

**Pädagogische Hochschule Wien**  
**Spring Quarter 2022**

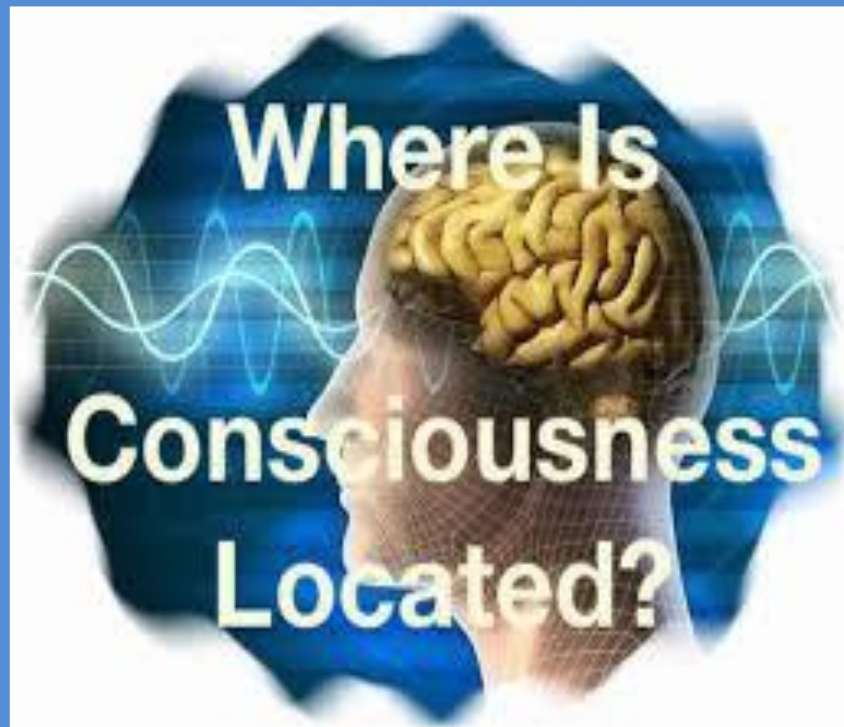
**Future Lab Seminar**

**From Self-Portraits  
to Geminoid Androids.**

**Identity and Difference in Robotic Doppelgänger**

**Fabrizia Abbate**

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**University of Molise, Italy**



Ethics provided us a rich vocabulary to explain the human behaviour: **consciousness, identity, decision, responsibility** for actions and, like synthesis of all that, **autonomy**.

It is here that philosophy have played its role in the last Century: as a huge support to the **individual autonomy and freedom**.

Ethics is still here, but nowadays we must be ready to deal with special metamorphoses of what we call human: **smart -machines, big data from web searches and digital devices, statistic analysis of everything, prosthetics, robots**.

Capitalism is using digital economy to be more successful: the whole functioning is an imperative. Cashiers, accountants, surgeons, airline pilots can soon find themselves unemployed: machines will be able to do their jobs less expensively, giving profits more efficiently.

*Are we ready to loose  
Autonomy  
in exchange  
for Automation?*

Autonomy means  
*human agency*, in  
terms of  
self imposing rules  
(αὐτός – νόμος)

Automation means  
something moving  
itself  
(αὐτόματος)

*My belief is that we can take  
into serious account  
the role of imagination  
in order to maintain our autonomy  
in all future automation processes,  
and to be able to assume  
new responsibilities.*

Today we are going to talk about the  
ambiguous relations between  
the *real* and the *virtual*  
in the contemporary context of robotics.  
We are going to consider  
*the art of Self-representation*  
as an essential goal for artificial intelligence in  
order to realize the main targets of robotics,  
for which I appoint three adjectives starting  
with the letter "P":  
*pervasive, persuasive, productive.*

# **Targets of robotics:**

**Pervasive Persuasive Productive**

**1. Self-portraits in Painting**

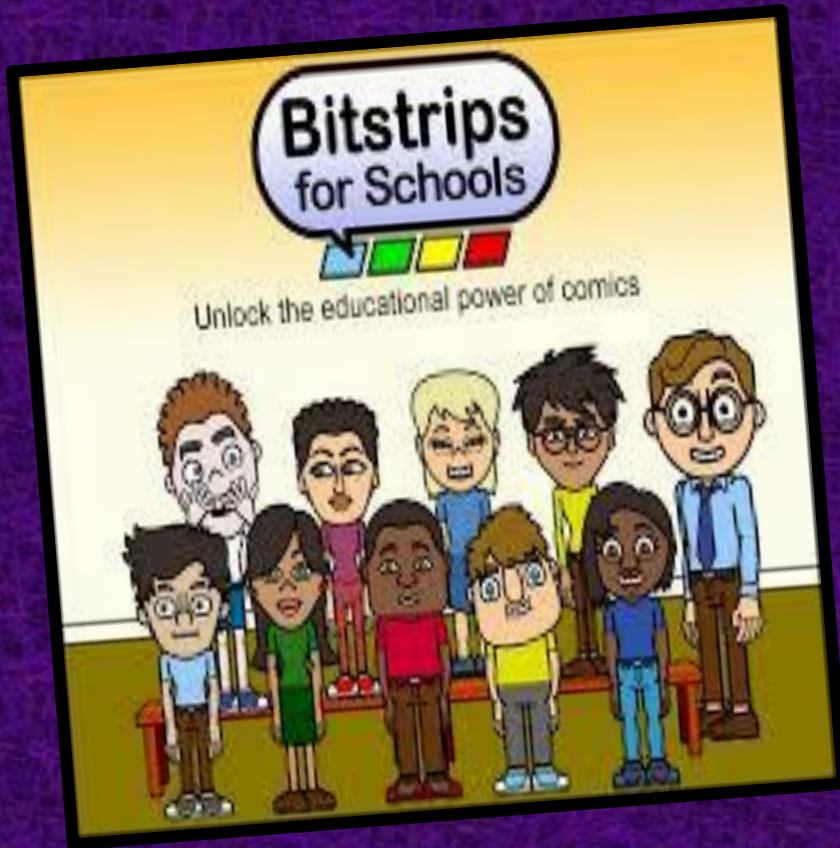
**2. The Doppelgänger in Literature**

**3. Geminoid Androids**

**Can artistic representations of the Self really be the resilience of the human essence in robotic identities?**



# Self-Representation in Digital Identities



In the real world, the presence of the **body** is absolute proof of **existence** while in the **digital world** the user must come “**into existence**” to communicate: he must build his personal profile, otherwise his **digital presence** is absolutely unobservable, so he simply does not exist for the community.

To compensate for the loss of physical presence, people must create new ways of reading the signals presented by others and new ways to present themselves.

People strive to laboriously construct *visual portraits* that reveal chosen aspects of their *identity* (see the usage of customized stickers on Facebook or Whatsapp).

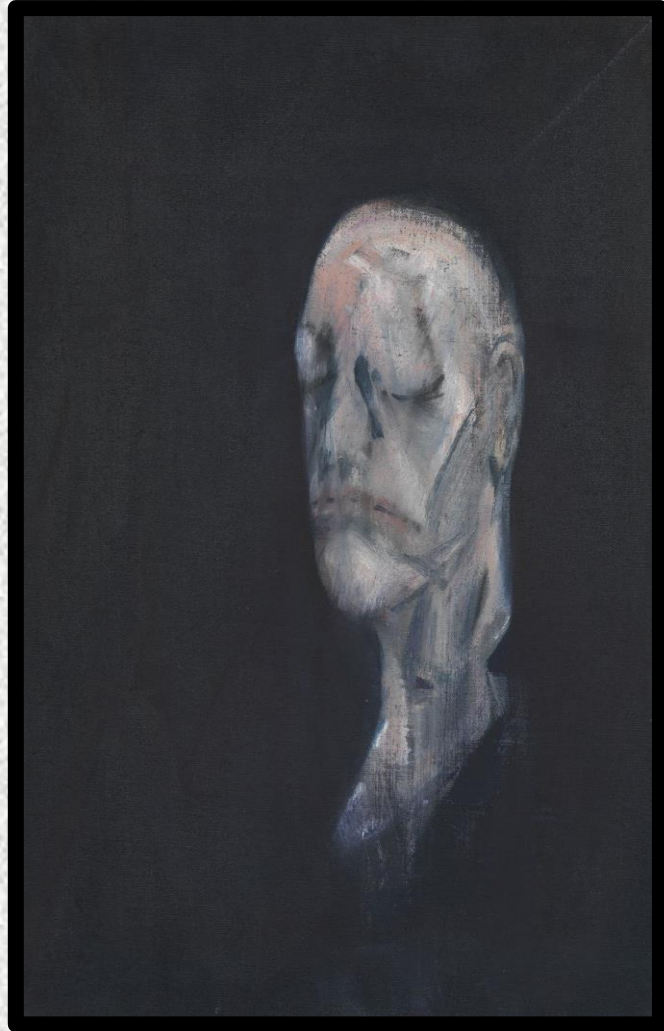
«In the virtual as well as the real world, identity is strictly related to the concept of difference»; you must be able to choose or create marks of special distinction in order to be recognized by other users.

Georges, F. (2009), *Self-Representation and Digital Identity. A semiotic and quali-quantitative approach to the cultural empowerment of the Web 2.0*, translated by E. Libbrecht, La Découverte, "Réseaux" 2009/2, n.154, France, pp.165 – 193



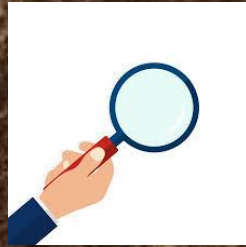
# 1. Francis Bacon

“If you want to convey fact, this can only ever be done through a form of **distortion**. You must distort to transform what is called appearance into image”

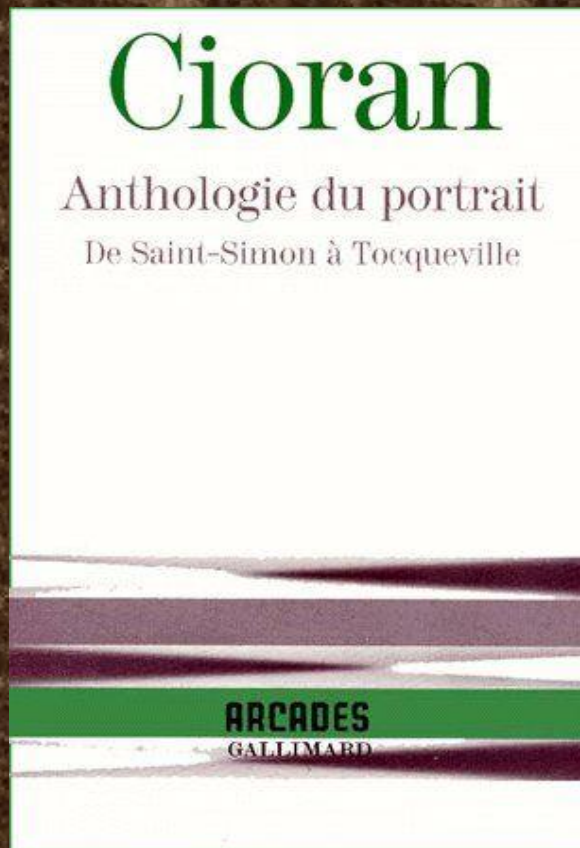


*The “inner man”  
(the interior and  
spiritual man)*

*The “outer man”  
(the individual  
over time,  
throughout history,  
in society)*



## 2. Emil Cioran



*A portrait  
gives  
temporality  
and history  
to the Self.*



**3. CARTESIO**

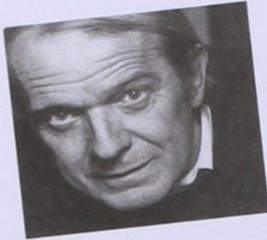


**+**



**SPINOZA**

★ R E P R I S E



GILLES DELEUZE  
**Spinoza**  
Philosophie  
pratique



LES ÉDITIONS DE MINUIT



*"What is a body capable of?"  
is the question asked by Gilles Deleuze,  
reading Spinoza's philosophy.*

*That is to say, not what a body is, but what are its  
possibilities, its activities, its performance in motion:  
capacity that depends not just on the body, but on the  
extended shapes of the world around it in every way.  
The same applies to animals and inanimate things: which  
is their capacity? And so, to summarize our third  
consideration, portraits of humans have the power to be  
virtual representation of body's capacity.*

*As Deleuze writes «the virtual is opposed non to the  
real, but to the actual. The virtual is fully real in so far  
as it is virtual».*

*Robotics inherit this conception of the body as  
virtual-actual in its mode of existence.*

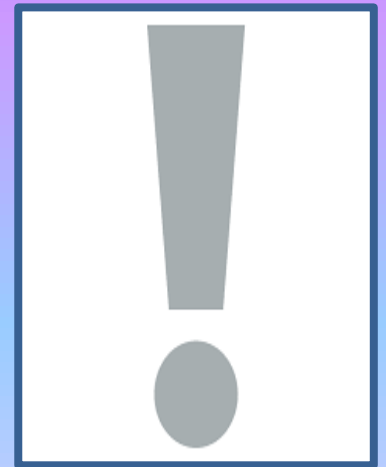
# Self representation in Portraits

**Distortion**

**Inner Man**  
**Outer Man**

**What is a body capable of ?**

**Portraits of humans  
have the power  
to be virtual representations  
of the **body's capacity****



***Io-Noi (I-We)***  
**by Umberto Boccioni**



***The Two Fridas***  
**by Frida Kahlo**



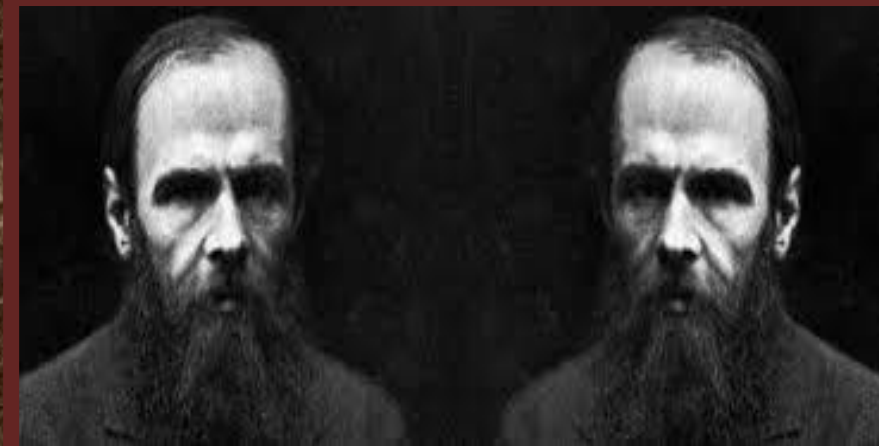
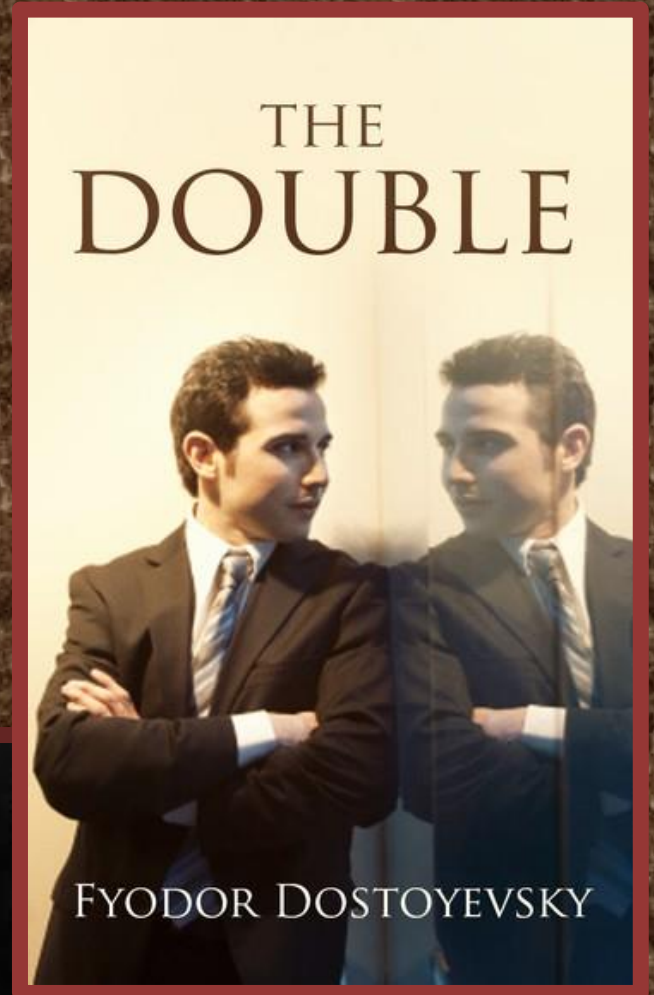
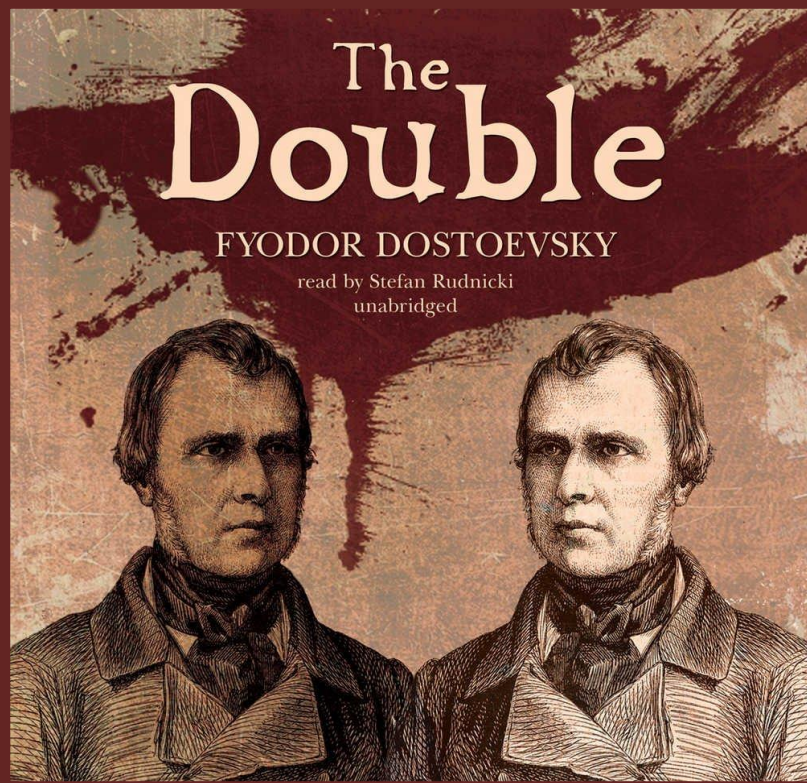
***Shining***  
**by Stanley Kubrik**

# Amphitryon by Plautus



**Dioscuri**





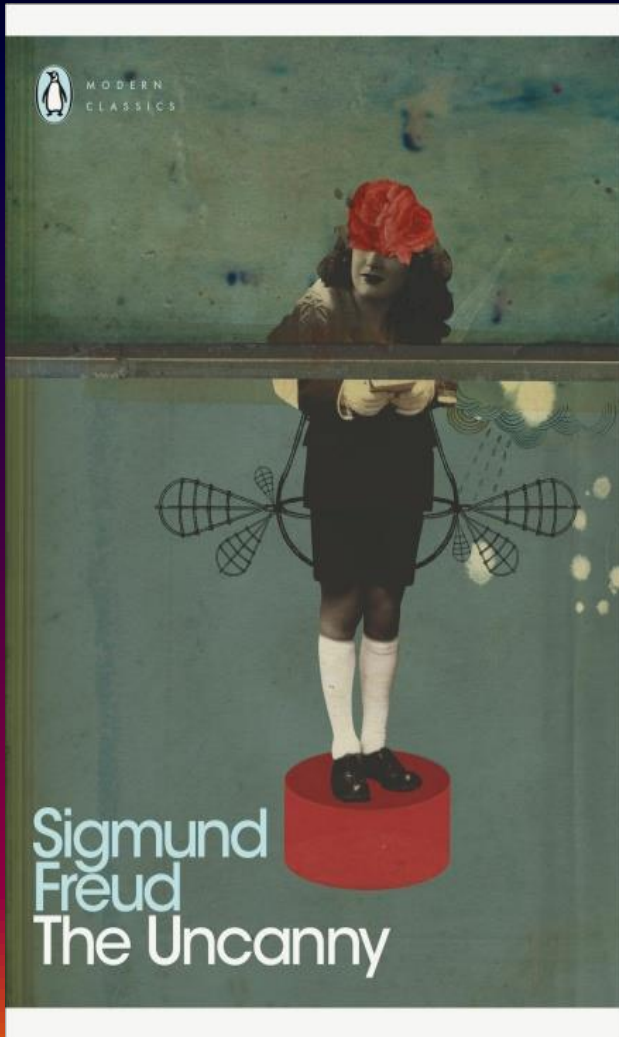
# *Is duplication a threat or a source of enrichment?*

*A keen interest has been taken in this issue, because this matter should concern all of us: it is not only interest in self-representation, but in the incipient penetration of **robotics** in our lives.*

*Duplication can contribute to strengths that already exist, but can also contribute to its impoverishment.*

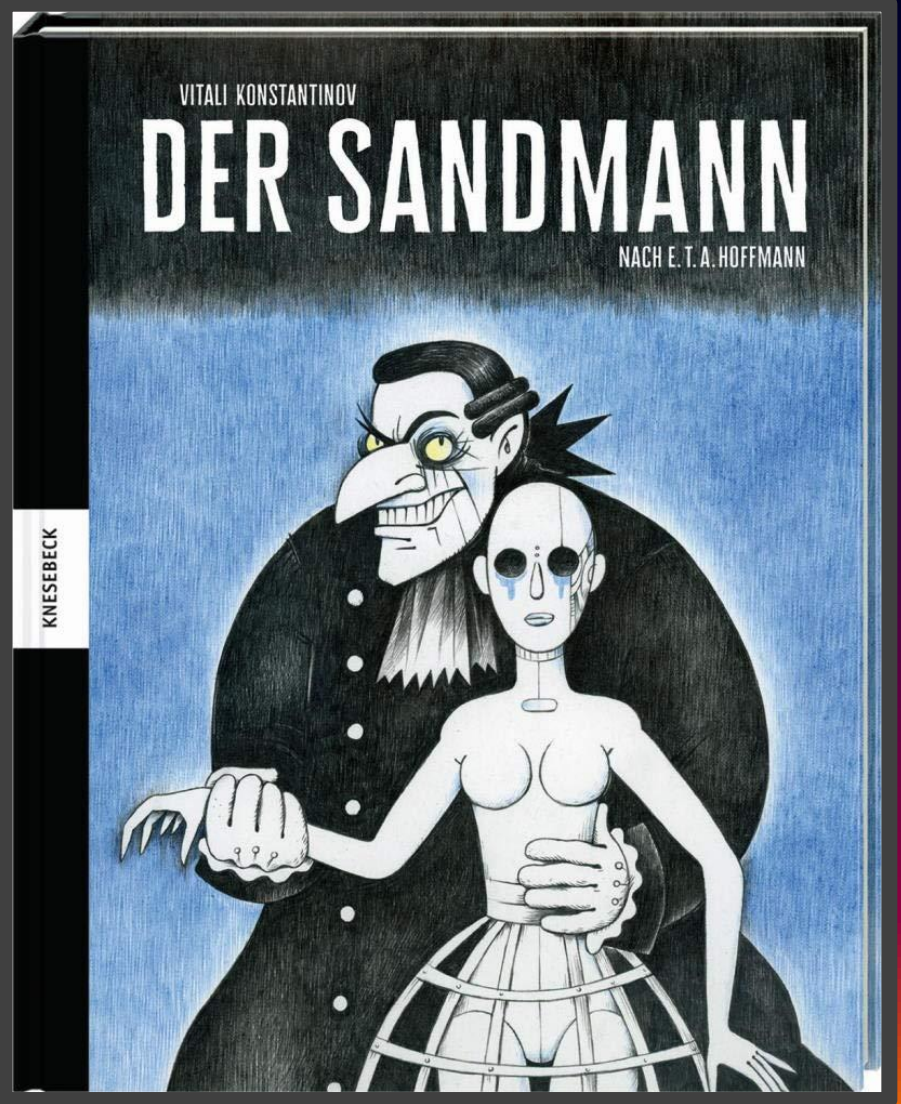
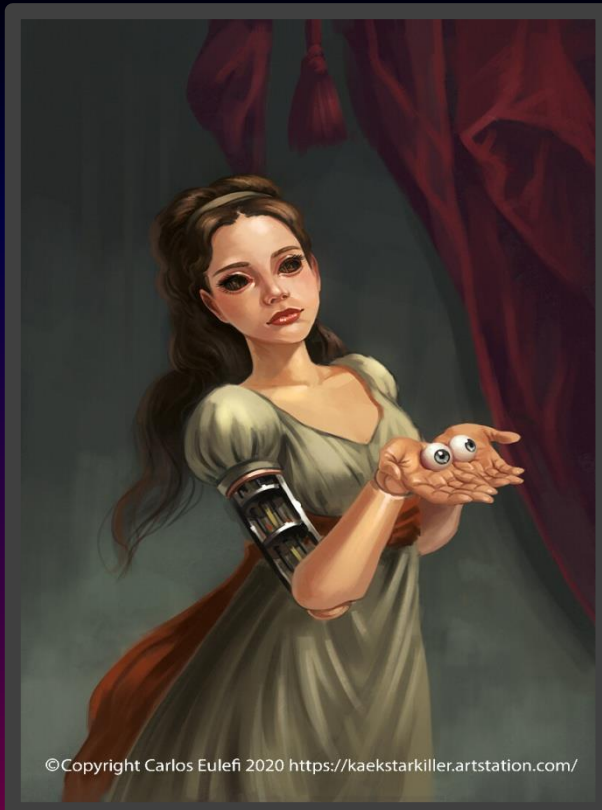
*Do self-representations improve our self-perception, or do they distort?*

*This is an old aesthetic issue, which is going to have a new answer, with the help of robotics.*



**Uncanny**  
is something  
that appears  
familiar and  
known,  
but  
immediately  
turns out  
to be strange,  
obscure,  
even creepy





Here the uncanny impression is shown:  
a hand cut from the body, a severed  
head, feet dancing alone; something very  
far from the rules of nature.

The uncanny sensation caused by  
imperfect simulations of human  
appearance and movement provokes a  
rejection: it happens in everyday reality  
when we face *prosthetic arms*, or  
*prosthetic eyes*, as well. It is called the  
*uncanny valley* effect in robotics.



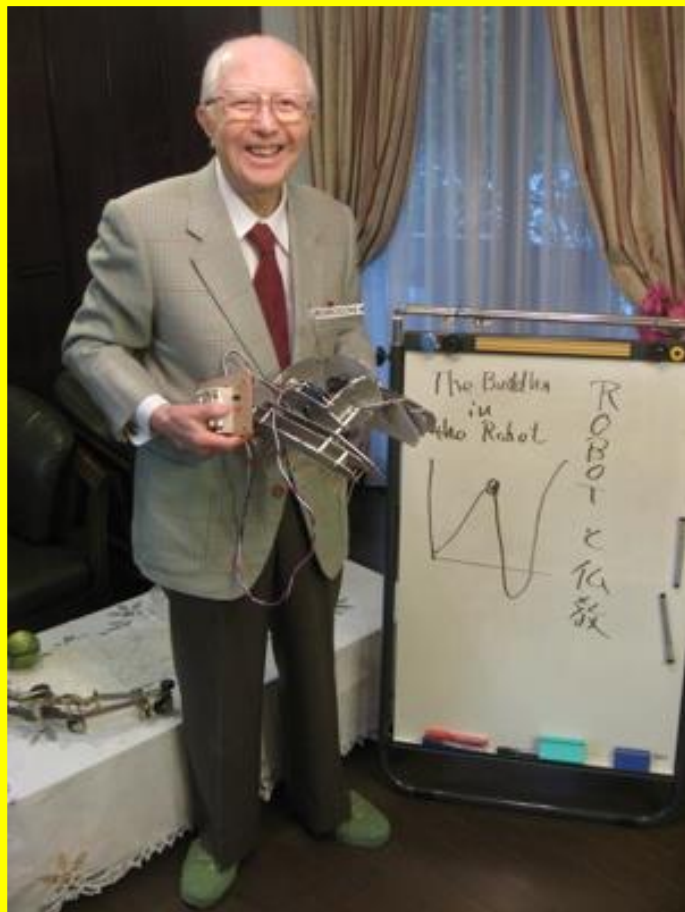
The Japanese robotic expert *Masahiro Mori* was the first one explaining this special effect in 1970, and he gave a precious warning to his successors:

*be careful in building too humanlike robots!*

Even the most perfect one, may result as uncanny and distressing, because its movements will be imperfect, or just because it deviates from norms of physical beauty.

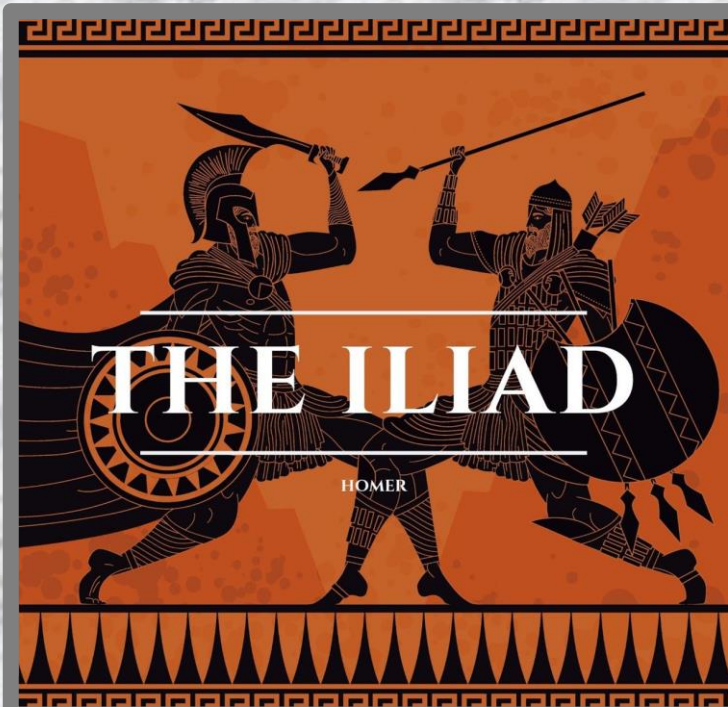
«Androids in various states of mutilation, decapitation, or disassembly are reminiscent of a battlefield after a conflict and, as such, serve as a reminder of our mortality» that is why we feel little confident with them.

# MASAHIRO MORI



# UNCANNY VALLEY EFFECT



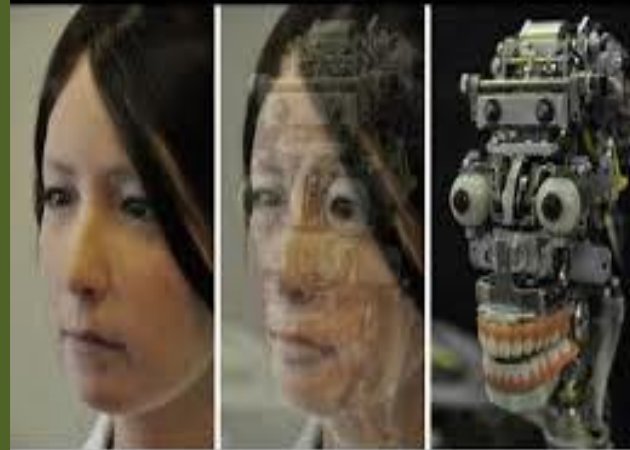




# Resemblance to Robots... the advent of *Geminoids!*

*By Hiroshi Ishiguro*





Hiroshi Ishiguro · Fabio Dalla Libera  
*Editors*

# Geminoid Studies

Science and Technologies for Humanlike  
Teleoperated Androids

 Springer

# GEMINOID SUMMIT



<https://www.youtube.com/watch?v=J71XWkh80nc>

**“Because of their  
resemblance to people,  
they have the potential to contribute  
to an understanding of human  
behavior and the roles of our brains  
and bodies play in it”**

MacDorman, K. – Hiroshi, I. (2006). *The Uncanny Advantage of Using Androids in Cognitive and Social Science Research*, p. 319.

*If androids are more likely to fall into the uncanny valley than mechanical looking robots, the reason may be that our brains are processing androids as human (...).*

*Methodologies from the social and cognitive science and ethology can therefore be used to evaluate android performance that were previously used to evaluate human performance. In comparing human-android versus human-human interaction, topics under study includes the effects of thinking, lying, and age on eye contact and gaze.*

*This means that we can use human participants to obtain a more finely-grained analysis of the behavior of androids than is possible with other kinds of robots.*

**MacDorman, K. – Hiroshi, I. (2006). *The Uncanny Advantage of Using Androids in Cognitive and Social Science Research*, in *Interaction Studies*, 7, 3, 2006, p. 301.**

Can artistic representations of  
the Self really be the resilience  
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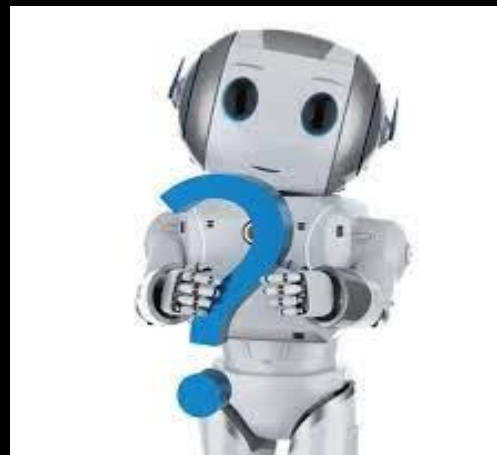
**Yes!**

Pervasive  
Persuasive  
Productive



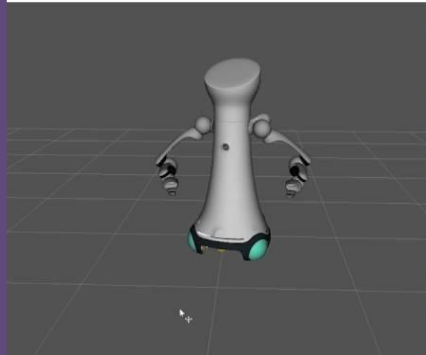
**Personable**

**Lifelike,  
but  
not alive?**

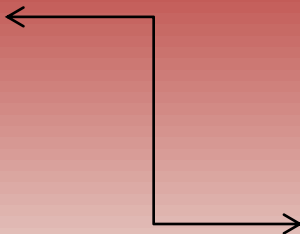


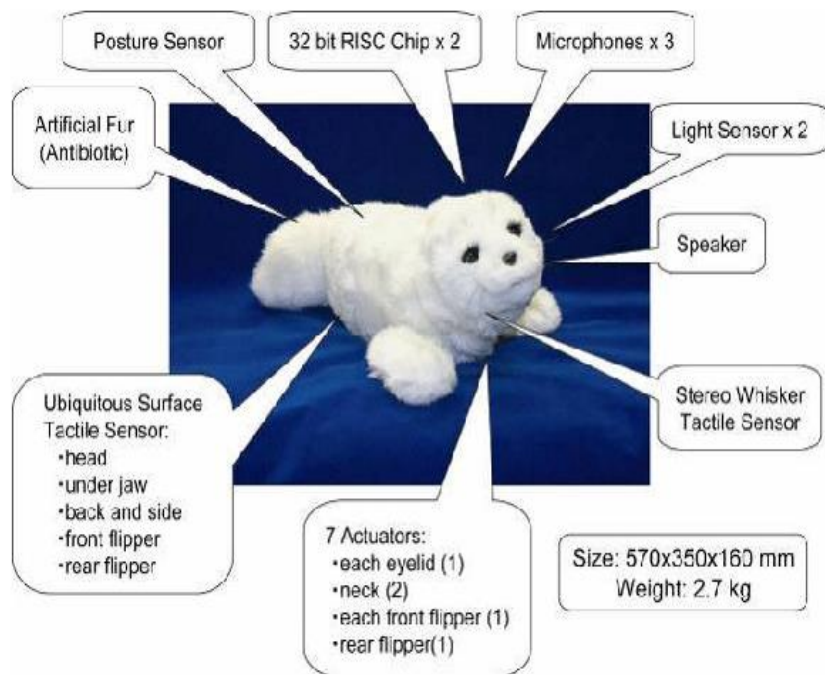


Compensation  
Base + Arm (both)



**CARE -O-BOT**





**PARO + ROBALL**



**ASSISTIVE ROBOTS**

**SOCIALLY INTERACTIVE  
ROBOTS**

**Elderly with dementia**

**Children with autism spectrum disorders**

**SUPPLEMENT – REPLACEMENT**

# KASPAR and MILO



**Emotions and empathic reactions embedded in  
a SOCIAL BODY (not solitary-private)**



**These are answered by External Robotics**

**Complements or  
Substitutes**

**They fit into the affective  
co-determination between human agents**

The creation of Substitutes promises to enrich and transform our plurality condition.

It promises to introduce among us new actors, who, similarly to animals, but in another way, will be at once like us and different from us.

**Paul Dumouchel e Luisa Damiano**



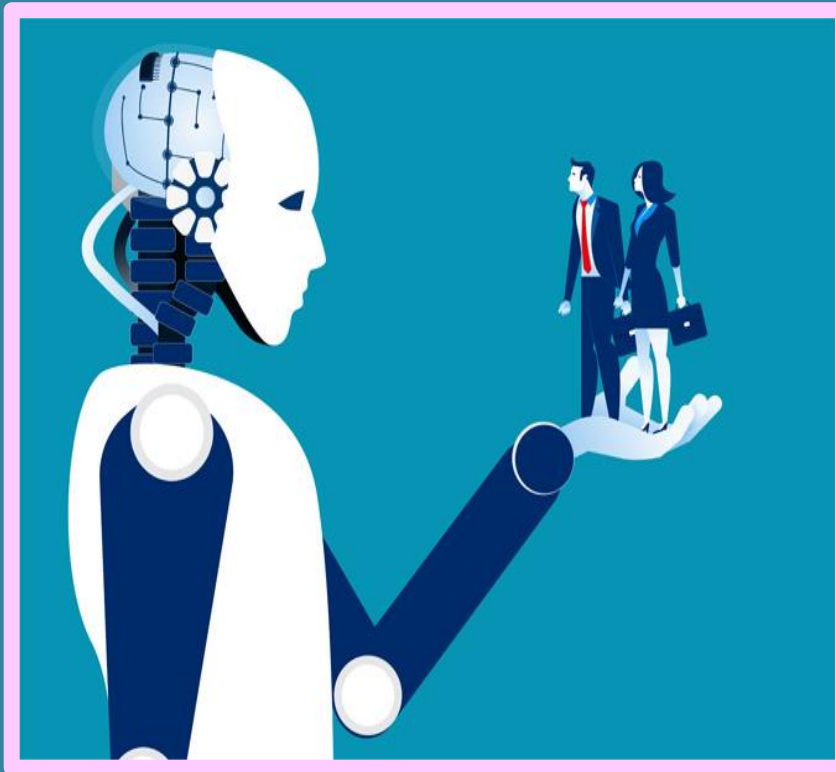
*How will we manage this  
amplified knowledge?*

*Are we going to use it for the market  
rules or for the human autonomy?*

*I believe ethics must seriously take  
these matters into its hand,  
challenging with its critical thinking  
a merely technologists' and  
scientists' approach.*

**“The Empires of the Future  
are the Empires of the Mind”**

**Winston Churchill**



**THE END**  
**Thank you!**

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