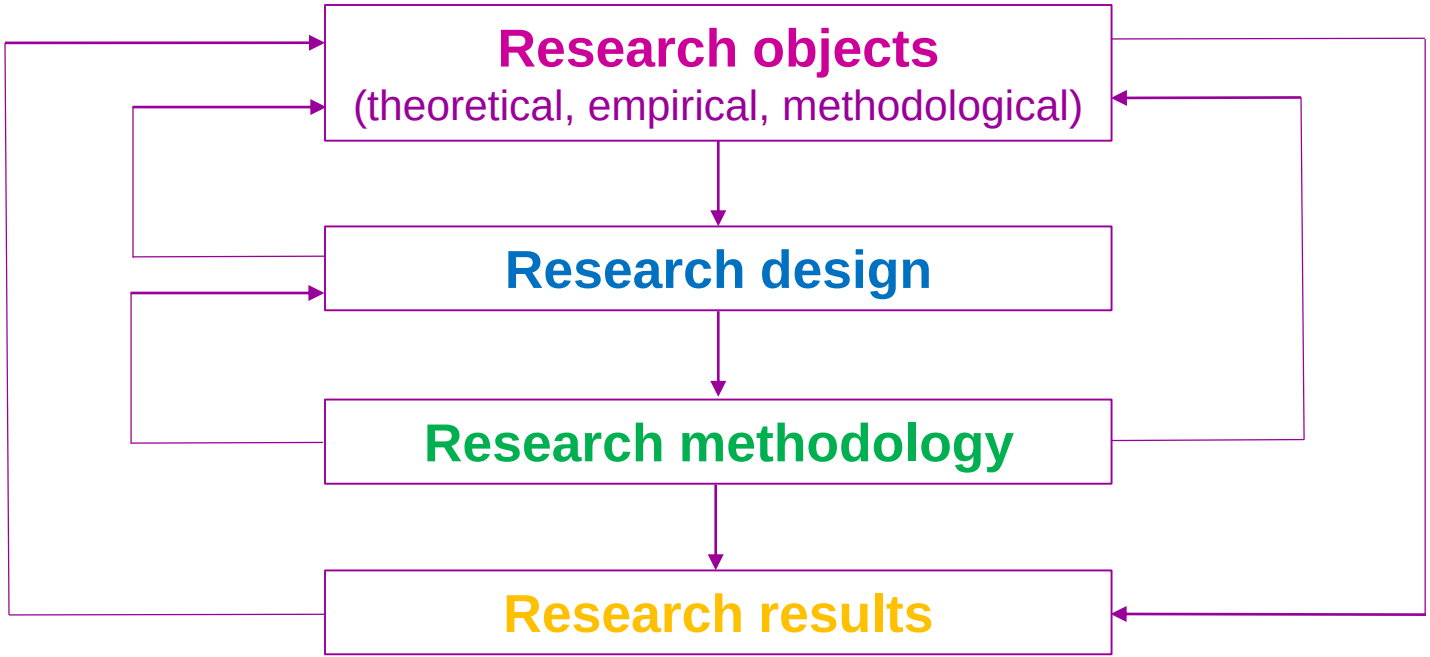
Internal combustion engine (ICE): environmentally improved by efficiency inventions (direct fuel injection, particle filters, new combustion concepts). *(Oltra & Saint Jean, 2009)*

ICE: strong and persistent dominant design, most engine innovations still focused on incremental changes within this design, supported on the consumer side by a demand for incremental changes.

3. Academic practices & the Anthropocene



THE RESEARCH PROCESS



Source : Thietart et al. R.-A. (2014). *Méthodes de recherche en management*, 4e éd., Dunod, p. 49, Fig. 2.1.

ANTHROPOCENE
THE HUMAN EPOCH

RESEARCH OBJECTS

Editorial
The Spirit of Science and Socially Responsible Scholarship

Anne S. Tsui[1,2,3,4]

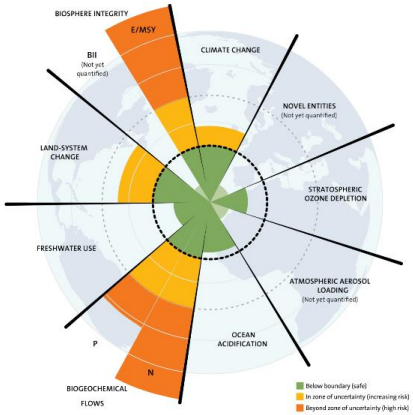
[1]*Arizona State University, U.S.A.*, [2]*Fudan University, China*
[4]*Shanghai Jiao Tong University, China*

“From paper-motivated research to context-sensitive scholarship”

Management and Organization Review 9:3, November 2013, 375–394
doi: 10.1111/more.12035

RESEARCH OBJECTS: @GCs!

ANTHROPOCENE
THE HUMAN EPOCH



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2016, Vol. 59, No. 6, 1880–1895.
http://dx.doi.org/10.5465/amj.2016.4007

A Framework for Addressing Grand Challenges

UNDERSTANDING AND TACKLING SOCIETAL GRAND CHALLENGES THROUGH MANAGEMENT RESEARCH

GERARD GEORGE
Singapore Management University

JENNIFER HOWARD-GRENVILLE
University of Cambridge

APARNA JOSHI
Pennsylvania State University

LASZLO TIHANYI
Texas A&M University

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2014, Vol. 57, No. 3, 615–623.
http://dx.doi.org/10.5465/amj.2014.4003

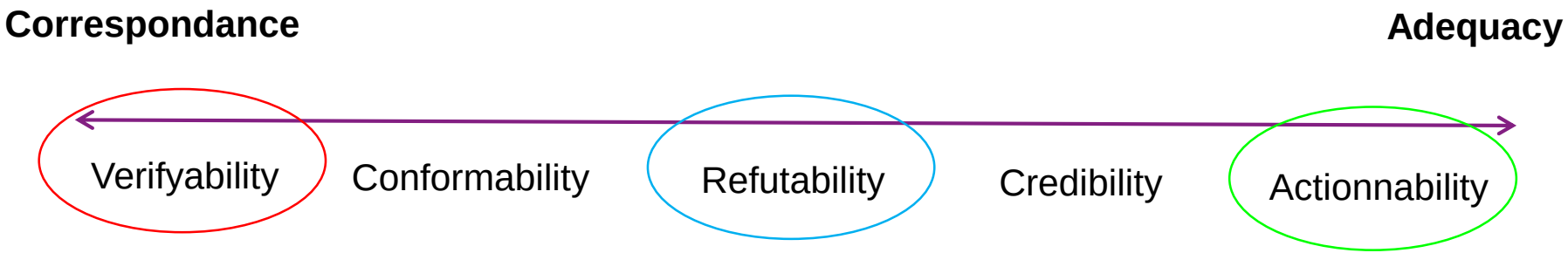
FROM THE EDITORS

CLIMATE CHANGE AND MANAGEMENT

RESEARCH DESIGN

Diversify epistemological choices

Conception of truth and validity criteria



Source : Thietart et al. R.-A. (2014). *Méthodes de recherche en management*, 4e éd., Dunod, p. 36, Fig. 1.3.

RESEARCH METHODOLOGY

Diversify research methods

What is the aim of my research?

Explain | Predict | Understand | Change


Academy of Management *Perspectives*

Bridging the Research–Practice Gap

by Pratima Bansal, Stephanie Bertels, Tom Ewart, Peter MacConnachie, and James O'Brien


Action Research

AR

Volume 1(1): 9–28: 034201[1476-7503(200307)1:1]
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London, Thousand Oaks CA, New Delhi
www.sagepublications.co.uk

EDITORIAL

Why action research?

Mary Brydon-Miller
University of Cincinnati, USA
Davydd Greenwood
Cornell University, USA
Patricia Maguire
Western New Mexico University, USA
and members of the editorial board of *Action Research*[1]

Source : Thietart et al. R.-A. (2014), *Méthodes de recherche en management*, 4e éd., Dunod, p. 52, Fig. 2.2.

ANTHROPOCENE
THE HUMAN EPOCH

RESEARCH RESULTS

© Academy of Management Journal
2016, Vol. 59, No. 6, 1869–1877.
http://dx.doi.org/10.5465/amj.2016.4006

MAKING RESEARCH IMPACTFUL

Beyond the Published Article

FROM THE EDITORS

MANAGEMENT RESEARCH IN *AMJ*: CELEBRATING IMPACT WHILE STRIVING FOR MORE

© Academy of Management Learning & Education, 2014, Vol. 13, No. 4, 623–639. http://dx.doi.org/10.5465/amle.2014.0121

Scholarly Impact: A Pluralist Conceptualization

HERMAN AGUINIS
Indiana University

DEBRA L. SHAPIRO
University of Maryland

ELENA P. ANTONACOPOULOU
GNOSIS, University of Liverpool

THOMAS G. CUMMINGS
University of Southern California

Revue Française de Gestion
Volume 43 / Numéro 267 (août-septembre 2017)

Recherche en gestion : retrouver du sens

Introduction

Recherche en gestion, le sens mis en pièces p. 67
Jean-Luc Moriceau, Hervé Laroche et Rémi Jardat

Face à la tyrannie des étoiles : révoltons-nous ! p. 133
Aurélien Rouquet

"researchers doing engaged scholarship must surmount the "**double hurdle**" of scholarly and practical impact, a difficult task that generally requires treating engaged research as a vocation or calling, not simply an episodic event leading to a publishable outcome."

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- **STRAT**: Hamann et al. (2019). Strategic Responses to Grand Challenges: Why and How Corporations Build Community Resilience. *Journal of Business Ethics*.

  Martí (2018). Transformational Business Models, Grand Challenges, and Social Impact. *JBE*.

- **ORG**: Wright et al. (2018). Organizing in the Anthropocene. *Organization.*

- **FIN**: Shrivastava et al. (2019). Finance and Management for the Anthropocene. *Organization & Environment*.

- **IS**: van der Velden (2018). ICT and Sustainability: Looking Beyond the Anthropocene. *Conf. ICT & Climate Change*, Springer.

  Winter & Butler (2011). Creating bigger problems: Grand challenges as boundary objects and the legitimacy of the information systems field. *Journal of Information Technology*.

- **HR**: Schad & Smith (2019). Addressing Grand Challenges' Paradoxes: Leadership Skills to Manage Inconsistencies. *Journal of Leadership Studies*.

- **ETP**: Doh et al. (2019). Adapting to Grand Environmental Challenges Through Collective Entrepreneurship. *AMP*.

  Markman et al. (2019). E Pluribus Unum: Impact Entrepreneurship as a Solution to Grand Challenges. *AMP*.

- **IB**: Buckley et al. (2017). Towards a renaissance in international business research? Big questions, grand challenges, and the future of IB scholarship. *Journal of International Business Studies*.

- **ECON**: Sol J. (2019). Economics in the anthropocene: Species extinction or steady state economics. *Ecological Economics*.

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Thank you.

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Institut Mines-Télécom Business School
9 rue Charles Fourrier 91011 Évry Cedex
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