



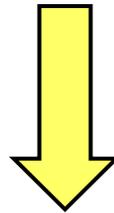
# **Spatial Mobility of Knowledge.**

**A proposal for a more adequate  
communication model**

Peter Meusburger

## Exchange of knowledge is a highly complex process

- **Most deficits in research about**
  - the impact of the internet on the spatial mobility of codified knowledge,
  - knowledge spillovers
  - knowledge sharing in clusters, organizations and networks



- **can be traced back to**
  - an oversimplification of the communication process,
  - a missing distinction between knowledge and information,
  - insufficient categorizations of various types and grades of knowledge

# Categories of knowledge

implicit ↔ explicit

High-grade knowledge

tacit ↔ codified

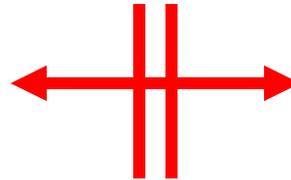
Low-grade knowledge

Knowledge embodied in people

knowledge presented in texts, signs

Knowledge integrated in machines.

information



knowledge

# Codification of knowledge does not guarantee its diffusion

Codes have to be transformed in information



Meaning and value of information have to be understood

For Lorentzian (2+1)-gravity with vanishing cosmological constant, each element  $\lambda \in \pi_1(M)$  is associated with two canonical Wilson loop observables which are the fundamental physical observables. The two fundamental observables are the holonomy  $m_\lambda$  and the spin  $s_\lambda$ . These are defined by the following equations (2.29):

I question the assumption shared by Fujita, Krugman, and Venables (1999), Maskell and Malmberg (1999), and many others that the more codified or the more public the knowledge involved, the more mobile it is and that knowledge, once codified, is almost instantly available to all firms at zero cost regardless of their location.

to the holonomy  $m_\lambda$  and the spin  $s_\lambda$ . These are defined by the following equations (2.29):

A publication may be available free of charge, but the proportion of the population being able to understand this information may be less than one hundredth of one percent; and the knowledge will only be spread to those places where these few experts live or work.

the Poincaré-  
 $(e^{n^b J_b}, \mathbf{a})$ . (2.30)  
ements of the  
ues determine

the spacetime uniquely and they parametrise the physical phase space (2.27) of the theory.

**Perception and interpretation of signs and patterns need prior knowledge**

This exposure will help a geomorphologist to describe and explain 20.000 years of climatic change

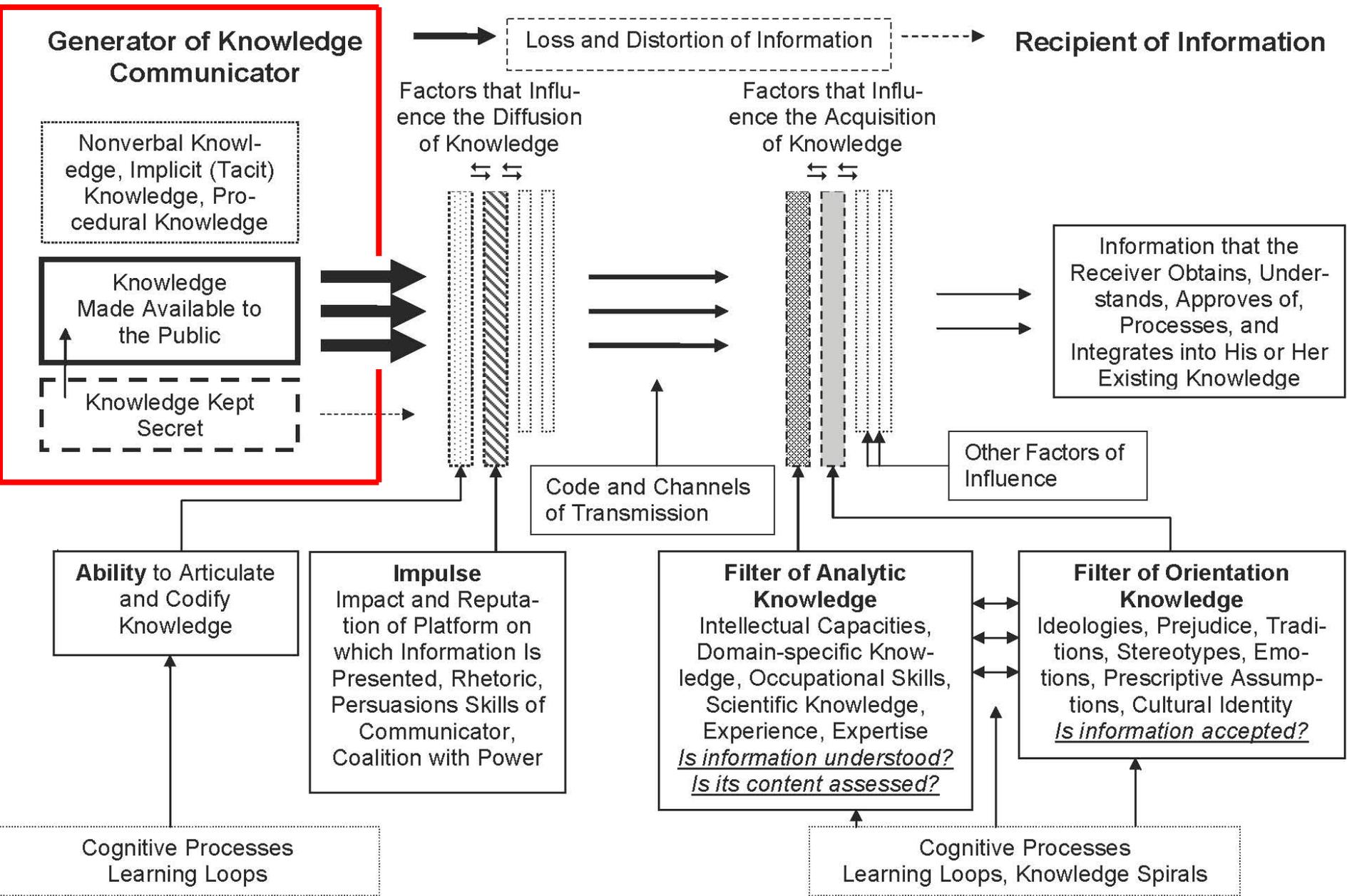
The information revealed by this exposure can only be circulated between agents with similar prior knowledge



Exposure

## Crucial steps where the process of knowledge transfer between communicator and recipient can be distorted or modified

- the willingness of person X to share his or her knowledge with others,
- the ability of person X to verbalize and codify his or her knowledge or demonstrate his competence,
- the degree of attention, reputation, and visibility the platform enjoys where the information is presented,
- the code in which an information is written,
- the communication channel (and type of contact) used for transmission,
- the place- or context-dependent chances of recipient Y to receive the information in time,
- the ability of Y to read the used code,
- the prior knowledge and cognitive capacities needed by Y to understand the information and integrate it into his or her knowledge base,
- the willingness of the recipient to accept the new information.



# Generator of Knowledge Communicator

Nonverbal Knowledge, Implicit (Tacit) Knowledge, Procedural Knowledge

Knowledge Made Available to the Public

Knowledge Kept Secret

**Ability to Articulate and Codify Knowledge**

**Impulse**  
Impact and Reputation of Platform on which Information Is Presented, Rhetoric, Persuasions Skills of Communicator, Coalition with Power

Cognitive Processes Learning Loops

Factors that Influence the Diffusion of Knowledge

↔ ↔

Factors that Influence the Acquisition of Knowledge

↔ ↔

Code and Channels of Transmission

Other Factors of Influence

**Filter of Analytic Knowledge**  
Intellectual Capacities, Domain-specific Knowledge, Occupational Skills, Scientific Knowledge, Experience, Expertise  
*Is information understood?*  
*Is its content assessed?*

**Filter of Orientation Knowledge**  
Ideologies, Prejudice, Traditions, Stereotypes, Emotions, Prescriptive Assumptions, Cultural Identity  
*Is information accepted?*

Cognitive Processes Learning Loops, Knowledge Spirals

Loss and Distortion of Information

# Recipient of Information

Information that the Receiver Obtains, Understands, Approves of, Processes, and Integrates into His or Her Existing Knowledge

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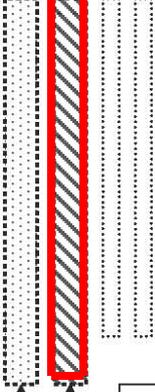
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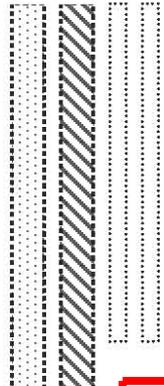
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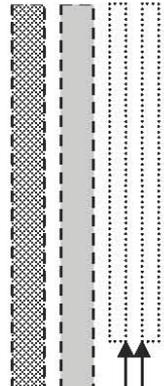
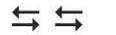
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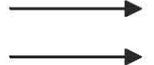
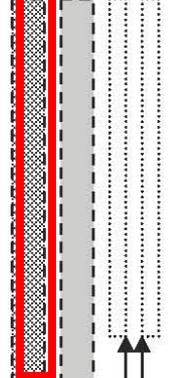
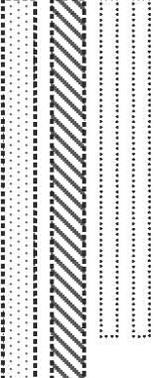
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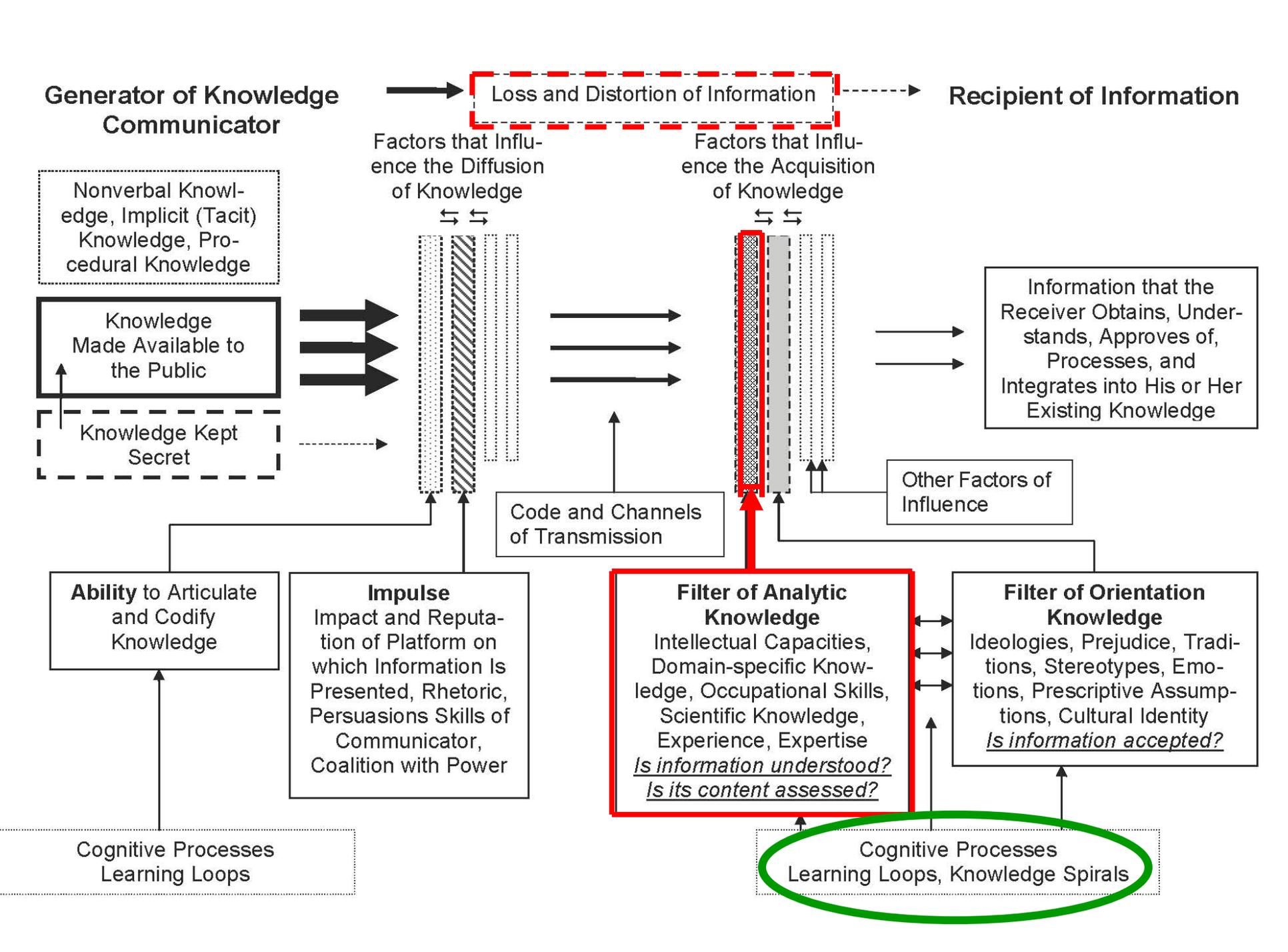
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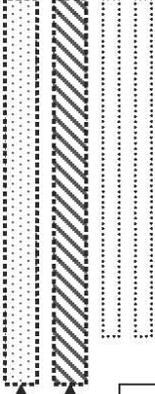
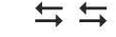
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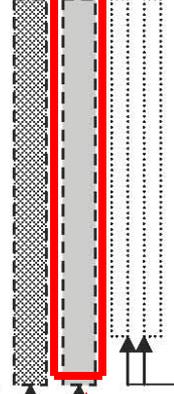
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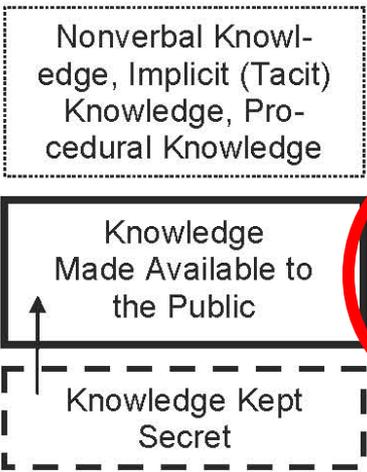
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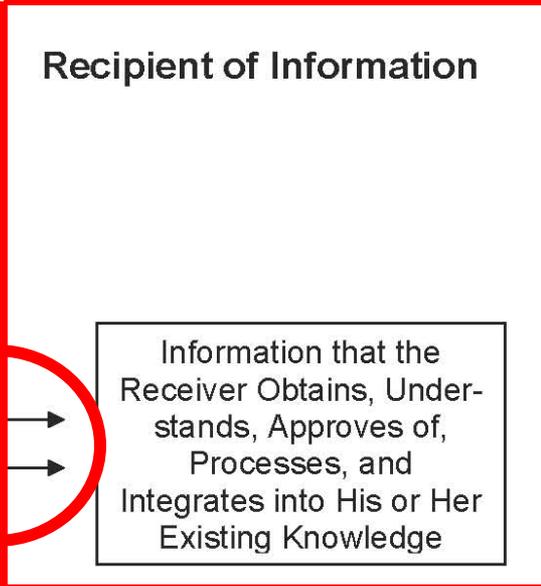
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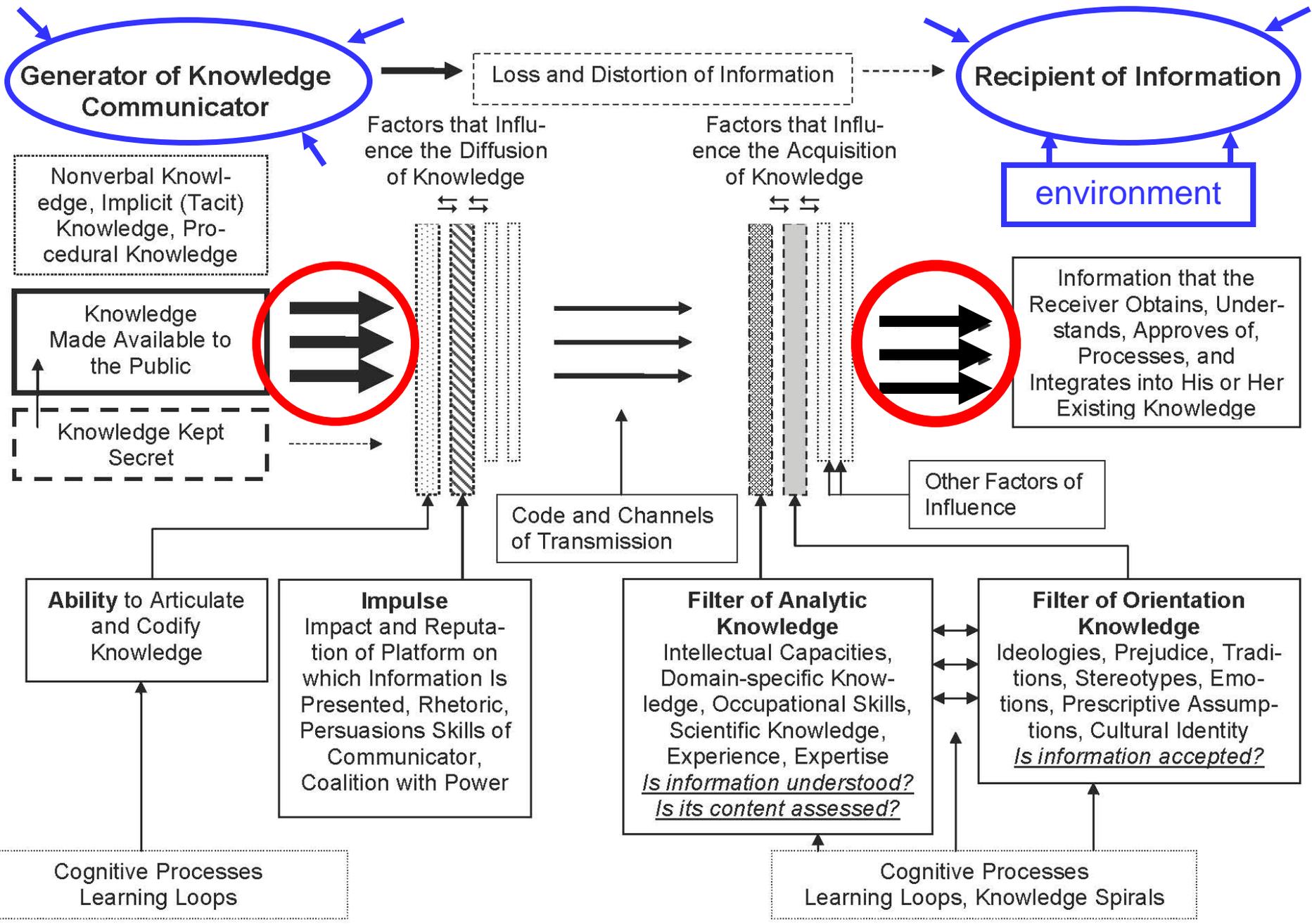
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Cognitive Processes Learning Loops

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# Thank you for your attention