

**Toward a Cognitive Theory of the  
"Humorous Effect".  
It is possible to formalize indecidibility?**

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*You can only find truth with logic if you have  
already found truth without it*

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## The theoretical model

- is developed in the frame of the so called "cognitive science", from the so called "functional" point of view, oriented to the study of the stymilus/response mechanism;
- aims at an explanation of the functional differences in mechanisms of response triggered by inputs normally defined just "humorous"
- is built to be coherent to any possible scientific evidence by any possible scientific field or school. Therefore,

the model is perfectible and modifiable

## Starting from the terminological problem

The term "humor" is used to intend an immense number of different things: wit, jokes, puns, and all the texts based on such rhetorical tricks as irony, self-irony, parody, self-parody, caricature, satire.

If a text is a trigger of a response, the same term "humor" is used to denote different cognitive and emotional mechanisms of stimulus/response

**The terminological problem  
is a conceptual one**

## Impossible to theorize? (Attardo 1994)

- from Croce (1903) to Eco (1985) it has been claimed that a theoretical definition of humor is to be excluded. Humor is not formalizable

**The reason is the terminological problem:**

- the word "humor" was presented as an hyperonym of a big "semantic field", becoming a synonym of "fynny" (cf. Raskin 1985). But: what is funny?

## What "humor" means?

To study humor scientifically, we need a conventional, discrete definition.

As noted and analyzed by Pirandello ([1908] 1995, 7) the word "humor" means *liquid, body fluid*:

Hence, humor has to do with physiology

Also in the pragmatic use, the term "humorous" seems not to be a perfect synonym of "funny"

funny has to do with laughing, but laughing is a reaction to absolutely different triggers

## From terminology to concepts

- The concept of "funny" itself till now has no scientific definition. Texts seem to be "funny" in different ways, for different persons, in different contexts.
- Nevertheless most texts trigger similar reaction in persons belonging to the same linguo-cultural group and, if functionally translated, in persons belonging to any other group.
- Hypothesis: The "funny" is a human universal expressed by universal cultural constants. These cultural constants are a sort of scripts (i.e. prototypes and stereotypes of entities and relationships).

## The main theoretical claims

- The category of *humor* includes inputs triggering responses not reducible to the unified response of “funniness” and to the output of laughing. Such a super-ordinate term leads to a dramatic misunderstanding of the functional mechanisms of humorous inputs. Different inputs trigger deeply different cognitive and psycho-emotional responses. It is instead useful to speak about a **pleasure/displeasure** response system.
- Different humorous stimuli express relationships which differ at the **vertical** (hierarchical) and the **horizontal** (affective) level.

## a short retrospective of the contemporary Humor Research

- **The Golden Age:** Theodor Lipps (1898), Henry Bergson (1901), Sigmund Freud (1905), Luigi Pirandello (1908)
- **Contemporary Humor Research (Humanities):** Viktor Raskin (1985); Robert Latta (1998); Salvatore Attardo (1994, 2001);
- **The formal approach** (computer science and AI)
- **The neuro-cognitive approach:** having to do with human neuromechanisms, i.e. with physiology: Ramachandran (1998)

## Differences

- Lipps, Freud and Pirandello 100 years ago had already understood that distinctions are needed if inputs act differently at the cognitive and emotional level. They agreed that not all the humorous inputs trigger the same cognitive and emotional response.
- Unfortunately the labels Lipps, Freud and Pirandello used to define different typologies are not the same. Freud and Pirandello even used a crossed over terminology: what Pirandello defined by the term “irony or comics” seems to be what Freud labelled as “humor”; the latter is namely the opposite of what Pirandello defined as “umorismo”.
- If translated into the today dominant terms of psychology and science Pirandello's theory seems perfectly coherent to all the most up-to-date scientific approaches.

## Restarting from Pirandello

In his long paper *L'umorismo* Pirandello analysed the fundamental distinction between

- 1) inputs based exclusively on rhetorical tricks (**funny texts**) and
- 2) inputs belonging to the class of “umorismo”:
  - Both typologies have in common some surface features, but at a deep level **they function differently**.
  - The firsts are “forms of the opposite” (binary system), while humorism is “feeling the opposite” with an affective involvement (suspension of the binary system).
  - A fundamental contraposition emerges between **jocular humor** (pleasure) on one hand and the “**reflective**” **humor** (pleasure/displeasure) on the other.
  - Jokes trigger fun
  - non-jocular humor triggers funniness and melancholy.

## Translating Pirandello into the language of cognitive science

Jokes = formal **recognition** of script-structures (binary evaluation system applied)  
*versus*

non-jocular humor = **cognitive subversion** of the binary evaluation system (no formal reference)

- All rhetorical tricks are formal representation of binary relations (“the formalisation of the contrary”).
- Non rhetorical humor is the violation of the binary code, a temporary preconscious experience of indecidability and paradoxicality (“feeling the contrary by reflection”)

## Jokes are formal oppositions

- Typical of jokes is the inversion of the binary evaluation system we normally apply to everything (the system is working as well).
- Fun and laughing are response to the recognition of shared stereotypes (our binary evaluation system is strengthened).
- A joke works because we have prejudices of opposition between badness/goodness, left/right, we/you; right/ wrong. **In any joke you can change the target of mocking with the opposite term and the joke works as well for the opposite group:**

## An example

What is the difference between Berlusconi and God?

Berlusconi thinks he is God,  
while God doesn't think he is Berlusconi

- You can change Berlusconi with Berlusconi's opponent and the joke works as well. If you are a blond you can try to subvert the stereotype: you can give rise to a new tradition of jokes on stupidity, in which the blonds are telling the jokes and the target are brown haired guys.
- Jokes follow rigid formal outlines and a strong ideological rules set. Also if cultural items are culture-specific, stereotypes are not: **all cultural groups have in common a counter group which embody stupidity (versus us...)**

## Laughing through tears: "feeling" the opposite

- Non-jocular humor, on the contrary, implies not an inversion of two scripts, but a subversion of the evaluation system itself; you don't have anymore idiots *versus* smart people: you do experience the absence of a binary contraposition.
- Hence, re-telling Pirandello in an up-to-date terminology, the **umorismo produces a "de-programming" action of the binary program leading our thinking.** It's a sort of Gödelian phenomenon: a program able to defuse programs (Hofstadter 1979).

**Humorism is based on a cognitive and emotional paradox.**

- **Humorism cancels the binary system, the contraposition between truth/false, innocent/guilty, right/wrong etc. The consequence is a pleasure/displeasure response.**
- **Pleasure and displeasure overlap, generating what we normally call "laughing through tears". The millisecond response speed prevent the defence mechanism of the consciousness, normally acting as a device erasing contradictions (using the binary system).**
- **The experience of paradox is going on temporarily, until the consciousness restores the binary evaluation system, but a feeling of rule-breaking and release leaves its mark in memory.**

## Complex design (Dennett 1995: 71)

- Non-jocular humor has a more "complex design" than jokes.
- To be able to react to "complex design" a cognitive training is needed (passive and active experience). All environments are jocular (people react very readily to jokes), but the environments where non-jocular humor is frequent are very unusual, at least in the Western countries.
- In the Buddhist tradition we can find the extreme case of paradoxical Zen **kōans** (an oriental version of Pirandellian *umorismo*). Kōans are aphorisms able to unblock the cognitive system and lead to an **insight** through a pleasure/displeasure overlapping. They function if in the text **less information is given than it is needed to involve consciousness.** The reaction is always speedier than consciousness. **If you try to explicitly explain a koan, you just destroy the trigger,** as in the case of jokes.
- The deprogramming property of pirandellian *umorismo* seems to be the same of Zen kōans.

## An application: Humor in translation

The translator of any kind of humorous texts has to keep in translation:

A) recognizable *scripts* or stereotypes (in the case, she can change the **script items**: a psychiatrist with a shaman or a rabbi);

B) the coherence of the script (she changes the typical faults of the psychiatrist with the faults of a shaman or a rabbi);

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C) the subversive potential of the involved dissociations; the response has to be a violation of the stereotypes: for example: a) the shaman (or the rabbi) has not that fault; b) what was intended as a fault is not a fault; c) the people supposed to be right have that faults; d) that faults are human universals; e) other.

## Summary:

A) jokes structure is normative, recognizable, algorithmic; the pleasure of laughing is given by the mutual recognition of the rules system;

B) Pirandellian humorism triggers a double response of pleasure/displeasure due to the ability of the sender to erase the contraposition between himself and the target object.

Therefore, non-jocular humor has a much more complex design than the jocular one and requires more training, a more sophisticated ability to be understood and responded to (cf. Pirandello 1995:64). This is confirmed by the fact that jokes are very widespread and requires no special "culture", while humorism is a rare phenomenon in every culture, in every time (as shows the Zen tradition, paradoxicality is a complex philosophy to be acquired and reinforced).

### A border-line text

Three Hasidim were bragging about their rabbis.

"My rabbi is so pious," began the first man, "that day and night he trembles. When he goes to sleep he has to be strapped to the bed so that he doesn't fall out."

"Your rabbi may be pious", said the second man, "but my rabbi is so close to God that *God* trembles, and is afraid of displeasing him."

"Very well", said the third man. "But my rabbi has gone through both of those stages. At first, he used to tremble. Then it got to the point where God trembled. Finally, my rabbi said to God, "look, why should we *both* tremble?"