Human and Data

About what now the two most often used words, 'Data' and 'Digital', really mean, including used in ESG/ESRS, based on science and technology, and some of my very brief and limited understanding

Ben Hu (benhu@dama.org.cn)
– DAMA China (HK), 14/06/2023

We have been collaborating with Eurofiling and XBRL International on XBRL and DPM since 2007

XBRL®
eXtensible Business Reporting Language

16th XBRL International Conference
Track Name

Presentation Title: Opportunities and Challenges for XBRL Integration
Date: 12/5/2007
Speakers: Dr. Youfang Lin, DAMA China, Beijing Jiantong University
David vun Kannon, PwC, LLP

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"More than 15 years ago, the Statistics Department of the IMF invited me to a seminar, which was opened by the Managing Director Horst Kohler, on Getting the Right Numbers and Getting the Numbers Right. That is still very much our concern today."
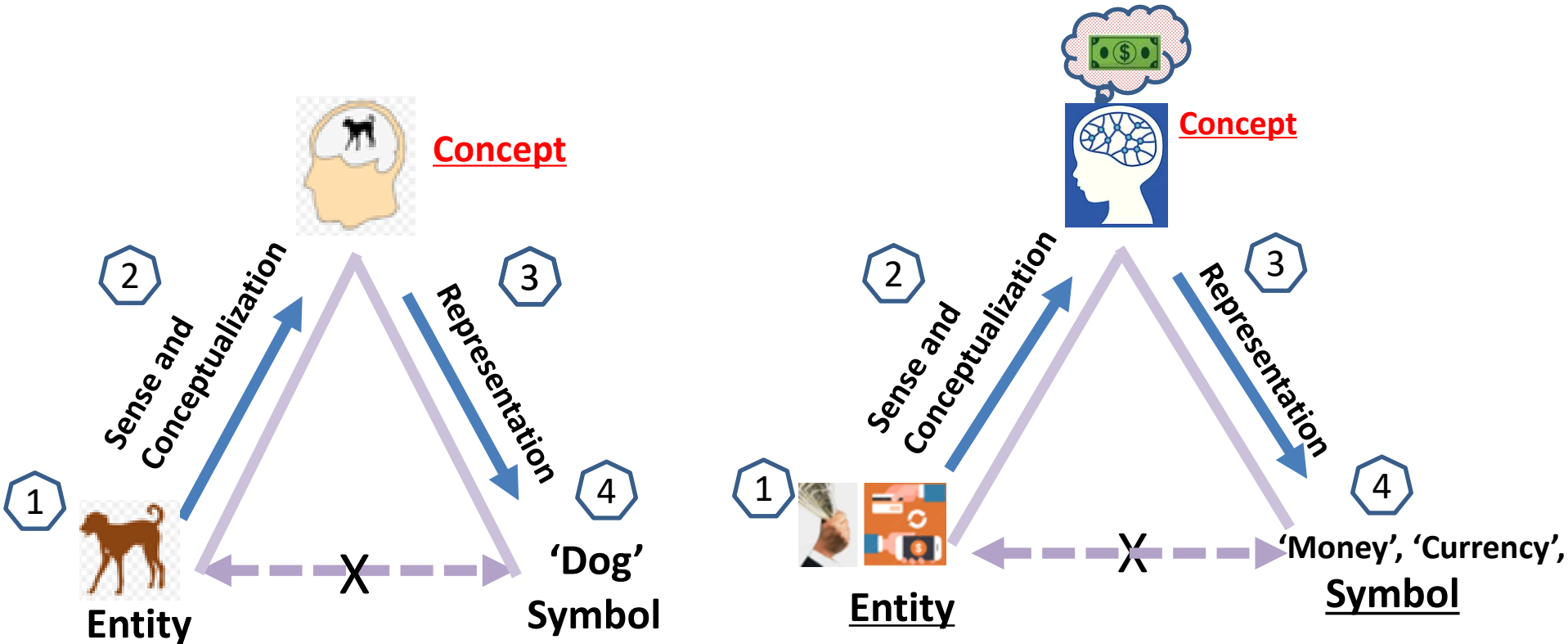
- 'Measuring the Digital Economy', IMF 5th Statistical Forum 2017, Vitor Gaspar

"One of the most basic needs and capabilities for any living form --- dealing and managing information/data around and within it

Any living organism cannot live without this capability.

- Prof Zhang, Zuo Ren, Founder and Pioneer of protozoan cytology and experimental protozoology in China

Why Human and Data
The Semantic Triangle
Ogden and Richards, 1927

Concept

② **Sense and Conceptualization**

③ **Representation**

① **Entity**

④ **'Dog' Symbol**

X

Concept

② **Sense and Conceptualization**

③ **Representation**

① **Entity**

④ 'Money', 'Currency', **Symbol**

X

1. Entity 🐕 and Symbol 'Dog' **can not be associated without Humans**
2. 🐕 and 'Dog' both **are data**, and physical, and what Humans can sense directly are non-digital

3. ② and ③ are very complex processes

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Why Human and Data
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Money',
'Currency'

Concepts

② Sense and conceptualization

③ Representation

① 'Money' , 'Currency'

'Virtual', 'Digital', 'Crypto', .. ④

Symbol/Entity
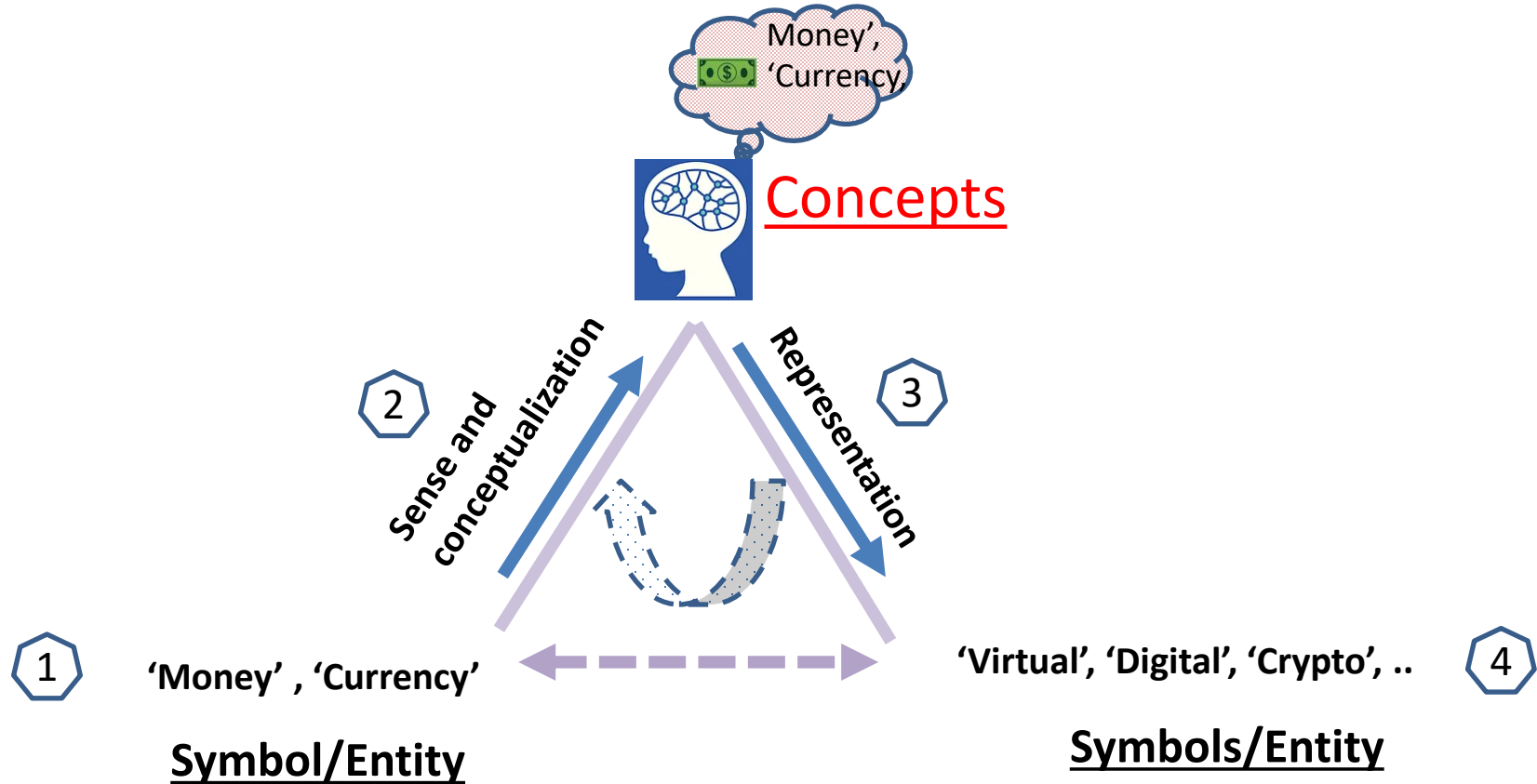
Symbols/Entity

Entity and Symbol both are physical and real data, not virtual 'Virtual' only exists in mind

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The <u>complete</u> and <u>endless loop</u> – human, data and machine

Signals received by humans

Signals output by humans

Concepts

Data e.g. voice

Data

Data

Perceivable by humans

perception→conceptualization→representation

Sound, visual, body gesture, ...

Data

Data Mining, Machine Learning, Algorithm, classification, Clustering, ...

Data

All signals produced by Nature

All Physical Signals

Data

Computer processing

No computer

Non-perceivable by humans

Data

Signals produced by Humans

Output

Processor/ Storage

Input

Data

Data

Computer
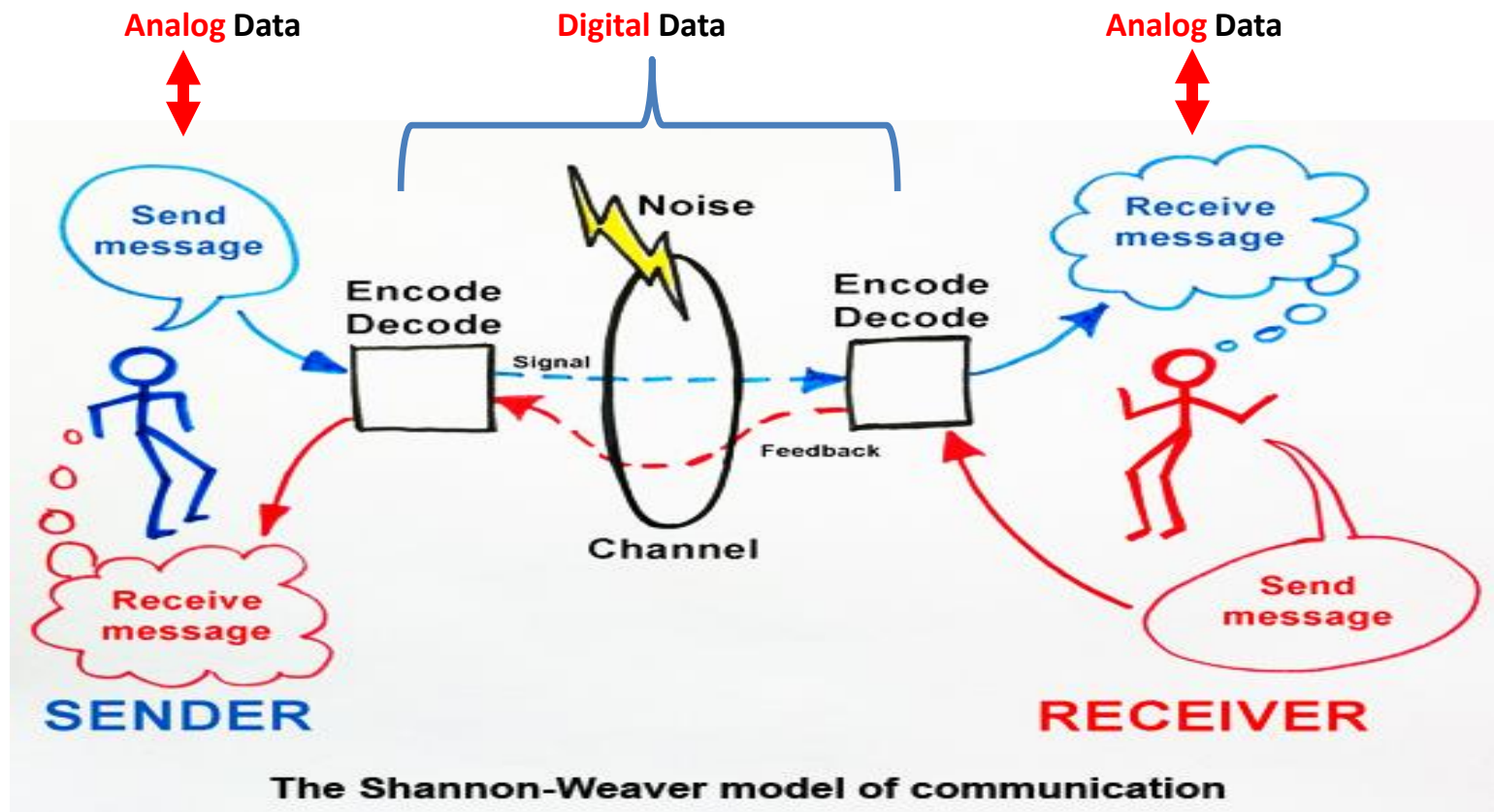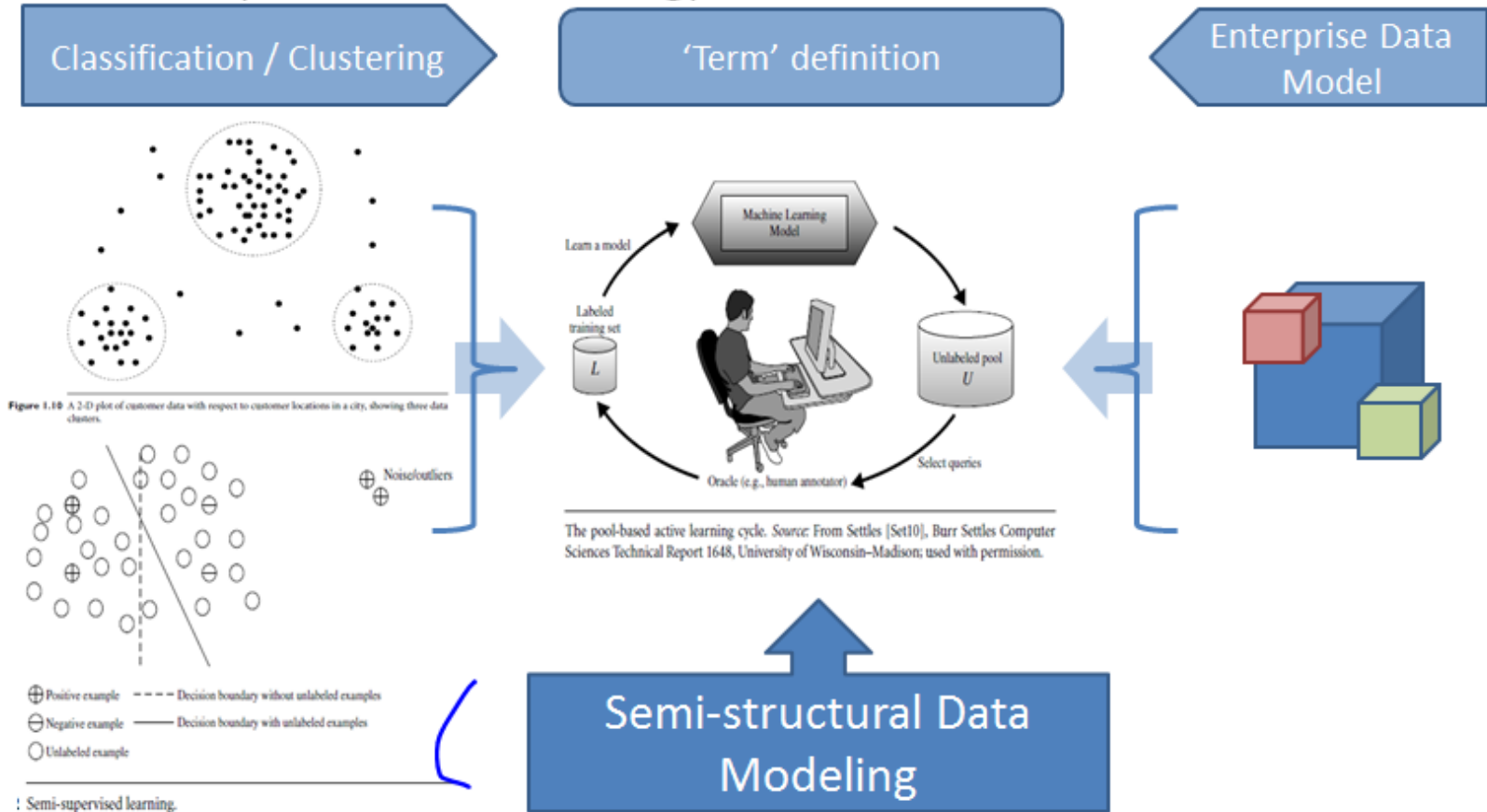
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What Digitization is – a <u>technique</u> and <u>interim</u> data processing for machine communication and computation

– <u>Natures and Humans are not Digital</u>

The Shannon-Weaver model of communication

Connection between HL (Human Learning) and ML (Machine Learning)

Classification / Clustering

'Term' definition

Enterprise Data Model

Semi-structural Data Modeling

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Thank You