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About SF and Fantasy through *Artificial Intelligence*

ABSTRACT
Set in a rather remote future, Steven Spielberg's film *Artificial Intelligence* (2001) tells the story of a childlike android named David programmed with the ability to love. Having as starting point a SF short story, namely Brian Aldiss' *Super-Toys Last All Summer Long* (1969) and a novel for children, Carlo Collodi's *Adventures of Pinocchio* (1883), Ian Watson, a British science-fiction writer, created a very interesting screen script. The movie marks the continuity of the specific need human beings have for stories as well as for love. It thus proves to be a combination between hard SF and fantasy. Our paper would mainly underline some changes in fiction about possible and impossible worlds throughout time with an accent on the balance between natural and artificial.

KEYWORDS
Artificial Intelligence; Hard SF; Fantasy; Science; Love.

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Preliminaries

The distinction between the human being and the machine has constituted for centuries the major concern of all those preoccupied by androids. All these creations have the same idea as a starting point: simulating life through art, science or magic in order to understand what makes of us human beings. But *A.I.: Artificial Intelligence*[1] goes even further by asking what constitutes the boundary between humans, non-humans and post-humans.

The notion of artificial intelligence goes back to the 18th century, more exactly to the year 1796 with Wolfgang von Kempelen's "Chess Player". The starting point for the development of modern artificial intelligence was given by Alan Turing's experiment. This mathematician and cryptographer did, in 1950, an experiment through a mimicry game. Two participants, a human being and a computer, placed in two different rooms, out of the examiner's sight are supposed to answer questions in writing, their answers appearing on a screen. The computer succeeds if his answers cannot be distinguished from those of the human being. Turing imagined that by the year 2000 the computer's achievements would rise at about 30%. Up to 2001, the first laboratory

of artificial intelligence opened in 1950 at the Massachusetts Institute of Technology (MIT), had created "Cog" and "Kismet", the last one with a face closer to the humans and capable of telling the difference between animate and inanimate objects, distinction humans are about to disregard when speaking of androids; it also put on the market "My Real Baby Doll", an electronic doll capable of acting in many respects like a baby. The remaining problem is that of creating emotions in a computer for if the computer is declared human, the human being can be assimilated to a lifeless object as Gaby Wood tells us in "Edison's Eve"[2].

Hans Moravec, chief scientist of Seegrid Corporation, adjunct faculty in the Robotics Institute of Carnegie Mellon University, assumes that by 2050 we would have "The fourth robot generation and its successors, with human perceptual and motor abilities and superior reasoning powers" which "could replace human beings in every essential task"[3]. In principle, our society could continue to operate increasingly well without us, with machines running the companies and doing the research as well as performing the productive work". Moravec's book, *Mind Children. The Future of Robot and Human Intelligence* (1988)[4], was recommended by Stanley Kubrick in 1990, together with Carlo Collodi's *The Adventures of Pinnochio* (1883) and Brian Aldiss' *Super-Toys Last All Summer Long* (1969)[5] to the English SF writer Ian Watson for the writing of a screen script; as Watson confesses in his recollections of the collaboration[6], the *A.I.* script was enhanced then abandoned, even lost, then taken up again until the heart attack that ended Kubrik's life in 1999. Nevertheless, I. Watson declared: "But we all feel *AI* represented the tremendous movie that it was Stanley's main and enduring ambition to make". Because, after losing Watson's screen script he said to him: "'This is one of the world's great stories. Would you write a short synopsis of it I can show to people?' I was rehired for a week to write 20 pages. I faxed, I disked. 'It's great,' said Stanley, before uttering the fatal words: 'I might just tinker with it a little...'". The movie "was to be a picaresque robot version of Pinocchio, spinning off from the Aldiss story, but the plotine had bogged down – global warming was flooding New York and an ice age had set in a thousand years ahead"[7]. The film was finally achieved by Steven Spielberg in 2001.

These specifications are important for my approach. They show from the very beginning to which extent intertextuality and multidisciplinarity are involved. Intertextuality because we have several literary texts going from fantasy to science-fiction where science has an important role, multidisciplinarity by the merging of literary and scientific texts into a film, a metafilm in fact. A metafilm about the specific need human beings of all civilizations have for stories as well as for love.

The followed steps start with intertextuality which implies the understanding of the film plot, continue with multidisciplinarity through which the film will find a place in the usual classifications of the genre, and finishes through a reflection on human existence with its capital challenges.

The intricacies of intertextuality

It would take many pages to resume each of the stories that have inspired Ian Watson' screen script, slightly modified after by Steven Spielberg. I chose to resume the film by trying to underline the sources of inspiration when necessary.

The film suggestively begins with the image of ocean waves accompanied by a voice, like the one of a story teller (equivalent of the narrator in a novel), locating the story in a hard-edged future after the disappearance of some parts of the Earth as a consequence of global warming: ice caps have melted and the resulting rise of the ocean waters has drowned all the coastal cities of the world. Amsterdam, Venice, New York were thus submerged. People were obliged to adapt to new life conditions. The next image projects us in a scientific reunion taking place at Cybertronics, New Jersey. The subject of discussion, directed and mediated by Professor Allan Hobby, is turning around the possibility to create an android capable of love. The android is called mecha (term invented by the Japanese)[8], in order to differentiate it from the orga, organic creatures. Professor Hobby evokes the birth of the notion of artificial intelligence and the 1796's Chess Player. Sheila, a mecha woman serves as a proof of the scientific evolution. It seems that Hans Moravec's previsions are accomplished: Sheila looks human from head to toe. Through simply pressing different buttons the professor leads us to the image of a complex mechanism covered by artificial skin. A mecha is not emotionally sensitive touched; if someone hurts it/ (him?), the response is a physical sensation. The mecha lover models can only work on the activation of senses having as an effect the creation of pleasure in the senses, not a neuronal flashback, "a kind of subconscious". Since this in an overpopulated world, a viable solution emerges, that of creating, through a new behavioral intelligent unit with a new neuron sequencing technology, a mecha child capable of love, a substitute for a human child. The first idea borrowed from Brian Aldiss' short story *Super Toys Last all Summer Long* is introduced. Questions on reciprocity are unavoidable: "Could humans love him back?"; "In the beginning didn't God create Adam to love him?", underlining the most important challenge of the film: the discussion on the boundary between reason and emotions.

The next image, located twenty months later, presents Monica and Henry Swinton in their car, going to the hospital where Martin, their unique son, had been cryogenically frozen five years before in order to be kept alive until a cure for his sickness would be found. An interesting connection between mecha and orga women is created in the passage from one scene to the other: after having her head opened, the first one opens her makeup box trying to mend the damage in her looks; the same operation is followed by Monica next to her husband in the car. At the hospital, while Henry is talking to the doctor, Monica is reading *Robin of Sherwood* to her encapsulated boy.

Everyday life scenes follow. Monica doesn't have a job, most of her activities develop at home. To help her fight against depression, Cybertronics decides to offer the family the first mecha child, David, an eleven years old boy (played by Haley Joel Osment). Logical fiery debates on the subject: how could a machine ever replace a human being? But David proves to be so perfect in its "built" that Monica finally goes from hesitations to the decision of keeping him. She then has to carefully press a button on David's head in order to introduce a code, an "imprinting protocol", while the mecha child is looking at her all the time. The words she pronounces are:

"Cyrus, Socrates, Particle, Disciple, Hurricane, Dolphin, Tulip, Monica, David, Monica." The child utters for the first time the "magic" words: "You're my Mummy". Love forever irresistible coming from the child which would be destroyed when the parents don't want him anymore.

In this part of the film, the short story and the screen script intermingle. David already exists when Aldiss' story opens on an indefinite future where almost everything is artificial, he is only five years old and already playing with Teddy, the robobear, he is already writing on sheets of paper unfinished declarations of love to his mother. But while the SF writer's Monica shows quite little interest in her artificial son and joyfully receives the news that her demand of conceiving a child has been accepted, Spielberg's Monica feels impressed by the incessant attempts David makes to show his affection. The David child has much in common from this point of view with Collodi's Pinochio: he makes all kinds of funny mistakes in his attempt to learn from human actions: he uses a whole bottle of perfume in order to smell like his mother, he appears in front of her unexpectedly, etc. He even has a sense of humor. The news Monica gets in *A.I.* while David is present, concerns her son's cure and return home. We will not see her dependent on alcohol as in the second short story of the Aldiss series, namely *Supertoys When Winter Comes*, after her child's death and after being disappointed with David's not growing at all. On the contrary, our *A.I.* Monica seems very impressed by David and needy of his affection, a deeper affection than the one coming from her own son, rather selfish and demanding. Martin sees in David a mere toy, a doll meant to replace Teddy. He becomes rather cruel and vengeful. The mecha child doesn't eat, but Martin provokes him to eat spinach and David's interior needs to be cleaned. Monica, like a careful mother, is holding his hand imagining he is a real boy. David is then supposed to cut a hair lock of her mother's in her sleep; Henry becomes worried. On Martin's birthday party, several boys are invited and incited to discover the difference between orgas and mechas asking David to pee or checking if he feels pain or not. Attempting to save himself, David's arms get stuck around Martin's chest and they both fall in the swimming pool, putting the real boy's life in danger.

The film meets Collodi's novel when, as a vengeful gesture, Martin asks Monica to read it to both of them. Its effect on David is unexpected though. In his mind, the idea that if he were real his mummy would really love him becomes the impulse for all the rest of his adventures. His presence in the family being assumed as dangerous (if he was created to love he would also know how to hate), Henry decides the mecha has to leave and Monica submits without totally agreeing though. When Monica abandons him in the woods, a curious place belonging to Cybertronics (while Henry Swinton's workplace in *Supertoys Last all Summer Long* is called Synthank), David declares his love, asks if this is a game and expects his mother to come back for him. When Monica denies, offering him some money and advising him to "Stay away from other people, only mecha are safe.", "I'm sorry I didn't tell you about the world", David's words are touching: "If Pinnochio became a real boy, I can become a real boy… Can I come home if I become a real boy?" (min. 50)

During the two other thirds of the film, David has to face the world, with Teddy by his side, like Pinnochio with his ABC. The course of events is different in *Supertoys When Winter Comes*. Her own child being dead, living in the company of David with his Teddy and of Jules, a mecha serving man of an aged look, dissatisfied with her

"son's" not growing and endlessly repeating the same games, endlessly watching the same stories, with her husband's almost continuous absence from home, Monica becomes alcoholic. Jules' destruction through falling down the stairs, with the head completely smashed, wakens her sorrow. In an attempt to comfort her, David says: "It doesn't matter, Mummy… He's only an android… You can soon buy us another, Mummy". "And what do you think you are! You're only an android yourself." comes the answer. This is a truth David is incapable to face. In his room, he opens Teddy's "tummy […] investigating the complex mechanism of its interior" and discovers he was nothing but a machine. He then acts randomly, striking by accident "the house's control centre wrenching it from the wall". Everything is destroyed, Monica dies. Bending over her dead body, David says: "I am human Mummy. I love you and I feel sad just like real people, so I must be human… Mustn't I?"[9]

Let us return to *A.I.*'s David. While he is advancing with Teddy into the woods, the film moves to another scene, the one where Gigolo Joe, the Mecha lover android does his job: "Once you've had a lover robot you'll never want a real man again" he says to frightened Patricia. The spectator will surely smile at Joe's turning his own head to the right in order to let some music play, at modifying his look in the left hand's palm, then at his finding the suitable words for every woman to whom his services are offered. A well-known client of certain hotels, "Hey Joe, what do you know?" is accused of having killed a woman he was seeing more often and who was in fact killed by her jealous husband. In his attempt to escape, Gigolo Joe rushes out of the apartment building and cuts off his registration tag to avoid detection by the police, then arrives in the same woods and meets David.

The scene in which, by night, the almost dismantled human-shaped robots gather on the pile of thrown away mechanisms trying to find an arm or a jaw which would fit into their missing parts alludes to the Throwaway town from *Supertoys in Other Seasons*, a place where Aldiss' David gets after the fatal accident: with "old models of automatics, robots, androids and other machines that had ceased to be useful to busy mankind"[10]. In the movie, the sentence "Moon on the rise" represents a big danger (min. 62-70). That moon is nothing else but some kind of a flying balloon from which humans check the consistency of the "fauna". Once detected as "cold", the frightened robots are haunted by other functional and dreadful looking machines. A mecha nanny, with "good references", protects David and sings to him a lullaby song in French ("Do, do, l'enfant do/ L'enfant dormira bien vite/ Une chanson douce que me chantait maman"). David himself is caught, thrown in a cage and led to the "Flesh Fair – Celebration of Life", some kind of a circus (evoking to a certain extent Pinocchio's passage from the Country of Playthings to the circus as a donkey[11]) where the delight of human beings is to joyfully assist at their cruel and inventive destruction. The fear of being outnumbered by the machines is great, the eternal *panem et circenses* demonstration in another space and time is easily observed. Mechas don't plea for their lives just like in the Roman arenas, they die with dignity, also because they are supposed to be unemotional.

When a few buckets of acid are to be dropped on both David and Joe, our hero cries out showing fear, like a real boy. The result is a riot, the two are set free and leave arriving in the same woods again. Gigolo Joe then leads his friend in a journey "towards the moon", to Rouge city ("All roads lead to Rouge"), a Mecca of adult entertainment that rivals Las Vegas and Disneyland. A knowledgeable computer representation

of Einstein, called Dr. Know, answering in 4D, in a child-like atmosphere reminding a small cinema room, accepts to give seven answers, in function of the money David inserts ("Nothing costs more than information", Joe will remark). Like a character in a fairy tale, maybe like the cricket or other natural elements in Pinocchio's adventures, Dr. Know tells them that the Blue Fairy can be found "at the end of the world where the lions weep". Joe explains this must be a place called Man-hattan, as many mechas have gone there and never came back. David's desire is so strong that, when the police try to catch Joe, he takes the controls of an amphibicopter, manages to release his friend from the clutches of the officer and they both get to Man-hattan, through the flooded New York City where they find the Cybertronics building on which statues of lions sit weeping water from their eyes.

David feels like his wish will come true, but the first "person" he meets when the doors open is another David: "I'm David."/ "You're not."/ "Yes, I'm David". Anger vanquishes and the second David is destroyed by the first in spite of his friendly behavior. We thus come to the end of the second third of the film. Everything was intelligently and mechanically directed, Dr. Know's answers were in fact Professor Hobby's ("I am the Blue Fairy") who is about to offer scientific explanations from the perspective of a scientist whose intellectual but also emotional satisfaction have reached the core. David has the physical aspect of Professor Hobby's son. Photos representing mostly father and son are on his desk. This aspect of the film directs us towards another cinematographic achievement owing a lot to Collodi's novel, namely to *Astroboy*, a Japanese manga series (from 1952-1968) later turned into an animated series (1980)[12] and even into a film (2003). In the cartoon series (1980), placed in 2030' Tokyo, Dr. Tenma, a very pragmatic applied scientist and minister of science, desperately wants to build a special android. He neglects Tobio, his own son who dies in an accident not before asking his father to give the future android his physical aspect. Astro Boy is very intelligent and powerful but also as clumsy as a child. In *A.I.*, David seems to be the copy of Professor Hobby's son. The scientist really seems touched and emotionally involved in his experiment. He explains to David that his mothers and fathers are anxious to talk to him, to listen to him and tell him what's in store for him next. Numberless Davids are hanging in the Synthanks laboratories where Henry leads his son in Aldiss' last short story, after losing his job:

> He confronted a thousand Davids. All looking alike. All dressed alike. All standing alert and alike. All silent, staring ahead. A thousand replicas of himself. Unliving.
> For the first time David really understood.
> This was what he was. A product. Only a product. His mouth fell open. He froze. He could not move. The gyroscope ceased within him. He fell backwards to the floor.

A.I.'s David also wants to die. He throws himself into the water but Joe fishes him back. Then he deeply submerges again with Teddy in the amphibicopter. They pilot the vehicle and find themselves in the remnants of the Coney Island amusement park right to the park's Fairytale Land within a Pinocchio themed area. Here, among different objects recalling Collodi's famous book, stands the plaster statue of the Blue Fairy. A nearby Ferris wheel collapses and the amphibicopter is trapped right in front of the statue. This cage may refer to the whale's

belly where Pinocchio gets in search of his father. David starts praying: "Blue Fairy, please make me into a real boy! Please make me real, please make me a real boy!"

The voice of the story teller is to be heard again. The ocean froze, two thousand years passed. Humanity disappeared. A new type of robots has replaced it. They are very interested in studying the past, so David's discovery finally makes him unique: he is one of the original robots who knew living people. Through reading his mind, the new inhabitants of the Earth discover unexpected details. For they are in search of the meaning of existence and human beings through their spirituality, art, poetry, mathematical formulas must have been the key. One of these special robots tells David that the very fabric of space-time appears to store the memory of every event in the past. A human space-time existence in the past can be used but never reused. These are too complicated things for the mind of a child robot ("You were created to be so young") whose only desire is to become real and to have his Mummy close to him, be it for a single day. The first wish cannot be accomplished, the second one instead, materialized thanks to Teddy who had kept strands of Monica's hair, makes David really happy. Like in a dream, Monica says to him: "I love you David. I will always love you." and then falls asleep forever.

The last voice to be heard is that of the story-teller: "…for the first time in his life, he (David) went to that place where the dreams are born". This step also recalls Aldiss' third short story, *Super Toys in Other Seasons*. If that David froze in the sense that he remained inert in front of the discovery of his non uniqueness, he really freezes in the film. That David is saved by his father with the help of his friend Ivan Shiggle, chief of Synthank:

> David lay on the bench between them still connected by cable, awaiting rebirth. His clothes had been renewed from stock, his face had been properly remolded. And the later type of brain had been inserted, infused with the earlier memories. […] He opened his eyes. He sat up. His hands went up to his head. His expression was one of amazement. "Daddy! What a strange dream I had. I never had a dream before…" […] Embracing the child, he (Henry) lifted David off the bench. David and Teddy stared at each other in wonder. Then they fell into each other's arms.
> It was almost human.

From the point of view of the screen story, which could be qualified as a literary text, with *A.I.* Ian Watson creates a metafiction[13]. We thus have to deal with a pastiche of Aldiss' series of three short stories. As far as Pinocchio's adventures are concerned, in Stanley Kubrik's vision, the "movie was to be a picaresque robot version of Pinocchio". I would rather incline for pastiche than for parody though. A third element specific to intertextuality can be added, the allusion. In our case the allusion does not refer to a literary text only but also to a scientific one. The first text is William Butler Yeats' poem, *The Stolen Child*[14] from which only the refrain is taken. The second is Hans Moravec's *Mind Children*, as the end of the screen story creates the image of a world totally dominated by strangely shaped androids. There also are allusions to the Bible as "Let he who is without sin cast the first stone" invoked by Johnson, the chief of ceremonies in "demolishing artificiality" on the Flesh Fair when offering David and Gigolo Joe as next in line to be destroyed. Or Professor Hobby's remark on God's creation of Adam in order to be loved by him.

Multidisciplinarity

As already mentioned, the two large domains meeting in *A.I.* are science and fiction. In order to define its genre as a film we need to establish the themes, the narrative approach and the structural elements. The great theme is machines, namely androids; the narrative perspective is that of an omniscient story teller whose nature is difficult to define when thinking at the immense time span involved; therefore its structure may involve a relationship between myth and tale adapted to nowadays' realities. We can thus discover hard and soft science as well as a feel of fantasy. Hard science and fantasy are both subgenres of science-fiction.

Speaking of the hard science's modernity, Roger Bozzetto quotes Wylensbroeck: "When scientific hypothesis is married with philosophical speculation a unique and meaningful literary genre is born"[15]; Hard science is a fiction articulated on a mirage issued from the irruption of Galilean techniques in the literary space. It transmits a specific type of emotions, "the sense of wonder", given not only by the scientific discoveries but also by the image of science in that society and by the light under which they both appear in mass media as well as in the reception of potential readers. Another impact is that of the connections existing in the reality and the imaginary between the image of real science and phantasmas in general[16].

In the beginning of SF, the hard science, with the USA *pulps* in 1926, invented the means of travelling out of space in order to colonize the universe through technical superiority; the technique was used as an "adjuvant". After 1950, with Hiroshima, a new approach spoke about the tragedy machines could bring and SF tried to somehow detach from science and its military industrial impact by developing the genre called fantasy[17].

The new hard SF texts offer richer perspectives even though the narrative is classical; they offer a "mental experience", thus anticipating a possible future by articulating exact sciences such as genetics, informatics, with extremely imaginative plots. A narrative may therefore engender cloning and informatics in a plot taking into consideration these two realities of our everyday life and the result is a twofold dimension: an imaginary and a worrying one – a curious hybridization between the universe of biology and the one of cyberworlds. The electronic, digitized copy, registers the memory, the emotional and intellectual content of the original while the biological cloning does not recreate an adult but an embryo capable of becoming a child and adult but obliged to pass through the experience from childhood to adult age (as with Mary Shelley's Frankenstein). The proximity of the imagined knowledge with the real knowledge, far from being an obstacle, becomes an "effective means of fascinated delight"[18]. At the same time, this mental experience can be assimilated to a ritual of initiation through fiction thus bringing this subgenre closer to fantasy.

The machine and the intelligence of the artificial being is a literary hard SF theme from the end of the 19th century. Modern fantasy also developed in the 19th century, but out of the fairy tales. It presently acknowledges two main forms of manifestation, namely high and low fantasy, dependent on the dominant world: the "primary" world (or the real one, a rational and familiar fictional world) and the "secondary" world (entirely fictional but with internally consistent rules, though different from the "real" world)[19]. In low fantasy the emphasis is less placed on typical elements associated with fantasy, the narrative being set in real-

world environments, in the "primary" world with the inclusion of some magical elements. The forms of low fantasy also include personified animals, personified toys, supernatural elements time slips and, of course, androids[20].

The two main literary texts that inspired *A.I.* come from two different centuries. Pinochio's adventures cannot be classified as a SF novel but it definitely belongs to low fantasy. Brian Aldiss' short stories, though first published in 1969, enter in the new hard SF category. *A.I.* is a SF movie where hard science and low fantasy meet, whose main theme is androids and the relationship between humans and non-humans[21].

If Ian Watson's screen play can be interpreted as metafiction, Steven Spielberg creates a metafilm. In the article "Very special effects" published in the *New York Review of Books*[22], Geoffrey O'Brien writes: "*A.I.* is a meditation on its components; the technical means that make possible the mechanical child are as one with the means used to make the film…. Now that we have the technology what are we going to use it for?"[23] This is a question with ethical and philosophical impact, the spectator's position must not be comfortable. By accompanying the characters all the way down through their experience they may learn a lesson. *A.I.* is a metafilm through the simulated crossing of the boundary between human and non-human and even post-human with the help of modern cinema techniques. Humans play the role of non-humans imagining that someday the reverse could happen. If by reading we create our own images, by watching the film we have to face a reality "happening" right before our eyes.

Hard science and fantasy appear in words and images when the oracle simulacrum takes place: the 4D "reunion" with Dr. Know with the help of a special computer. But Dr. Know's head – a funny imitation of Einstein – comes from a cartoon, as well as the moving images David would like to catch. The combination of words in the last question is also suggestive. A flat fact appeals to reason, a fairy to imagination and fantasy. No wonder that the last demand seems to totally disturb the computer system. By combining Flat fact + Fairy tale a provoking question is created: "How can the Blue Fairy make a robot into a real live boy?" The answer represented by *The Stolen boy*'s refrain, slightly modified, is an invitation, an incantation, but also a rhymed riddle whose sense is painfully discovered once arrived "at the end of the world where the lions weep":

> Come away O human child
> To the waters and the wild
> With a fairy hand in hand
> For the world's more full of weeping
> Than you can understand.

Art, science and magic: cultural impact

The quotation from Plato's dialogue (*Laws*), evoked by Philippe Walter in his attempt to read Pinocchio's story as the "the resurgence of a myth of the *homunculus* through Plato and the hermetic and alchemical tradition"[24] is more than revealing:

> Let us conceive of the matter in this way. Let us suppose that each of us living creatures is an ingenious puppet of the gods, whether contrived by way of a toy of theirs or for some serious purpose – for as to that we know nothing; but this we do know, that these inward affections of ours, like sinews or cords, drag us along […].[25]

The Genesis tells us we are made of clay over which a breath of life blew. God

connects human beings to the cosmos through vegetal strings, some tissues, where the vital fire is consumed; according to the Brahmanic doctrine, the organs of the body are connected through the breaths (*pranas*), equivalent of the Winds (but these breaths, are igneous pneumas breezes of fire); the human being is made of this "breath" which allows the articulation and this articulation coincides with a ritual representing the building of the fire altar. Which means the string and the thread explain that any being is through its own nature "projected" or woven by a superior principle, and that every existence in time implies an articulation or tissue. Cell tissue, conjunctive tissue, bone tissue, muscular, nervous or blood tissue, the human being is a tissue of igneous *prana*[26]. This is Pinocchio, a character made of a piece of wood with symbolic meanings which finally becomes human through "magic".

Pinocchio became a contemporary archetype[27]. In a patriarchal society like ours, for it continues to be so, this child creation, a puppet or a robot, belongs to "Godlike fathers". They created it as a child figure, namely a boy, not a girl, to serve their needs. Geppetto is a craftsman "allied to the tradition of *poiesis* or creativity to which artists belong", while the mechas' creators, Dr. Tenma and Professor Hobby are scientists, although "poetic" ones who want to make robots in order "to chase down their dreams". Artists or scientists, they are all "figures of the *male* creator who appropriates the procreativity of the maternal realm as they singlehandedly 'give birth to' their 'sons', effectively excluding women from their worlds except in highly idealized and symbolic, rather than active, roles"[28]. In the end of dr. Know's "divination session", Professor Hobby appears as the author of the book *How Can a Robot Become Human.*

Geppetto creates Pinochio in order to help him make a living, Disney's Gepetto needs companionship and love, Aldiss's David also is there to love his human parents unconditionally, Astro Boy is created to replace dr. Tenma's missing son but also in order to achieve a scientific goal, dr. Hobby's David is programmed to love his mother unconditionally. But what do we understand by love? Sheila, the mecha woman defines it as: "Love is widening my eyes a little bit, quickening my breath a little, and warming my skin, and touching…" Gigolo Joe would give a similar answer. This is some mechanical definition addressing to the senses.

At the very beginning of the film, when the idea of creating a mecha child who could love is presented, one of the participants at the reunion, a woman, puts "the oldest question of all": "Could humans love him back?" The selfish desire of the scientist is projected in the answer: "In the beginning didn't God create Adam to love him?" The film practically turns around this question, adapted of course to our times, trying to suggest possible answers: What happens if the mecha child doesn't grow old while his "parents" do? What happens if the parents really get attached to the child? What does love mean for the mechas? What does love mean for human beings? Can it imply hatred?

For David love becomes the mere reason of his existence. When, after consulting Dr. Know, David assumes the risks of going to Man-hattan, his decision is motivated by his mother's love for him. Gigolo Joe tries to dissuade him: "She loves what you do for her […], she does not love you. She cannot love you. […] You are alone now only because they got tired of you". Man-hattan represents the end of the world for the mechas and David's will is defined as sacrifice. If Pinocchio learns what love means through moral lessons, through negative experiences, David loves from the very beginning, he is programmed. In his very early existence,

Pinocchio cannot tell the difference between good and bad, "physical" suffering makes him acknowledge it. Aldiss' David is too small to understand death. "Good" and "bad" for him and for Spielberg's David are only connected to their goal. Even for this mecha child love is seen as including not only courage and suffering but hatred also.

The film offers a different perception of the consumerist society's impact on our behavior. Our need for love is not double directed, it's a selfish one. Unfortunately Gigolo Joe might be right: "They made us too smart, too quick and too many." We are suffering from the mistakes they make because when the end comes all that would be left it's us." (min. 100) and they are afraid. What we call love is nothing but pleasure or attachment merely connected to a patriarchal society. Real love is something one shares, it can never be associated with fear or hatred even if our wishes are not fulfilled.

The opposition man/ woman/ creator therefore remains the eternally unsolved human problem. As for Pinocchio, David's birth does not imply a maternal involvement, but some kind of a 'rebirth" takes place for both of them under the sign of a mother. The feminine presence is rare; in *The adventures of Pinocchio*, none but the Blue Fairy, passing from a moribund little girl, to a fairy and then a mother. As Rebecca West states, in Collodi's book, the Blue Fairy often is "quite hard-hearted and often does not display much affection for the puppet"[29]. She is an "ambiguous figure, including her blue hair, her ability to metamorphose and her associations with death"[30]. Although in a funny way, when first hearing about the Blue Fairy, Gigolo Joe points out that for humans blue is the color of melancholy and of course he could help her liberate from it. This color even brought in the idea of assimilating the Blue Fairy with the Virgin traditionally depicted with a blue mantle. Spielberg's film also brings in the first plan for a few seconds something like a bust of the Virgin; although not dressed in blue, it appears in a blue light and under the small cross one can read "Our Lady of the immaculate heart"; and she is placed in Rouge city close to Dr. Know's divinatory room.

For David, the Swinton's family house is Eden because his mother lives there. Once expelled from his Eden, he futilely looks for the fictional character Blue Fairy to make him a real boy so that his mother will want him back. Who is the Blue Fairy in *A.I.*? An animate drawing in Dr. Know's room, a plaster statue on the bottom of the ocean which, when touched, goes to pieces, an "apparition" in the mirage Eden reconstituted by the last generation of androids. "What if the Blue Fairy is a parasite that is the reason to hold the minds of our artificial intelligence?" Gigolo Joe asks after the meeting with Dr. Know. "I am the Blue Fairy" says Professor Hobby when David arrives in Man-hattan. The feminine image remains rather an illusion, David does not become human, Eden cannot be regained, neither his mother nor he is real and the perfect mother-son day is "disturbingly hollow"[31]. Should humanity remember that love is a gift and not a possession?

Having to face David's desire to become human even after his mother's death (in *Supertoys in Other Seasons*) Henry states that "his obsession with being human would count as a neurosis if he were a man. There were humans who had illnesses where they imagined they were machines".

According to Hans Moravec's previsions by 2050 the society could operate increasingly well independently. If we are able to furnish scientific information concerning our physical development, meek is the only characteristic attributed to humans. Would that finally mean love's triumph? Would the loss of interest in biological

heritage turn humanity in another direction, the one in which he would give up incarnating the invisible?

> Meek humans would inherit the earth, but rapidly evolving machines would expand into the rest of the universe. This development can be viewed as a very natural one. Human beings have two forms of heredity, one the traditional biological kind, passed on strands of DNA, the other cultural, passed from mind to mind by example, language, books and recently machines. At present the two are inextricably linked, but the cultural part is evolving very rapidly, and gradually assuming functions once the province of our biology. In terms of information content, our cultural side is already by far the larger part of us. The fully intelligent robot marks the point where our cultural side can exist on its own, free of biological limits. Intelligent machines, which are evolving among us, learning our skills, sharing our goals, and being shaped by our values, can be viewed as our children, the children of our minds. With them our biological heritage is not lost. It will be safely stored in libraries at least; however its importance will be greatly diminished[32].

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Notes

[1] *A.I. Artificial Intelligence* (*Artificial Intelligence:AI* - original title) – 29 June 2001 (USA), 146 min. Director Steven Spielberg; screen story: Ian Watson; screenplay: Steven Spielberg. http://yify.tv/artificial-intelligence/.

[2] Gaby Wood, *Le rêve de l'homme-machine. De l'automate à l'androïde*, traduit de l'anglais (américain) par Sébastien Marty, Editions Autrement, Paris, 2005, coll. Passions complices, p. 16-22. First publication under the title *Edisons' Eve*, by Alfred A Knopf, New York, 2002.

[3] He thus projects for ca. 2000-2010 the dumb robot, for 2010-2020 the learning robot, for 2020-2030 imagery, for 2030-2040 reasoning, first generation technicalities, for 2050+Mind children. In Hans Moravec, "The Universal Robot", http://90.1-46.8.18/en/archiv_files/19911/E1991_01-3.pdf.

[4] Hans Moravec, *Mind Children. The Future of Robot and Human Intelligence*, Cambridge University Press 1988, Harvard University Press, 1990.

[5] Brian Aldiss, *Super-Toys Last All Summer Long*, http://www.wired.com/wired/archive/-5.01/ffsupertoys_pr.html. *Super-Toys When Winter Comes*, *Super-Toys in Other Seasons*, transcribed from *Super-Toys Last All Summer Long and Other Tales of Future Time* by Brian Aldiss, Copyright 2001, published by St. Martin's Press in *The "A.I.: Artificial Intelligence" Fanfiction Online Anthology*, http://mechahuggermr.tripod.com/-id29.html, http://mechahuggermr.tripod.com/-id30.html.

[6] Ian Watson, "My Adventures with Stanley Kubrick by Ian Watson", in *Playboy*, August 1999, http://www.frc.ri.cmu.edu/~hpm/project.archive/clippings.and.notes/9908.Ian.Watson.Kubrick.html.

[7] *Ibidem.*

[8] The Japanese word "mecha" is derived from the Japanese abbreviation *meka* for the English word "mechanical". The Japanese use the term "robots" (*robotto*) or "giant robots" to distinguish limbed vehicles from other mechanical devices.
Mecha: 1) Japanese slang for Mech (piloted robot); 2) A giant or small robot used in Japan controlled by a person 18-21 years of age, with the exception of "the chosen one", type of pilot who is usually 15 years of age; 3) Robot with unbelievable power, weapons, and height. Usually defies the laws of physics. 4) Can usually be found in Anime, secret underground factories, and outer space. http://www.urbandictionary.com/define.php?term=mecha. These definitions are not totally adaptable to our situation.

[9] B. Aldiss, *Super-Toys When Winter Comes*, http://mechahuggermr.tripod.com/id30.html.

[10] *Ibidem.*

[11] Carlo Collodi, *Pinocchio: The Adventures of a Marionette*, translation from the Italian Walter S. Cramp, Boston, Ginn, 1904, http://www.questia.com/library/2722131/pinocchio-the-adventures-of-a-marionette.

[12] *Astro Boy* (1980's), official teaser, first episode, http://fathom.lib.uchicago.edu/2/72-810000/72810000_pinocchio.pdf.

[13] "Metafiction is a term given to fictional writing which self-consciously and systematically draws attention to its status as an artifact in order to pose questions about the relationship between fiction and reality. In providing critique of their own methods of construction, such writings not only examine the fundamental structures of narrative

fiction, they also explore the possible fictionality of the world outside the literary fictional text." Patricia Waugh, *Metafiction: The Theory and Practice of Self-Conscious Fiction*. New York, Routledge, 1984. http://www.eng.fju.edu.tw/Literary_Criticism/postmodernism/metafiction.htm.

[14] Published in 1889, in *The Wandering of Oisin and Other Poems*, "The Stolen Child" was written in 1886 and is considered to be one of Yeats' more notable early poems. It is based on an Irish legend and concerns faeries beguiling a child to come away with them. Yeats had a great interest in Irish mythology about faeries resulting in his publication of *Fairy and Folk Tales of the Irish Peasantry* in 1888 and *Fairy Folk Tales of Ireland* in 1892, ttp://www.online-literature.com/yeats/816/.

[15] John Wylenbroeck, in *Extrapolation*, vol. 23, n° 4, Winter 1982, p. 326, p. 59 in Roger Bozzetto's article, "Modernité de la *hard* science-fiction", in *IRIS. Le Fantastique contemporain*, n° 24, Les Cahiers du Gerf, Centre de Recherche de l'Imaginaire, Université de Grenoble 3, Hiver 2002/2003, p. 59-63.

[16] According to Roger Bozzetto, "Modernité de la *hard* science-fiction" – article cited in note 14 –, p. 59-60.

[17] *Ibidem*, p. 61.

[18] *Ibidem*, p. 61-62.

[19] Kathleen Buss, Lee Karnowski, *Reading and Writing Literary Genres*. International Reading Association, 2001, p. 114; Phylis Jean Perry, *Teaching Fantasy Novels*, Librairies Unlimited, 2003, p. vi.

[20] Jean-François Leroux, Camille La Bossière (ed.), *Worlds of Wonder*, University of Ottawa, pp. 190-192.

Low fiction is thus involving "nonrational happenings that are without casuality or rationality because they occur in the rational world where such things are not supposed to occur. (Robert H. Boyer, Kenneth I. Zahorski (ed.), *The Fantastic Imagination II*. Avon Books, 1978, p. 2.

[21] The recent films talking about these obsessions owe their existence to the 19th century automatons (Mary Shelley's *Frankenstein* and Villiers de Lille Adam's *Future Eve*) firstly inspiring George Méliès' cinematographic special effects, first attempts to create virtual realities. From Gaby Wood, *op. cit.*, p. 22.

[22] Geoffrey O'Brien, "Very special effects" in the *New York Review of Books*, August 9, 2001, cited by Rebecca West in *The Persistent Puppet: Pinocchio's Heirs in Contemporary Fiction and Film*, The University of Chicago Library, Digital Collections, Copyright 2002 The University of Chicago, http://fathom.lib.uchicago.edu/2/72810000/, Session 9: "Futuristic (and Future) Pinocchios".

[23] Rebecca West, *The Persistent Puppet: Pinocchio's Heirs in Contemporary Fiction and Film*, Session 9: "Futuristic (and Future) Pinocchios".

[24] Philippe Walter, "Pinocchio, l'âme de feu et la marionnette de Platon" in *La fabrique du corps humain: la machine modèle du vivant*, Véronique Adam et Anna Caiozzo (eds.), Publication de la MSH-ALPES, p. 203.

[25] Plato, *Laws*, Book I, 644d, 644e. http://www.perseus.tufts.edu/hopper/text?doc=Perseus%3Atext%3A1999.01.0166%3Abook%3D1%3Apage%3D644.

[26] Philippe Walter, "Pinocchio, l'âme de feu et la marionnette de Platon", p. 212-213. http://www.youtube.com/watch?v=g9hnUYV06t4

[27] Rebecca West, *The Persistent Puppet: Pinocchio's Heirs in Contemporary Fiction and Film*, Session 1: "The Value of Pinocchio".

[28] *Ibidem*, Session 9: "Futuristic (and Future) Pinocchios".
[29] *Ibidem*, Session 4: "Pinocchio and 'Serious' Fiction".
[30] *Ibidem*, Session 5: "The Blue Fairy and the Fantastic"
[31] *Ibidem*, Conclusion.
[32] Hans Moravec, "The Universal Robot", p. 4, http://90.146.8.18/en/archiv_files/19911/-E1991_013.pdf.