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**Hypercitizenship  
and the Communication of  
Science in the  
Cosmopolitan Scenarios**

# Purpose



**Research project aimed to  
implement a portal to provide  
knowledge intensive services to  
hypercitizens:**

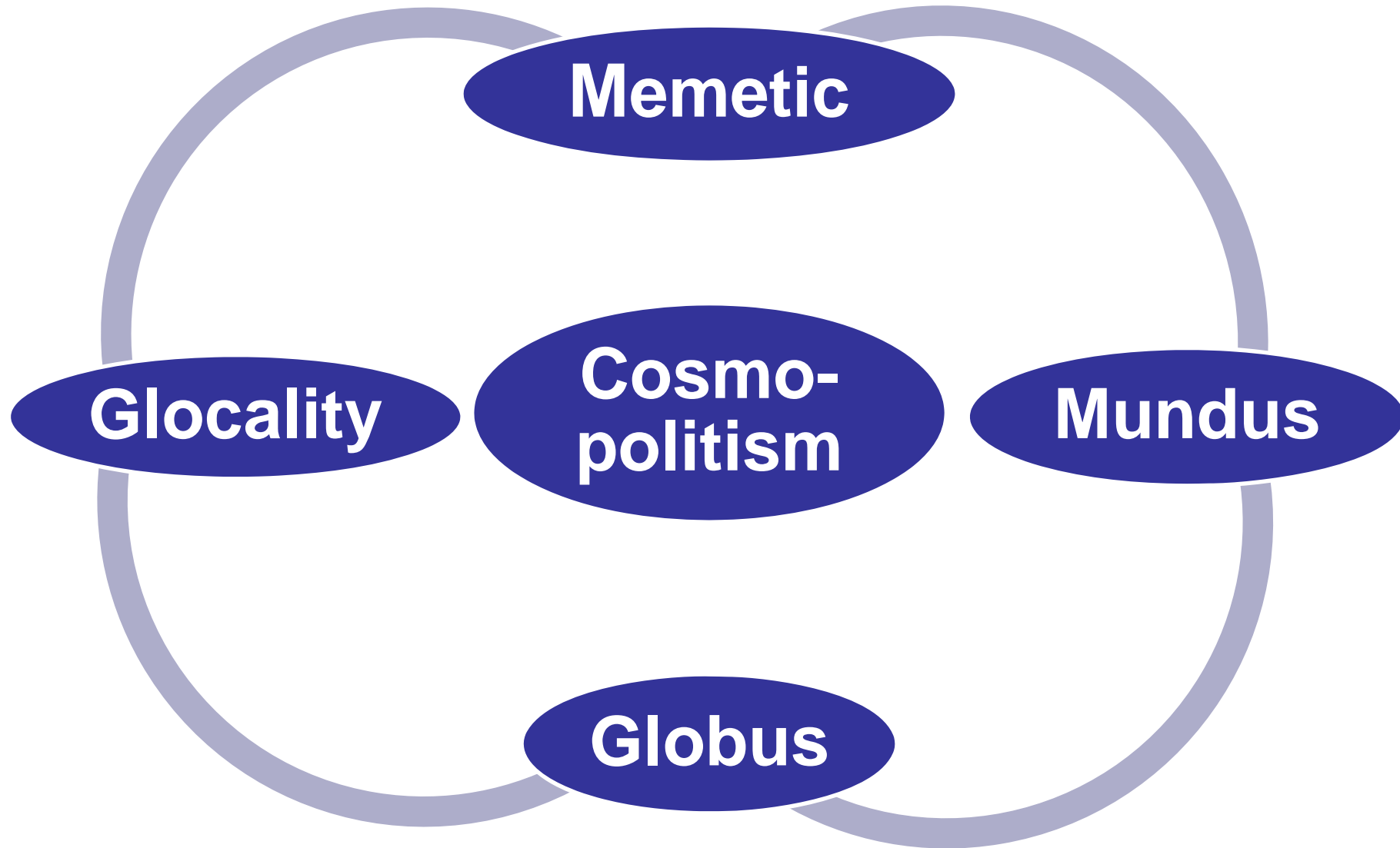
**[www.hypercitizen.com](http://www.hypercitizen.com) ®**

# Hypercitizenship: main features



- a. Cosmopolitanism**
- b. Science**
- c. Entrepreneurship**
- d. Social Autonomies**

# Cosmopolitanism



# Scientific Citizenship (1)



“A knowledge based society also increases its production of epistemic things, various kinds of abstract objects, and technical artifacts that are subject to the same rules.

The democratization of scientific expertise is also merely the expansion of the principle of governance that have served the Western liberal democracies well. Today, science and technology are no longer viewed with awe but are part of everyday life. Mediated by the educational system and the qualifications and certificates people acquire, they determine people’s chances for upward social mobility, their working world, and the course of their biographies. It is thus logical to extend the concept of citizenship to science and technology. “Scientific citizenship comprises rights and duties and asks about both the functions that an expanded concept of citizenship could fulfill in social integration and also the duties that arise from it for citizens as well as for political institutions and administration [...]”

(Nowotny H.,  
*Insatiable Curiosity. Innovation in a Fragile Future*, The Mit Press, London 2008 p.20)

# Scientific Citizenship (2)



It is the Era of  
**RING** convergent technologies:

**R**obotics

**I**nformatics

**N**anotechnologies

**G**enetics

# Entrepreneurship



Europe lacks neither of ideas nor of entrepreneurs, but European history has got two possible perspectives, both discouraging.

Those who have ideas will encounter the knowledge filter, facing which they will either give up and nothing will come up of their ideas, or they will find opportunities outside European borders.

Either way or the other, Europe loses.

(see Audretsch D. B.,  
*The Entrepreneurial Society*, Oxford University Press 2007, p. 162)

# Social Autonomies



They are the patterns of the societarian citizenship (Donati)

Evolution of the societarian relation





# HYPERCITIZENSHIP AS AN ALGORITHMIC INFORMATION THEORY (AIT) FOR MEMETIC SELECTION AND RECOMBINATION IN THE DIGITALIZATION AGE (I)



We are entering the Algorithmic Information Theory (AIT) and asking ourselves,

*"What is the smallest self-limiting program that produces a given result?"*

The answer is

*"the size of that program in bits is the complexity  $H$  (output) of the output"*

(Chaitin G.,  
*Meta Math*, Vintage Book, New York 2006 p. 81)

# HYPERCITIZENSHIP AS AN ALGORITHMIC INFORMATION THEORY (AIT) FOR MEMETIC SELECTION AND RECOMBINATION IN THE DIGITALIZATION AGE (II)



**AIT** develops from a powerful interface between biology and mathematics which is why DNA is the best metaphor for the organization of AIT itself

(see Chaitin G.,  
*Meta Math*, Vintage Book, New York 2006, pp. 97-103)

# HYPERCITIZENSHIP AS AN ALGORITHMIC INFORMATION THEORY (AIT) FOR MEMETIC SELECTION AND RECOMBINATION IN THE DIGITALIZATION AGE (III)



“And one can more or less classify organism into a complexity hierarchy based on the amount of DNA they need: viruses, cells without nuclei, cells with nuclei, multicelled organisms, humans. That’s the biological reality. Now let’s abstract a highly- simplified mathematical model of this:

- a) program-computer- output;
- b) complexity/size measure: bits /bytes kilo/mega/gigabytes of software;
- c)  $H(\text{output}) = \text{size of smallest program for computing it.}$

Now let me be provocative: Science is searching for the DNA for the Universe!”

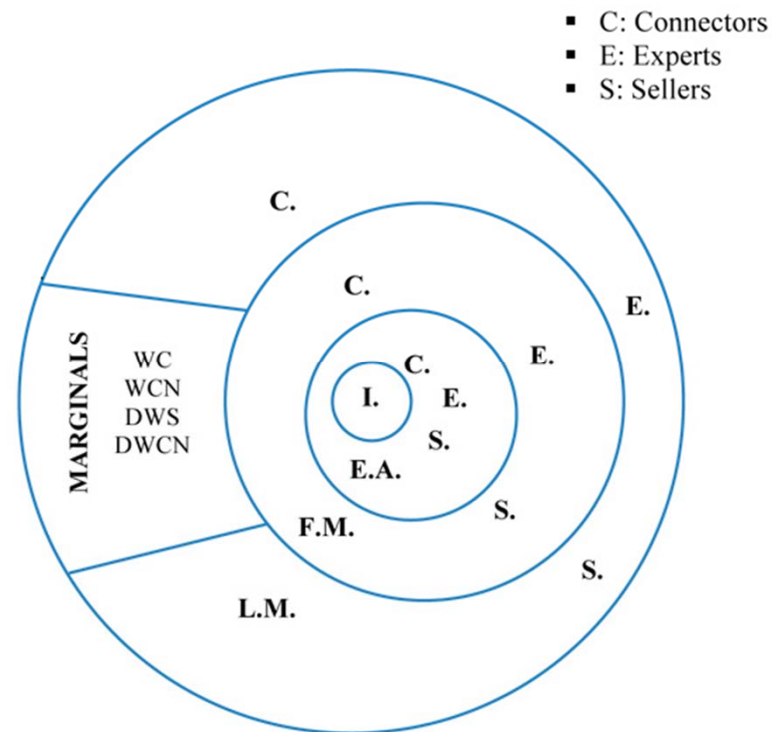
(Chaitin G.,

*Meta Math*, Vintage Book, New York 2006, pp. 81-82)

# Hypercitizenship as a righth catalogue à la carte (I)



ROGERS MODEL UPDATED (PITASI, 2007)



- WC: They want to and they can
- WCN: They want to but they cannot
- DWS: They don't want to, but they should
- DWCN: They don't want to and they cannot

# Williamson's Costs



Every individual and every organization bear 3 types of costs just for their own existence (namely Williamson's or transactional costs):

1. CONTRACTUAL
2. ECONOMIC
3. ORGANIZATIONAL

$$V = R/W$$

# A Relevant Case (1)



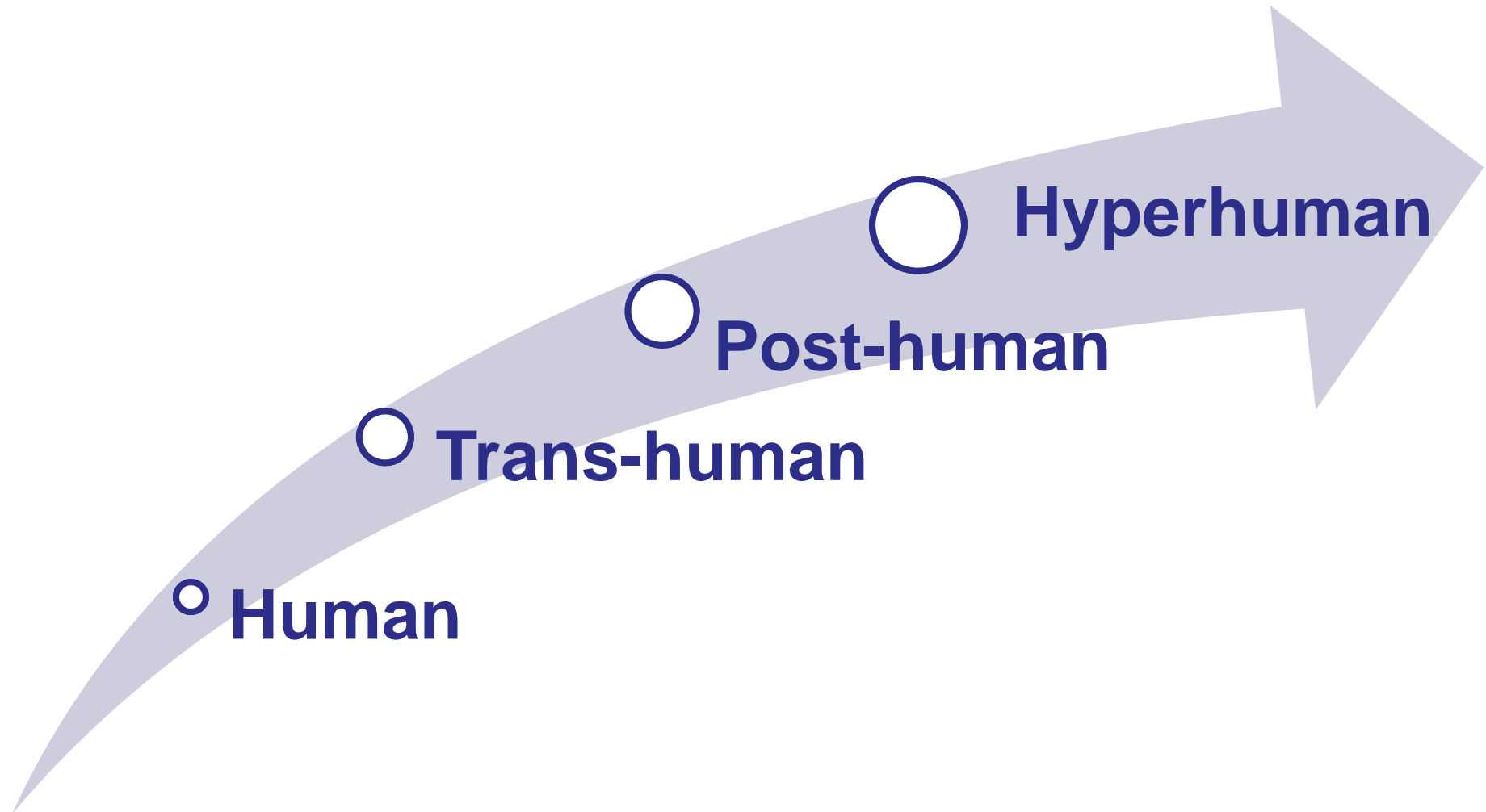
**Code:**

**RING:** Robotics, Informatics, Nanotechnologies, Genetics

**RC:** Right Catalogue

**RIHP:** Riconfigurational Innovation for the Health Policies

# A Relevant Case (2)



# What's next



???



Thank you!

*Andrea*

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