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The Ethical Challenges of the IC Technologies

The symbolic transfer as a key for the ethical dimension of humanoids and AI

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2. Definition of humanoid as symbolic machine
3. Further clarifications
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6. Final ethical considerations

Summary

The aim of this presentation is to indicate that the **symbolic capacity** of the humanoids is a central element, not only for its definition but also for its ethical valuation because this dimension links the autonomous work of the machine to the free human will.

מכון טכנולוגי לישראל

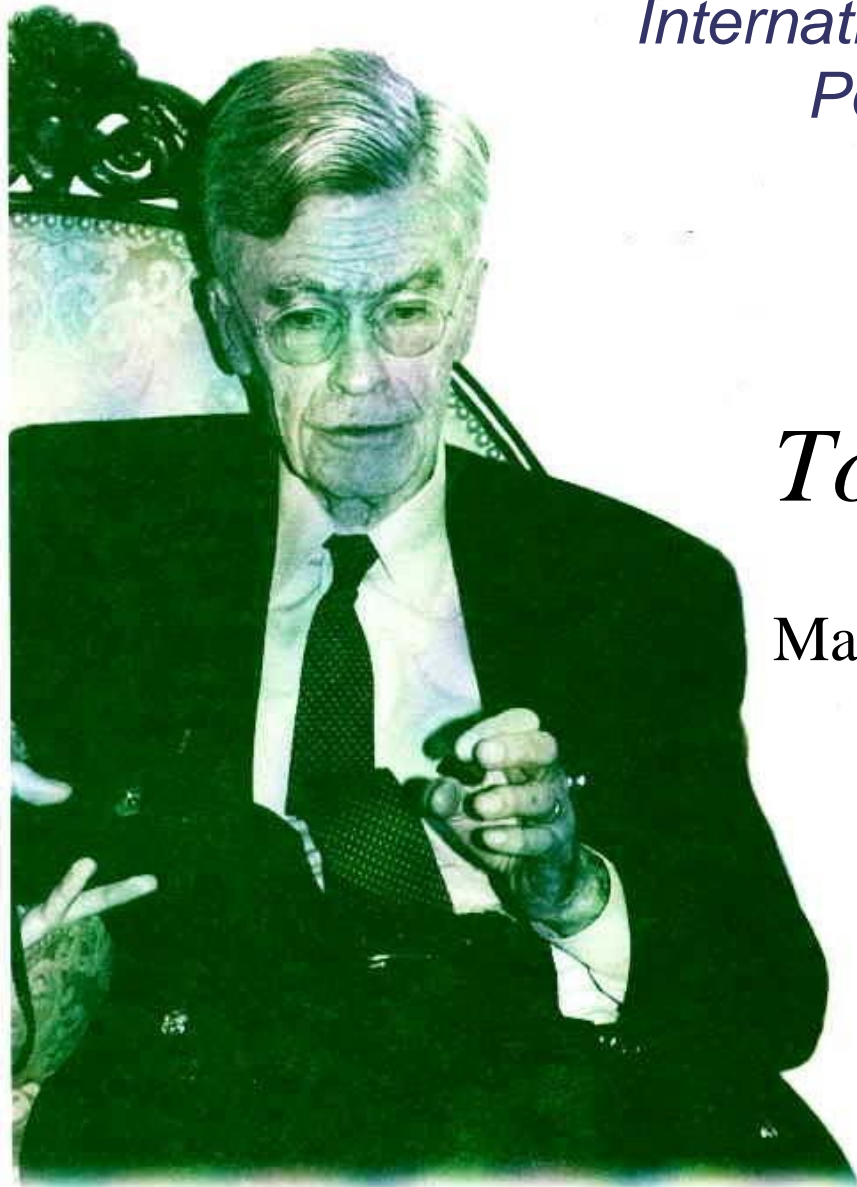
Technion
הטכניון

Israel Institute of Technology

*International Symposium on Ethics in an Age of
Pervasive Technology (Haifa 1974)*

Toward a Technoethics

Mario Bunge (McGill University)



The symbolic transfer as a key for the ethical dimension of humanoids.

Introduction

“the technologist, just as everybody else, is personally responsible for whatever he designs, plans, recommends, or execute”...

“the technologist who contributes to alleviating any social ills or to improving the quality of life is a public benefactor”...

“the technologists should tackle their own moral problems rather than pretend that they can be transferred to managers and politicians”

(M. Bunge, *Towards Technoethics*, 1974)

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Introduction

“Technologists should contribute to the overhauling of ethics, attempting to construct a technoethics as a science of right and efficient conduct”

(M. Bunge, *Towards Technoethics*, 1974)

“Sometimes the criticism of science and technology is so severe that it comes close to a condemnation of science itself. On the contrary, science and technology are a wonderful result of human creativity which is a gift from God. They have furnished us with wonderful possibilities, and we benefit from them with a grateful soul. However, we know that this potential is not neutral: it can be used either for the progress of man, or for his degradation”

John Paul II (Hiroshima 25.02.1981)



The symbolic transfer as a key for the ethical dimension of humanoids.

Introduction

TECHNOETHICS:

destination of a technical event to the
true good of humanity

The symbolic transfer as a key for the ethical dimension of humanoids.

Introduction

the definition of the object must reflect its nature,
distinguishing what is real, although non actual, from
what is only “thinkable” but in fact not real

**Science-fiction is not a matter for
technoethics**

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Introduction

The use of the **inductive method** in technoethics, as in the experimental sciences or in technology, could be **useless to give an utile judgment for more than one case**

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Definition of humanoid

“a humanoid is not less than...

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Definition of humanoid

***...a symbolic (partly) unlimited
machine”***

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Further clarifications

the symbolic spectrum of man includes the **corporeality**, for the symbolic ability of the language is intrinsically linked with the body

The body is the first symbolic tool of man

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Further clarifications

the “**written word**” or a word in anyway disconnected with the whole person can have many advantages at the level of historical, social, artistic meaningfulness, but is always under the symbolic ability of the “**pronounced word**”

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Further clarifications

an AI system must include, to be considered as humanoid, a **bodily dimension** capable to establish relational links with the environment through sensors and effectors

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Further clarifications

the symbolic ability of the humanoid is
limited only by the same limits of the
human corporeality

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Further clarifications

the specific characteristic of the human or
humanoid language is the
significant pluri-finality

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Further clarifications

the human word has a total **conventionality** (not arbitrariness!), in which the link between the sign and the signified reality is added to the nature

the human word is non *natural*, but *cultural*

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Ethical dimension of the symbolic function

The indetermination of the symbolic ability in the humans founds a **gap** between **being and language**, between “**internal word**” and “**external word**”, between all that the person reveals through his/her symbolic manifestations and all that is the true perfection of his/her being

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Ethical dimension of the symbolic function

the ethical dimension of the language
consists precisely in this required continuity,
acted by the personal freedom

**SYMBOLIC ABILITY = ETHICAL
DIMENSION**

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Ethical dimension of the symbolic function in a machine

the symbolic transfer

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Ethical dimension of the symbolic function in a machine

a humanoid performs autonomous functions
that can **look like** ethical acts

its product is **apparently** not a final
formalized product

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Ethical dimension of the symbolic function in a machine

in humans the ability for ethical acts lies in
the self-orientation of the actions to the final
aim of mankind; what does occur in the case
of the machine?

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Ethical dimension of the symbolic function in a machine

technics are not limited by the goal of the technical act; every technical achievement opens new possibilities, because **technics has not a finalistic sense**, despite every technical object is finalized to the purpose which is decided in its production

in technology every arrival is a departure

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Ethical dimension of the symbolic function in a machine

the human ability in giving a finality to acts
can integrate the objective dimension of the
technical act in the free finalization of human
acts

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Ethical dimension of the symbolic function in a machine

“reproducing” the symbolic spectrum is not a new symbolic function: it is necessary to consider it as a more complex

“already-produced-symbol”

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Ethical dimension of the symbolic function in a machine

in the human acting the formalization of an act as directed toward the end is due to the free will, and not to the physical dimension of the act

(obviously, this implies the statement of the free will as not reducible to the biological functions)

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Ethical dimension of the symbolic function in a machine

the humanoid (or the machine), instead, formalizes its symbolic act only **with the nexus between the physical reproduction of the human act and the formalizing human free will**, and not only in the act of reproducing itself

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Ethical dimension of the symbolic function in a machine

the human free will **transfers the
symbolic ability to the machine**
through the intrinsic technical
capability of human beings

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Final ethical considerations / 1

the ethical dimension of humanoids
is gathered primarily from the
human free will that has built them

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Final ethical considerations / 2

New technologies (ICT, humanoids), being a symbol capable of reproducing the symbolic function, increases the expressive capacity of freedom in a very important way; if the use of this capacity is ethical, this increment is very good from the ethical point of view

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Final ethical considerations / 3

every symbol must be transparent, but the profusion of symbols can easily carry to a diminution of the symbolic capacity; this implies a very hard ***extrinsic ethical request***, for the symbolic possibilities of humanoids and ICT are really very big

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Final ethical considerations / 4

in humanoids there is also a more important ***intrinsic ethical request***, non present in other symbolic machines, that comes from the symbolic transfer between human and machine

this is not always ethically correct, because non all the symbolic functions are transferable

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Final ethical considerations: intrinsic ethical request / 5

the symbolic transfer is ethically
correct when the object of the
transfer is a human symbolic ability
which consists in an
***objective trans-personal cultural
dialogical product***

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Final ethical considerations: intrinsic ethical request / 5 bis

The symbolic transfer is ethically problematic when the dialogical ability of the whole person is involved in a subjective personal level

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Final ethical considerations: intrinsic ethical request / 6

obviously these considerations must be preceded by the ethical judgment of the transferred function apart from the transfer itself

using a humanoid for stealing is always evil, although the humanoid in this case is able to act in a “very human way”!

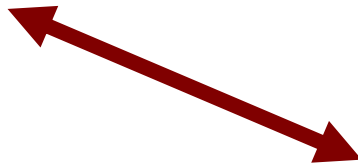
HUMAN ARCHETYPE



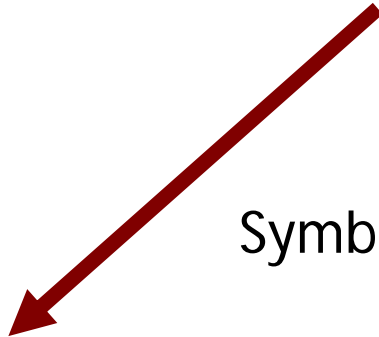
Symbolic capacity



SYMBOL



HUMANOID



Symbolic function