

Convention on 50 years of artificial intelligence held at the-
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Valeria Patera- ***THE CONTINUOUS THEATRE OF A DISCREET LIFE*** -

The visions and reasons of a theatrical text

- Alan's apple-Hacking the Turing test- published in "Alan Turing:
life and legacy of a great thinker"- international editors
Springer Verlag - preface by Douglas Hofstadter- introduction by
Giulio Giorello.

* Premise.

We can say that Turing was a borderline scientist, who was a forerunner in positioning the best of his research in intersections between various disciplines. Within this borderline spirit, the work that I would like to introduce here, places itself on the intersection point between science and humanitas. I am convinced that the interaction between the two cultures opens up a new prospective for aesthetic research, which is necessary for the formulation of new expressive models which, urged as they are towards a broadening of their thematic horizons and an overcoming of the linguistic limits of individual disciplines, might be capable of capturing the voices and the spirit, as well as the problems of our time. Therefore just as science poses the greatest and most urgent questions to philosophy, it brings an extraordinary sense of nourishment to theatre and opens it up to great epochal themes. For its part, metabolised as it is by artistic language, science acquires a richer communicative value and returns to be part of that "unitary knowledge" that characterised other eras.

* Science, Life and Theatre.

Outlining a new thought paradigm, Turing used to say that several description levels are necessary in order to be able to say something interesting about the world. I believe therefore that a piece of theatre, which, by definition, intertwines different levels of description and writings regarding the world, might be a place within which to represent the story of an extraordinary man and his extraordinary act of conscience, as was that which Turing put into act, and being able to represent it within the complexity of his living self, within his time, although always having been so external to it, more advanced than it certainly, prophetically more towards our time. By means of the creation

of what has now become the essential and ever present computer, this scientist made an impact on our daily lives more than anyone else. His research, which literally "changed the world", inevitably combined computer engineering with biology and mathematical logic with philosophy and psychology. Fulfilling this vocation, he thought that a new model of science would be inaugurated that, in the hypothesis of intertwining several descriptive levels within the world, might face up to the courage to open a discussion on its own axioms: a New Science for New Men.

In the title of my intervention, I borrowed two terms from the vocabulary of logic, so that beyond the technical meaning, the combination of continuous and discreet might generate an oxymoron that represents the tone of Turing's life well, in which he played on a continuous sense of theatricality, despite the fact that he was an extremely discreet and shy person who loved the simple things. He hated uproar in all its forms but failed to escape it, he was substantially animated by the desire for simplicity, by an anxiety to always start from what was elementary, and he applied this both as a life choice and as a research method. The intertwining of Turing's work and the human adventure is very close if not inseparable: thought and action, logic and physical, abstract and concrete - this was the problem of his theory and it was also the problem of his life, during which he maintained the shy air of a student rather than that of an outstanding professor and he never felt like "one of those who count".

It is possible that this may have had a negative impact on his career, but it leaves the memory of him as quite a singular man, not only due to his intellect but also due to his human aspect. I would like to recall an image of Turing, who, sitting on the roof of his home in the company of a great little 6 year old friend of his, with an extremely serious and involving tone, was discussing whether or not God could get a cold, walking barefoot on damp grass or another image of him riding his inseparable bicycle to get to the secret rooms of Bletchley Park where the foreign office had its cryptography analysis headquarters, wearing a gaudy gas mask with the utmost of naturalness, which he used to defend himself from pollen.

But beyond recounting extravagant and theatrical anecdotes, having studied his biography I was struck by a highly dramatic aspect, that is

the retaliations that characterised his life and for which I would describe him almost like a modern Dante in the spiral of damned scientists.

And so, although by breaking the Enigma Code, which was a fundamental step in the preparation of the disembarkation of the allied forces, he contributed to freeing Europe from the domination of the Nazis, a few years later he found himself accused in a trial for homosexuality. From liberator to offender, from the excellent man from the Foreign Office to the reprobate of a hypocritical English society.

Morally upright and sincere, he fell into a legal trap due to a moment of careless sincerity, having gone to the police to report a petty theft, he confessed to a homosexual relationship, which was punishable with two years imprisonment in the England of the 1950's.

The English Courts failed to appreciate the sincerity with which Turing revealed that within the protective womb of the best English colleges, homosexual relations were tacitly tolerated by the establishment as a possible parenthesis in the life of men belonging to the same social class. Regarding this he took one step too far, he had had unfavourable relations with an Oxford student, and what's worse, he had failed to hide it, tenaciously refusing all possibilities of abjuration to enter into the favour of the Court.

Following this, he was granted the generous alternative of Organ Therapy for one year. This was a form of treatment set up by the British Government which consisted of a series of oestrogen injections, the aim of which was to eradicate his sexual deviance and which inevitably caused worrying physiological changes. This was happening to he who was a pioneer at the Medwar congress the subject of which was the study, with experimentation on rats, of the relationship between hormones and consequent neuro-physiological reactions.

Therefore from the researcher to the guinea-pig, from the forerunner of a New Science to the victim of the application of an absurd, blind and aberrant scientific paradigm.

Turing lived with a constant tension towards the possibility of giving back the extraordinary to normality, but for this he was condemned to live the life of an outsider from which he received the extraordinary injustice of having to go through a chemical blaze that remains a stain on

the beginning of the reign of Elizabeth II (the return journey home from Kenya of the young Elizabeth following the death of her father King George VI coincides almost perfectly with the moment in which Alan Turing was told of his sentencing by the Police) that leaves a mark on the emblematic image of the apple with which he then poisoned himself.

He made an instrument of death from the vital fruit of consciousness because if - knowing is an actual action, it is deciding, an operative reality within the dominion of existence of being alive (...) being able to physically touch one's own world... - (from "L'albero della conoscenza" Maturana and Varela he affirmed that dominion by choosing death with the peaceful expression, which remained intact on his face, found by those who discovered him lifeless on his bed.

It was Pentecost of 1954.

The fact that Turing chose a day dedicated to the Holy Spirit for his death did not go unnoticed, with his epistemological elaboration at the basis of research towards a genesis of artificial intelligence that contributed to breaking up the metaphysical formulation of concepts such as that of mind or thought.

He was the symbol par excellence of a transcendent concept of knowledge and venerated as a supreme knowledgeable entity, perhaps even by those who "scientifically" burnt him in the discrete fire of molecules and discredit.

The world that his act of conscience had placed in his hands, had caused a few uncomfortable truths to emerge, which had brought turmoil to those who were resting on settled cognitive certainties; without fearing any fuss, he affirmed that - there is nothing sacred about a brain and the real mind doesn't exist. The mind is comparable with an onion, if I remove a layer, I will find nothing underneath other than another layer and so on, I will never find the core.

Proceeding from here, he clarified that, if all mental processes were to be reduced to a series of elementary passages, as elementary as possible, in virtue of the principle of imitation, it would be possible to reproduce them mechanically, he was therefore establishing an operative concept of intelligence which certainly doesn't exhaust its indefinite nature, but which has inaugurated an approach and outlined a route of which current neurosciences are the development, as he used to say -

the more we study men to understand how machines work the more we study machines to understand how men think -

- Can a machine think? And what is the meaning of thinking?-

By asking these questions and above all, by answering them, Turing etched into the compact skin of certain conceptual definitions such as the mind, the conscience, memory, be it intelligent, natural or artificial, stimulating a categorical redefinition of the same.

Moreover, it was his definition of the mind that successfully guided his research towards the mechanisation of thought. Although he did not have any particular notions regarding the physiology of the human brain, in 1939, he was convinced that certain functions of the human brain such as computation, the filing of information and memorisation of the same, the ability to judge, could be reproduced mechanically; that it was possible to build an electric brain (it is important in this phase to underline this because electronics only entered the equation later on).

It is clear that the very proposal to recreate these same human functions, implicitly meant counting on the possible mechanical reproduction of an artificial thought and such a position could not avoid sounding subversive and bordering on heresy. None of this surprised him, he was aware of the revolutionary force of his theories and he realised how it was necessary, first of all to - agree on what we mean by thought and what we mean by machine - in doing so the destinies of several different scientific disciplines inevitably became intertwined with those of epistemology, as we mentioned above, a new scientific paradigm that embraced research and application, pure theory and practical engineering.

Turing's genial intuition lay in understanding that we had to start from the logical structure of the brain, which means that anything that the brain does, it does in virtue of this structure and not because it is situated within the head of a person or because it is made up of a particular tissue with a particular bio-cellular formation and therefore that same logical structure can be represented by other physical means, other supports.

As such, while emphasising once again the link between his thought and his life, I ask myself if perhaps it was the desire to detach himself from

his bodily support, the flesh that hormonal devastation made him feel alienated from, that convinced him to leave this life, (to subsume himself within a purely logical idea?).

Or was it, on the other hand, the need to detach himself from the historical support which was so worsened by the facts of Los Alamos and the Manhattan Project that reopened the crucial theme of the ethical implications of scientific practice?...

* The question and the structure

Nevertheless, when facing the effort of having to structure a story, I realised that writing a text for theatre / science means first facing the risk of intertwining the limit of two different languages: poetic language and epistemological language and measuring the distance of this, risking the creation of a third linguistic and expressive territory that is a cross between Science and Art. As I was reflecting on this point I couldn't fail to ask myself: what can I write about science when I transfer it to a piece of theatre? Leaving this question open and facing the dramaturgical practice I managed to see in theatre, in the true pretence of the scene, the space from which the moment of scientific or philosophical intuition re-emerges from a fragment of existence that always appears new within the complexity of the da-sein that the benefit of pretence allows me to re-create by means of the bodily presence of the actor who acts within the space / time of the scene, marking its rhythm.

What is said by Maturana and Varela, according to which - every act of consciousness places a whole world into our hands, made me realise that Turing's act of consciousness made an important contribution to putting the world that we live in into our hands, intended as a world of technology and communications.

The relationship between Turing's work and IT society today, this is what interests me from the point of view of my elaboration; for this reason the intention of my project was never to represent the biography of Alan Turing tout court but rather to open up a scenic representation within which to cause a virtual meeting to occur between two existences

distant from each other from the point of view of space and time but closely related in the genealogy of artificial intelligence and both bearing the marks of an existence tattooed by diversity.

Proceeding from here, I docked at a story which was undetermined from the point of view of space and time, opening up a scenic representation that compares Alan Turing, who, given his work at the Foreign Office, we can say was the first hacker in history, with two young contemporary hackers and who incarnate the contradictions and paradoxes of the technological era with their thoughts and lifestyle.

And so some stylised passages from the life of Turing, the plot of which has all the connotations of a modern tragedy with a touch of comedy here and there, given the originality of the character who was so well known for his eccentricities, his contempt of power, his disarming and unconventional sincerity and his spirit of freedom, collide virtually with the adventures of two young modern hackers who meet him while surfing on the Internet. Following a red line, through the intertwining of the two stories, stylising it, I tried to represent the emersion of the paradigm of thought that, proceeding from the forerunning research of Alan Turing, develops as far as the Artificial Intelligence of the end of the '50's (the MIT programme with which the concept of Artificial Intelligence is made official in '56, that is, two years after his death).

Working on the interweaving of the double épos, some interesting transversal themes emerged that compare the life of the forerunning first hacker and that of the young Internet enthusiasts.

The theme of the body is certainly the strongest transversal theme: as far as Turing is concerned it is existentially the crucial point, the problem that effected his entire life, first of all a lack of interest in caring for his body, despite his activity as a runner in which he excelled, obtaining significant results, then tragically having to submit to a terrible bodily punishment, an insult to his personal freedom, to the intangible nature of his own body.

Then the theme of the body becomes a central question, from an epistemological point of view, when artificial intelligence becomes a concrete reality, as the fact that artificial intelligence is reproduced, having been uprooted from a body and an environment, poses a series of philosophical questions among others, which still remain unsolved today,

despite the extraordinary successes in the production of self-learning programmes and the development of technological reproduction systems. Both Alan and the modern characters experience a problematic relationship with school and bureaucratic institutions, a relationship that is anything but peaceful with the opposite sex and they are also likened by a feeling of intolerance as regards all forms of conformism to bourgeois values of respectability, not to mention a tireless desire to acquire knowledge.

In the case of the hackers, the body is seen as an impediment, the body is a handicap that limits the circulation of information, the body gets in the way of relations with others, in a technological world organised on the basis of connection between brains, more than on the relationship between bodies, therefore the body is seen as nothing other than a container for the mind. This cannot fail to bring us directly back to Turing's reflections regarding the theme of the relationship between body and mind (- the body gives the spirit the things it needs to do... when the body dies, what kept the spirit linked to it dies too, therefore we can presume that the spirit finds itself in a new body...) was a favourite, and here, on this point perhaps he left the mark of weakness of his system.

Two more themes that are closely linked to the theme of the body are the themes of identity and gender. Here the theme of identity and gender is made up of this entire story, as in Turing it is a question that has to do with him as a man above all else, a man who fails to find a sexual identity and then it becomes a focal point for his reflection that leads to the invention of the so-called Turing test or "imitation game" that, before coming a test for artificial intelligence, had been invented to verify what kind of imprint on language could derive from belonging to the female or male gender.

And so, just like his own life was transformed into a test at a certain stage, in which he himself played the role of the person being interrogated, answering the absurd questions of mysterious interrogators, sustaining a verbal game with which he burnt out his life, here, proceeding from a strong theoretical abstraction we get "practice", it is made solid in a reproducible game (let us not forget that Turing constantly repeated that what he was interested in were the real

manifestations of the abstract), here in my pièce, the essence of the imitation game becomes an aesthetic form, giving structure to the theatrical form, bringing us before the last instant in the life of a man who looks at us from his complete nudity, faced with an unjust and incomprehensible pain and it digs into our conscience with a question mark.

I will conclude this intervention by presenting you with the poetic hypothesis of the last words that Turing might have said, for all the rest I advise you to refer to the theatrical piece, the text of which I have given you the end of.

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(...)

ALAN They've accused me of being against the establishment, but I've never been either for or against the establishment.

Pause

Today I feel completely against my own body.

He pushes his hand under the lapel of his robe and rubs his chest.

Orange halves.

He repeats the gesture

My body has sprouted two tiny breasts.

They're still growing.

Pause

Estrogen in state dosage.

*Female hormones are upturning the roots of my body
my desire*

They're trying to crush it with blasts of molecules.

Pause

They gave me a year's parole provided I accepted a course of "organ therapy", a kind of hormone cocktail.

How could I refuse?

They allowed me the privilege of not going to prison.

But this time they're the ones in charge of the experiment.

Pause

Chemistry plays its part.

I am helpless.

I did not sleep a wink last night.

I tossed and turned and kept feelings these alien protrusions.

Pause

They're relying on chemistry to eradicate my deviance, my Otherness.

Pause

It's the outcome of a "positive investigation".

The Police are supporting science. I never thought it would happen. (a bitter nervous laugh)

Pause

Chemistry, it would seem, offers a solution to the problem of social control.

Pause

The heretic burnt on a discreet molecular fire, a nineteenth century chemical stake

...

Pause

After the initial rather bland injections, they'll be giving me a massive one in my thigh. Horse medicine!

Pause

They say I shall get back to what I was before once the punishment's over.

Pause

Before.

I'll get back to what I was before, the same but the worse for their vengeance.

Pause

I attended the conference where Medwar gave a paper on experiments giving male animals estrogen injections. His aim was to discover the relative neuro-physiological mechanisms in the light of behavioural changes.

Pause

From being a spectator I am now a guinea pig.

I've passed through the looking glass.

Pause

I wanted to discover the magic of the human mind.

Pause

I've succeeded in controlling the logic of machines but the human mind still foils me.

Pause

To reproduce the complexity of thought mechanically is as difficult as describing scenes of family life on Mars but finding a meaning to life is no less easy.

Pause

The inimitable irrational.

Logic. Yes.

Pause

The spirals on a pinecone are perfectly patterned. It means beauty, a mathematical destiny, the harmony of Fibonacci's numbers (for a moment he looks bewitched)

Pause

With these injections they intend changing my body's destiny.

My actions and feelings.

Pause

Impotent

Pause

And science can succeed in this.

*They put me on trial.
A test about my life
I didn't pass the normality test.
I'm the interlocutor.
They didn't tell me who my interrogators were.
Pause
I have a thousand replies to the questions they never asked.
They weren't expecting one of these.
I should have played a different role.
Imitation game.
I couldn't bring myself to...
I wanted to make the extraordinary normal, but not make myself normal.
I'm receiving extraordinary injustice.
Extraordinary life and death in return for ordinary bureaucracy.
Why are you staring like that, Porgy?
You who have stayed silently by my side all these years, should really understand at this point:
the key lies in the apple.
Snow White's apple provides the key to life's enigma.
Its never ending machine stops discreetly,
delicately chewing
Pause
Yes, I decided to peel the onion of the mind.
And I reached nothingness.
Pause
But my hope, my wish, was to find this (he takes an apple and bites into it) , the core of the apple.*

*Pause
Innocent life.
Pause
A calculator can only open windows to logic through which life itself escapes.
The irrational is inimitable.
Pause
Arsenic salts ...I adore reactions.
He continues to work on the apple, totally absorbed in what he's doing , the slowness and attention of a ritual ..he hums to himself)
"Dunk the apple into the mixture
so it gets soaked in the sleep of death."
Pause
A calculator will never be able to enjoy a fairy tale like a child can.
I love Snow White's apple.
Her reflection in the looking glass
(He bites several more times into the poisoned apple)
Pause*

The inner part that's what I'm looking for.

Pause

Imitation game

Imitation game.

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