

Immersion vs interaction

The design of the Bank of Italy Money Museum

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Digitalization and financial awareness – IFFM X Annual Conference

October, 3rd, 2022

Carlo Azeglio Ciampi Conference Center, Via Nazionale, 190 - Rome

The new educational museum of the Bank of Italy

The Museum of Money and Finance



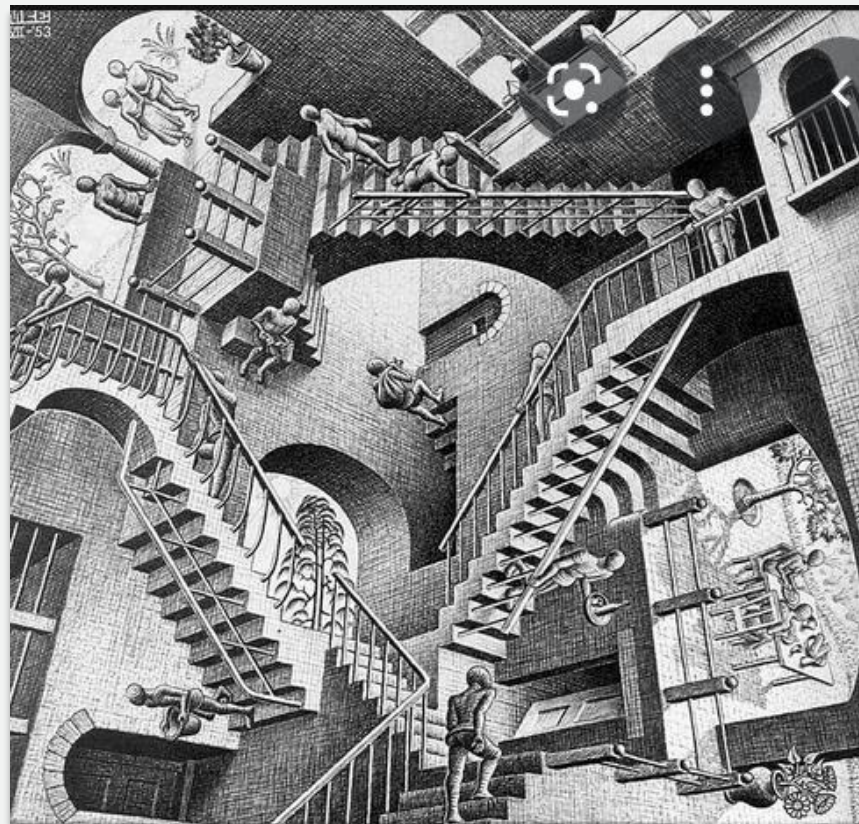
A TRADITIONAL CONTAINER

- Based in Rome, opposite the *Banca d'Italia* headquarters
- Within the *Carlo Azeglio Ciampi* Center of Monetary and Financial Education
- Near the *Banca d'Italia* conference center
- Inside the beautiful *Villa Hüffer* (1883)
- Total exhibition surface: 3.985 square meters

BUT THAT'S JUST FOR THE SAKE OF APPEARANCES...

Disentangling the options

How to choose what should be inside the container?

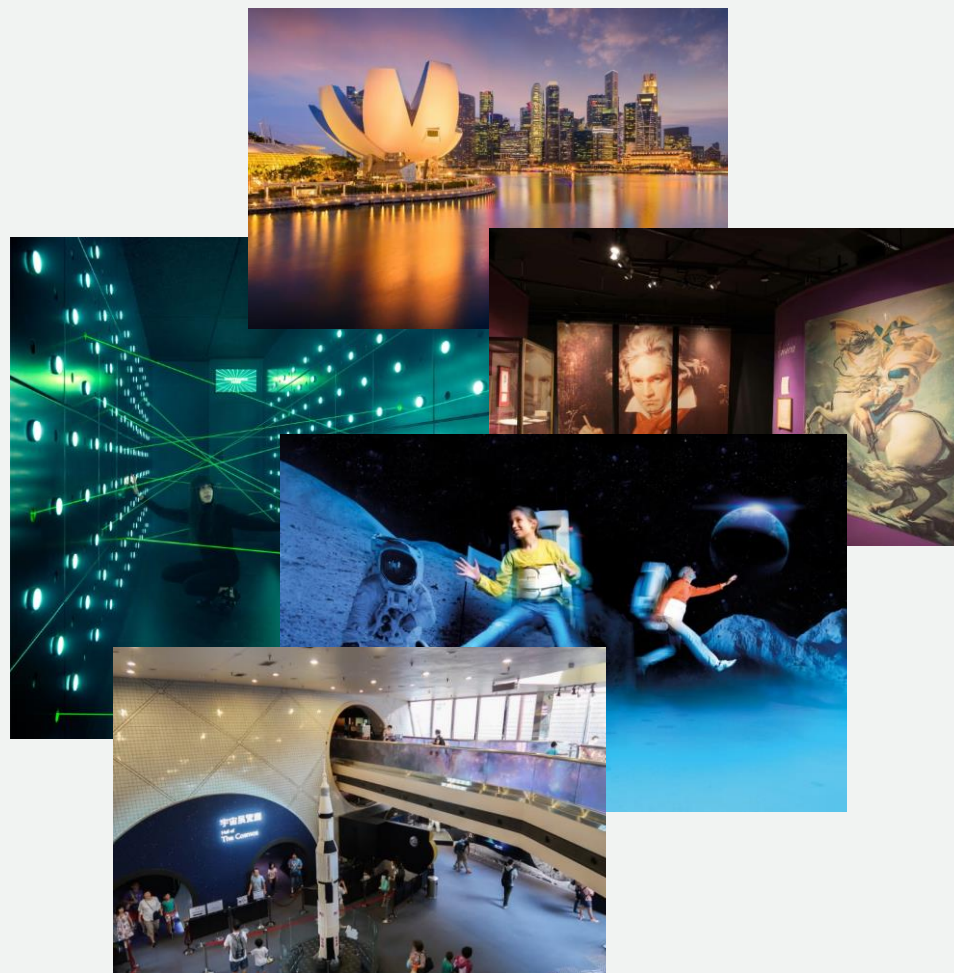


Embracing a model

Contemporary educational museums are *interactive*

TOP EDUCATIONAL MUSEUMS FOR SCHOOLS AND THE GENERAL PUBLIC

- SPYSCAPE New York
- ArtScience Museum Singapore
- Cité de l'espace, France
- Haus der Musik – Vienna
- Hong Kong Space Museum
- Universeum – Sweden
- NEMO – Amsterdam
- Exploratorium – San Francisco
- Museum of Childhood, London



Enacting best practices

Following on the footsteps of science museums



GAMES



EXHIBITION

- Games and informal learning techniques are increasingly being used in museums as educational tools (Beale 2011, Sanchez *et al.* 2015).



The originary structure of our museum

How to make monetary and financial subjects engaging

Structure



Themes



- **Division of labour**
- **Accounting**
- **Inflation**
- **The payments system**
- **Central banks**
- **Gold**
- **Derivatives**
- **Probability and statistics**
-

Writing the contents

A detailed script for each display

- We wrote detailed stories and plans
- We used the simplest possible language
- We hired storytellers
- We imagined how the public could *interact* with each exhibit

We proudly produced an enormous dossier, ready to be transposed into an exhibition.

EVERYTHING WAS READY...



Coming to terms with reality Our assumptions were invalidated by the experts

...THEN WE MET OUR DESIGNERS



Name: Paco Lanciano

Profession: physicist and scientific popularizer

Experience: has spent 30 years creating scientific tv shows and educational museums

Current job: he's the head of our designers team

His opinion on our dossier:

«This isn't going to happen»

The problems of our original approach Facing the general public

OUR **FLAWED** ASSUMPTIONS:

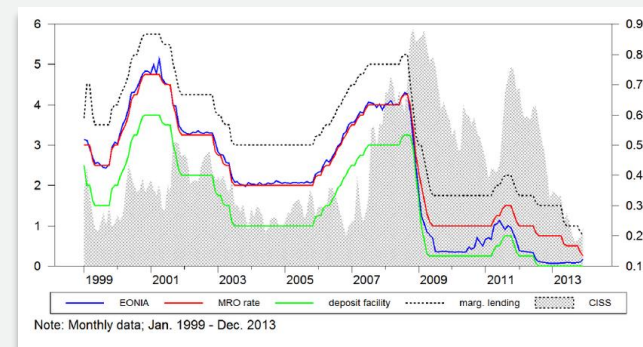
- The public will enjoy «playing» just because it's a game
- Talking clearly is enough to get the visitor's interest
- Our *main* objective is to foster financial literacy
- Money and finance can be treated like the natural sciences

What would the average visitor prefer to know?

Is there life on Mars?



What's the MRO rate?



What we are dealing with

The Italians and science

- In Italy, the average of people who claim to be «very interested» in scientific issues is slightly higher than the EU average.
- Nonetheless, those who are «not at all interested» are twice as many as in France and Germany.
- 42% of these, claim that the reason is that they «do not understand it». The EU average is 32% instead.
- Among those who claim to be interested, only 17% indicates **economics** as their subject of interest (EU, 24%)
- Only 33% of Italians consider **economics** as a scientific discipline (EU, 40%)

QA1.6 Let us talk about those issues in the news which interest you. For each issue I read out, please tell me if you are very interested, moderately interested or not at all interested in it.

a) New scientific discoveries; b) New inventions and technologies; c) New medical discoveries

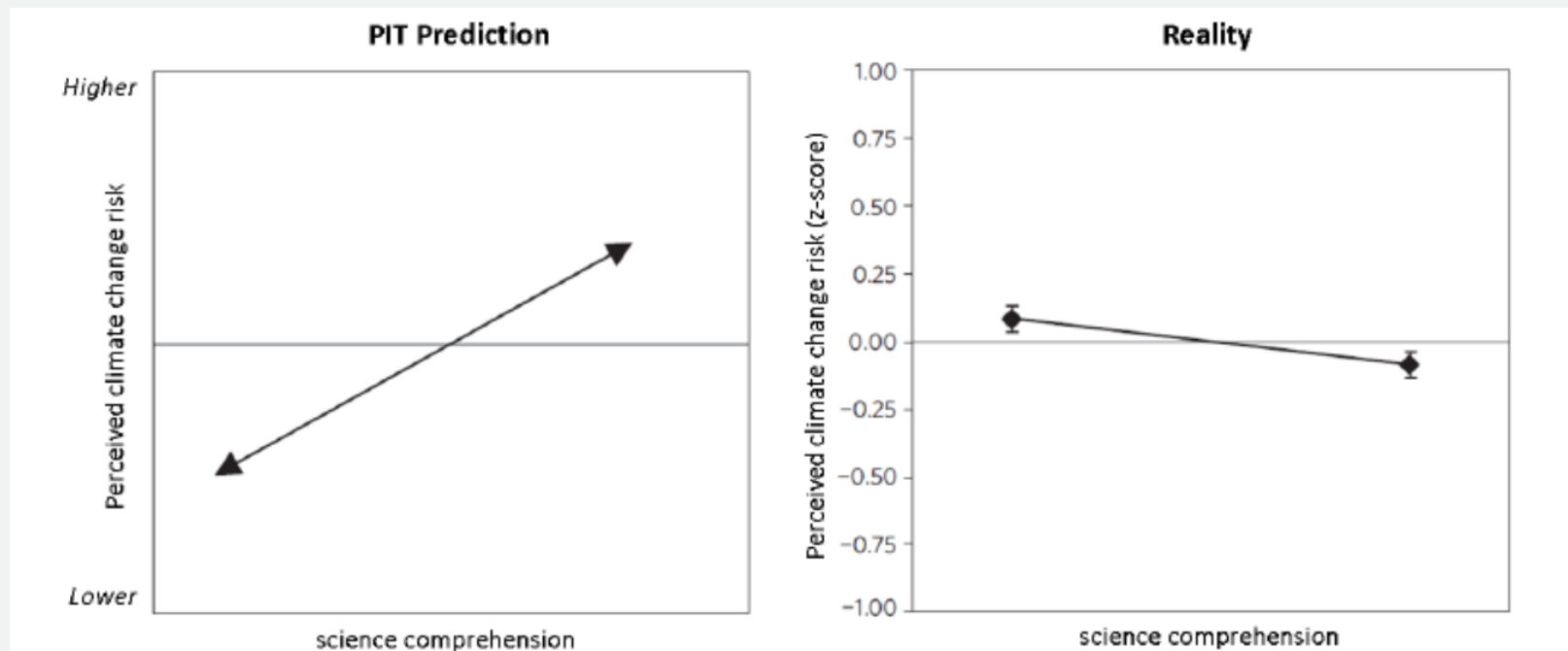
Media delle risposte					
(valori percentuali)					
	IT	UE25	DE	FR	UK
Very interested	17%	31%	40%	42%	33%
Moderately interested	56%	49%	47%	45%	47%
Not at all interested	26%	19%	13%	13%	20%
Missing	1%	1%	0%	1%	1%
Num.	1.006	24.895	1.507	1.021	1.307
Fonte: Eurobarometer Survey, 2005					

It is not a matter of literacy

People's resistance is based on something else

- The «Public Irrationality Thesis» (PIT) is wrong

*Members of the public, PIT stresses, are not very science literate.[...]. If they lack the knowledge and capacity necessary to understand empirical information, then **we would expect the gap between public and expert perceptions to narrow as members of the public become more science literate** and more proficient in critical reasoning. **But that does not happen.** D. Kahan *Journal of Science Communication* (2015)*



The role of emotions

Immersive experiences

THE CORE OF AN **IMMERSIVE** EXPERIENCE

- **Before** I start playing a game or engaging in a learning process, I need to feel an *emotional drive* towards it.

Information is not mediated by linguistic codes but conveyed mostly by sensorial feedback (images, sounds, etc.) and therefore easily understood even by non-specialized users. (Carrozzino and Bergamasco 2010)



Emotions are authentic
The keyword is «empathy»

**WE NEED TO PROVIDE VISITORS WITH AN EXPERIENCE THEY CAN
RELATE TO**

THE CASE OF ÖTZI, FROM MUMMY TO SUPERSTAR



(for reference: Eric H. Cline, *Digging deeper. How archeology works*, Princeton University Press, 2020)

Activating empathy 1

Fighting alienation

Most of us have experienced the frustration of walking into a museum and feeling alienated

HOW CAN A **SUMERIAN TABLET** SPEAK TO US?

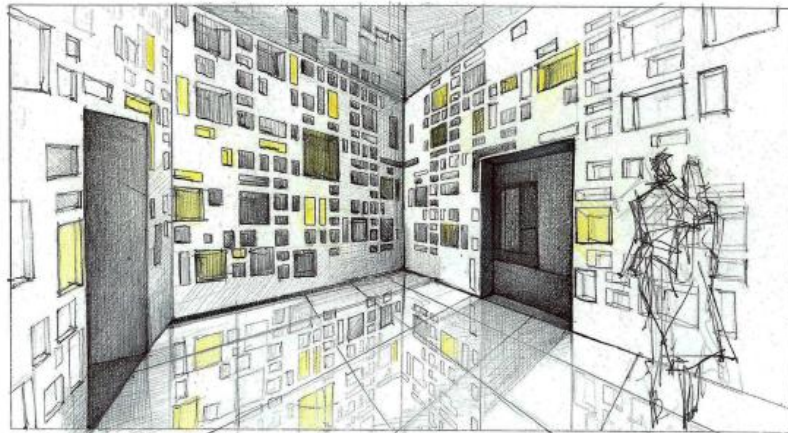


Activating empathy 2

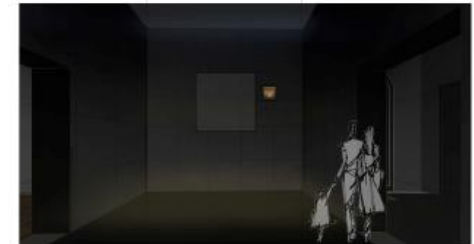
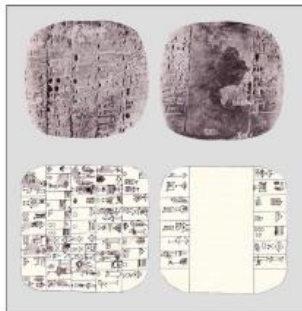
Speaking to the sumerians: an experience they will never forget

PERCORSO 01 L'AVVENTURA DEL DENARO

SALA 02 LA NASCITA DELLA FINANZA L'ANTICA MESOPOTAMIA



NICCHIE VARIE MISURE
PER ALLOGGIARE ANCHE DI ALTRI OGGETTI
INCONSI NEL RACCONTO —



PRIMA POSIZIONE DELLE QUATTRO PARETI (da sinistra a destra)
DAL BICO SI ACCESSE SOLO UNA NICCHIA CON LA TAVOLETTA INADUNATA PER ESSO SCHERMO TRASPARENTE



SI RIVELANO GRADUALMENTE LE NICCHIE SOTTOSTANTI CON ESPOSIZIONE DELLE TAVOLETTE DELLA COLLEZIONE ICI
SE RISPONDE SI ACCENDONO UNA DOPO L'ALTRA GRADUALMENTE



COMPLETAMENTO GRADUALE ACCENSIONE NICCHIE SOTTOSTANTI DA TAVOLETTE CHE ALTRI OGGETTI DA ESPORRE
SCHERMO CENTRALE E PARETI INQUADRANO GLI OGGETTI ESPOSTI NE RACCONTO LA STORIA, TRACCIANO SCRITTURE...

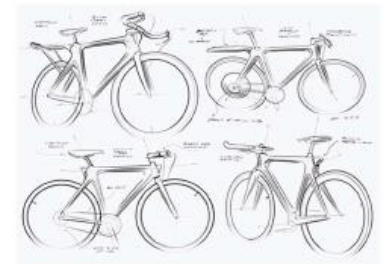


Activating empathy 3

Metaphors: how do you represent the financial system?

PERCORSO 01
L'AVVENTURA DEL DENARO

SALA 01
IL SISTEMA INVISIBILE



spazio
incontro
biciclette
sul soffitto



Activating empathy 4

Let's not forget we are in Rome

PERCORSO 01

L'AVVENTURA DEL DENARO

SALA 03

LA NASCITA DELLA MONETA CONIATA

GRECIA E ROMA



02



03

01 - 06 : SPAZI ESPOSITIVI

01 - AREA PLASTICO :

FONDO CON NICHE PER MONETE ILLUMINATE SINGOLARMENTE E INFRANDETE SULLO SFONDO.

ILLUMINATA AREA PLASTICO CON PROIEZIONI GRAFICHE.

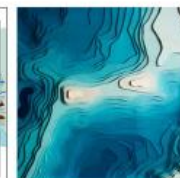
02 - REPERTI LEGIONARIO ROMANO

03 - MUCCIO DI MONETE

04 - BUSTO TRAIANO E DETAGLIO COLONNA TRAIANA

05 - ESPOSIZIONE MONETE

06 - COSTANTINO E SOLIDUS



01



01 - DENARIO DI GIUNONE



05 - SELEZIONE MONETAZIONE ROMANA E SOTTOMULTIPLI



06 - SOLIDUS COSTANTINO



04

Defining «immersive»

Is technology essential to the definition?

In the digital age cultural experiences are increasingly re-created thanks to creative applications of new technologies. The expressions “Virtual reality” (VR) or, more appropriately, “Virtual Environments” (VE) identify “a complex technology which exploits more low-level technologies (such as computer science, 3D graphics, robotics etc.) in order to create a digital environment which users feel completely immersed inside, and which they may interact with”. (Virtual Cultural Experiences: the drivers of satisfaction. Bellini, Bergamasco, Brehonnet, Carrozzino, Lagier, 2018)

- Technology is **necessary** but does not define an «immersive» experience
- **Sensations** and **emotions** define the experience
- **Authentic objects** have a key emotional role

Counterarguments

A limited view of «immersive experience»?

- This kind of experience is «passive»
- Visitors will not «learn» very much
- Visitors don't get to put into practice what they have seen



Counter-counterarguments

There is more than it seems

- If breaking an emotional barrier can be defined «passive», then the experience is passive!
- A museum does not have the space or the time to teach but it can *inspire*
- Yes, visitors *will* be able to be active, just not in the main exhibition (there will be **laboratories**, **games** and a **virtual museum**)



Immersion versus interaction

Last round

- The relevant literature rarely distinguishes clearly between «immersive» and «interactive»
- We are not ruling out *interaction*, we are separating it to make it more effective

Immersion

versus

Interaction

IT'S JUST AN APPARENT
CONFLICT

The background is a vibrant, abstract composition. The top portion features a red field with intricate, dark, geometric patterns. Below this, the image transitions into a more painterly style with large, bold shapes in red, yellow, and white, some of which appear to be layered or overlapping, creating a sense of depth and movement. The overall effect is one of dynamic energy and artistic expression.

**Thank you for your
attention and see you
in 2025!**