

Cultural Capitalism and Global Robotic Plots. The case of Japan

Authors Barbara Henry

barbara.henry@santannapisa.it

Istituto Dirpolis | Scuola Superiore Sant'Anna

Abstract Global “robotic plots” and their social impact on the new typologies of “governmental innovations” are the content and *experimentum crucis* for my assumption and the core of my contribution. The main source of inspiration is the need to adopt a new (cultural-)embedded variant of post-Marxian cultural criticism in order to tackle and analyse properly the alliance between cultural capitalism and cultural imaginary, which is to be considered as an autonomous and fruitful field of research.

The so-called cultural capitalism is assumed to have carried out the shift from the markets of things to web connections. Therefore, we have the appearance of unprecedented relations that produce fidelity marketing of clients as regards global, transnational enterprises. Going far beyond the controversial twenty-year-old prognosis of Jeremy Rifkin (Rifkin, 2000) we should check to which extent the progressive dematerialization of property, spaces and borders between goods, once upon a time identifiable with material objects in discrete succession, takes place in the world of the markets, economics and finance, and with repercussions on the daily life of millions of persons.

Keywords Cultural Capitalism | Imaginary | Robotic Plots | Science-fiction | Manga
Japanese cultural/economic system



BY

www.imagojournal.it





1. Premises, contexts and main issues

If a *cultural capitalism formula* exists, it might indicate the planetary commercialization and diffusion of both the lifestyles of the rich (North-American and Asian) societies, and of the local life forms (Rifkin, 2000), still on a non-egalitarian basis. According to such a diagnosis, given that it is considered to be a *novum* with respect to the *classic* capitalistic model, the true or presumed cultural capitalism has apparently strengthened itself through the production of some global masters of cinema animation, comics, and in particular manga (comics, in all the terminological variations which are specific for each country and culture in the Far East) and anime (cartoon films). From a phenomenic analysis, such a stipulative/operational vision of *cultural capitalism* seems to make some specific solutions like the Japanese one understandable, in terms of political-economic choices for issues regarding the digitalization/automatisation of social and work processes.

The aspiration of seeing in the very near future androids/gynoids strolling among us on city streets is not the dream of a visionary, nor that of a fanciful screenwriter of cartoon films. On the contrary, it is precisely the strategic aim and social *raison d'être* of the FuRo – acronym of the Future Robotics Technology Center, branch of the Chiba Institute of Technology, one of the most prestigious Japanese robotics research centres. The fact that the toughness and seriousness of the functional imperatives of one of the most aggressive capitalism models should be inspired by manga and anime, true origin of a multifaceted impact on several industrial sectors¹, is often hard to accept at least for many of us *westerners*.

According to these premises, the first issue concerns the operational validity of such an assumption. The second issue is coincident with the fulfillment of an embedded analysis: such a cultural capitalistic operational vision seems to make understandable the socio-cultural solution offered specifically by Japan for the issues regarding the automation of social patterns, like the widespreading of domotic and robo-care solutions for elderly people, and the connected productive processes. This type of exemplarity is strictly conditioned, limited to the issue at stake, and it does not include all the features of the otherwise controversial Japanese societal, political, economic system.

Global *robotic plots* as such, inserted in the notion of imaginary, represent therefore the *experimentum crucis* for this work. The methodologies used are based on the hermeneutical tools offered by qualitative social sciences and critical cultural studies; textual and iconographical interpretation is the method chosen here.

¹ Signora G. (2010), *Anime d'acciaio*, Bologna, Kappa Edizioni.



This is to be examined in the light of the imaginary and of its influence on pop-culture, especially with regards to science-fiction repertoires and codes.

2. Classic robotic plots and science fiction as primary sources for the global imaginary

Mircea Eliade was one of the first storytellers, out of the circle of professional science fiction storytellers and influential prophets, who signalled the epochal transformation concerning the modern and different patterns of *imaginary building*². Eliade prompted us to search for the imaginary and myths which we believe have vanished from our civilisation in escapist literature (and artistic expressions). The imaginary³ has at least three meanings: a) as a symbolical tank or repertoire of symbolical outcomes such as images, mythical plots, artistic works, etc.; b) as a mental faculty; c) as a modus of binding a) with b). The concept of imaginary - which is crucial to recall here as a sensitizing concept⁴, but that does not constitute a specific object of this research - is to be interpreted, in the stipulation hereby adopted, as endowed with the following meanings: a) as a *thesaurus* of symbols, images, narrative plots, extremely ancient though cross-cultural in nature⁵; b) as a symbolic framework which generates myths and images able to be collectively conveyed, receipted and modified, that is, that faculty of imagination which is in action in its own products; c) in its third meaning, as the modality of the linkage holding together the spiritual figurations created by the imagination that we referred to in (b). This latter specific connectivity, or modality of the symbolic bond, can be activated both by individuals and by groups, that can be distinguished and decoded from a social, political and contextual perspective. Human groups - though in variable proportions and in different shapes- are ascribable to symbolic contexts of reference which are historically defined yet in some cases oriented towards future scenarios. Scenarios which may involve radical transformations, from the perspective of the general frameworks and of the responses to situations of crisis. According to the third meaning of imaginary such scenarios, constellations or frameworks of meaning are at times endowed with a symbolic surplus (or significance)

² Eliade M. (1948), *Traité d'histoire des religions*; tr. it. Vacca V. 1996², *Trattato di storia delle religioni*, 448-451, Torino, Bollati Boringhieri.

³ See Cassirer E. (2009), *Philosophie der Symbolischen Formen*, Hamburg, Hamburg, Felix Meiner Verlag; Bachelard G. (1957), *La poétique de l'espace*, Paris, PUF; Berger P., Luckmann T. (1966), *The Social Construction of Reality. A Treatise in the Sociology of Knowledge*, New York, Doubleday; Goodman N. (1978), *Ways of Worldmaking*, Indianapolis, Hackett Publishing Company; Henry B. (2014), *Imagines of the global age. "Golem and others" in the post-human condition*, *Politica e società*, 2: 221-246; Henry B. (2016²), *Dal Golem ai cyborgs. Trasmigrazioni nell'immaginario*, Livorno, Belforte.

⁴ Such phrase (sensitizing concept) is not to be interpreted in a technical way, but rather as a preliminary framework to orient our reflections; it resembles the category employed by H. Blumer and his scholarship.

⁵ The definition of the first meaning of "imaginary" provided by Wunenburger is relevant here. See Wunenburger J.J. (2003), *L'Imaginaire*, Paris, Puf.



which is extra-ordinary, in a way as to become the condition for phenomena, whose consequences are unforeseeable. Here, I refer to anthropological transcendental concepts, frameworks or matrixes in a new meaning, which matches the contributions by Ernst Cassirer, Nelson Goodman, Thomas Luckmann⁶. In fact, they all refer to long-lasting or latent phenomena which have historically-specific origins but which, once subjected to an ex-post facto evaluation, proved to be open to different cultural productions (in fictional, figurative, artistic, imaginative, essayistic production). They can be in any case traced back to the matrixes they originated by basing on their shades and reflections, their tone, the modality of the bond which ties them together. The fruitfulness of such meaning in contemporary global frames derives from its ability to highlight the “how” of the bond. In fact, in specific cases, the shade proved able to connect the past and the future of related objects, of the products and of the faculty of imagination itself. A fundamental phase of this process is the identification and extraction, from their relative context, of the criteria which serve to identify the prevailing shade in the symbolic phenomenon analyzed, that is, its modality, which can play a key-role as an interpretative access point to the creative disposition (the imaginary in its second meaning) and to the images/specific objects (the imaginary in its first meaning) within a specific historical framework. Thus, the idea of giving relevance to the three meanings of imaginary can be agreed upon by those who follow the path traced by Bachelard⁷, an epistemologist and theorist of the imaginary, in his *Poetics*⁸. Such path had already been sketched up by Lady Ada Byron Lovelace in the first half of the 19th century, as she invented the expression *poetic science* in order to define the process that enables those who practice it to conjugate science and imagination. With her Notes, she was a real privileged speaker of Charles Babbage, the inventor of the Analytical Machine, as well as the beautiful mind (and in a feminine shape!) unacknowledged at that time and only partially rehabilitated not only as a valid mathematician but foremost as the first person who programmed a machine

⁶ Cassirer E. (2009), *Philosophie der Symbolischen Formen*, Hamburg, Hamburg, Felix Meiner Verlag; Goodman N. (1978), *Ways of Worldmaking*, Indianapolis, Hackett Publishing Company; Berger P., Luckmann T. (1966), *The Social Construction of Reality. A Treatise in the Sociology of Knowledge*, New York, Doubleday.

⁷ In the words of Sébastien Robert,, 2 January 2010, (see <http://monlibraire.net>): «Avec la raison, que Bachelard aura longtemps cherchée à mettre à l'épreuve des sciences, l'imagination occupe chez lui une place de choix. C'est par l'analyse de l'image poétique que le philosophe pourra déclarer que l'image est davantage créatrice qu'ordonnatrice de pensées. Cause et non effet, la conscience imageante est le lieu d'une origine; antérieure à la mémoire, l'image s'enracine dans le corps et s'emmêle dans le monde. On pourrait dire que, chez Bachelard, l'image est créatrice d'un lien: elle est une sorte de mouvement qui s'enracine dans l'expérience matérielle et qui trouve écho au plus profond de nous même. Dans *La Terre et les rêveries de la volonté* ou *L'Eau et les rêves*, le philosophe montre comment les “éléments” jouent un rôle essentiel dans la vie spirituelle du sujet et par conséquent dans sa vie de lecteur. De même, dans *La poétique de l'espace*, l'intimité ou le creux d'une armoire ou d'un coin, la rondeur d'une coquille, sont les conditions premières de l'imagination poétique».

⁸ Bachelard G. (1957), *La poétique de l'espace*, 131, Paris, PUF.



using a computational language. Her awareness of the fact that “the machine might act upon other things besides numbers”⁹ did constitute a fundamental landmark in the history of computation and a divide between the era when the idea of machine corresponded to something which facilitated and enhanced faster computation and that of devices able to perform abstract operations basing on symbolic equivalences. To imagine, through poetic science, realities that can be possible, interconnected, symbolically dense, yet never imagined before¹⁰.

To sum up, the first and the third meanings of imaginary are thus properly relevant within the context of this contribution. Therefore, by adopting them we can identify a sufficiently accredited repertoire of nomenclatures, which circulate among heterogeneous classes of reference points, such as scientists, producers of the cinema and entertainment industries, all users and consumers of the outcomes of the imaginary (to be taken here and later on in its first meaning): that is to say, of symbolic products.

It is to the implementation of this meaning, through examples from science fiction plots, that the following pages are devoted. Science-fiction is undoubtedly considered here as a primary source of contemporary pop-culture. That is to say, science fiction is here targeted as a fundamental symbolic source for narratives/mythic plots that undoubtedly exercise a striking and an increasing impact on the social life and civil awareness of common citizens as makers and users of global culture. If not previously, at least, from the 1920s and 30s onward, science-fiction - which since the 19th century had already substituted the more ancient sources of collective myths - had already set about anticipating science, foreseeing the passage from industrial robots (precision-built mechanical limbs, mobile robotized platforms) to the humanoid of steel. We should consider under this lens even the quotations of Isaac Asimov’s robotic plots and fictional visions to be found in the *Special Report on Robots* published on *The Economist* in March 2014¹¹, plots which are recognized therefore as a mainstream source of references for average-level educated people.

3. Interpretative approach to robotic narratives

Science fiction is consequently not regarded in my present contribution as a basic root for technophiliac ideologies, but rather as the most relevant field of pop culture

⁹ Byron Lovelace A. (1843), “Note A”, *Richard Taylor’s Scientific Memoirs*, september 1843, signed A.L.L. see Piga Bruni E., Presutti C. (2019), *The Human in the Age of Mechanical Reproduction: The Artificial Unconscious in Science Fiction*, *Between*, 9.17: 1-53.

¹⁰; Fuegi J., Francis J. (2003), Lovelace & Babbage and the creation of the 1843 ‘notes’, *IEEE Annals of the History of Computing*, 25.4: 16-26.

¹¹ *Special Report on Robots*, *The Economist*, 27th March 2014, available at <https://www.economist.com/special-report/2014/03/27/immigrants-from-the-future>



determining the global symbolic inventory of narratives/plots¹². And it is still a fundamental source of criticism against social dystopias emerging from the global imaginary, and the real world. The so-called *global symbolic thesaurus* - which correspond to the first definition of the imaginary - is what we all tend alternatively to supply and to exhaust from different angles and places of the globe, thus changing contents and styles continuously via our re-adaptation to our sublimated needs. The common content of this immaterial tank are images, styles and plots. Plots must be considered in the present contribution as graphic novels or alternatively as drawn stories (drawn literature, *letteratura disegnata*, in the meaning given to the phrase by Hugo Pratt)¹³, some kind of fictional narratives which are inherently different from the logic and function of scientific deliveries. From their autonomous position, they can constitute a source of ideal and pragmatic critique to scientific(techno-social) plans and endeavors, in particular when robotics in a broad sense is concerned. I shall devote my attention to some robotic plots focusing on their transposition in manga, anime, and graphic novels in an oriental form. Let us not forget: since the 18th century onward, and tracing back even prior origins, manga bore the meaning of extravagant/satiric images, and they enjoyed enormous fortune in Japan as a widespread symbolic medium, the most adaptable to the changing cultural and economic frames from pre-modern to modern and - most importantly - to contemporary times. Japan was able to rise again after Hiroshima and Nagasaki by means of a low-cost industrial sector, with a high-quality level, an expansive spill over effect towards other sectors, a worldwide market appeal: the production of the first tin toys reproducing the protagonists of the local manga and anime and of the western science fiction comics. Time after time, they induced the demands for objects and drafts necessary to their merchandising (the use of the image of a product to produce and to sell other products) of Hollywood science-fiction machinery in the 1950s and 1960s. This was related to TV series and movies. One classic example: the artificial co-protagonist of *The Forbidden Planet* (1956): the unforgettable Robby the robot, which was produced and sold by the historical Japanese enterprise Nomura¹⁴. This figure exemplifies in its shape and attitude the positive (domestic and protective) character of any efficient device.

The term *Robot* indicates precisely the machine-like artefact that frees us from the drudgery of manual work (*worker*, in Czech *roboti*). As everyone knows, the drama which coined the term and the category is to be traced back to 1922, in Czechen. RUR, alias Rossumovi Univerzàlnì Roboti, describe how human workers (*roboti*) have been substituted by machines.

¹² Caronia A. (1996), *Il corpo virtuale. Dal corpo robotizzato al corpo disseminato nelle reti*, Padova, Franco Muzzio Editore; Caronia A. (2008), *Il cyborg. Saggio sull'uomo artificiale*, Milano, Shake Ed..

¹³ Remonato G. (2015), Corto Maltese fra fumetto e letteratura disegnata, *Belphegor. Littérature Populaire et Culture Médiatique*, 13/1, <https://belphegor.revues.org/620?lang=fr>.

¹⁴ Signora G. (2010), *Anime d'acciaio*, Bologna, Kappa Edizioni.



Robots. This latter category of automatons, humanoids and not, is worth specific treatment in any study devoted to the forms of the imaginary, and of the cultural variations of the same.

When in the evolution of the science fiction imaginary (not yet in reality) the anthropomorphic metallic robots become true androids/gynoids - that is the type of anthropomorphic automaton built in the likeness of human beings with a wealth of details - the pathways of symbolic and social acceptability apparently branch off in different directions, between the West(s) and the various Orient(s). At least, this can be said to a certain extent. This is not a real cleavage, but rather a matter of gradation, based on a more fundamental differentiation.

Let us consider for a moment as a whole the *not* human and *not* organic spheres of material existence. These former spheres have been for centuries integrated parts of the imaginary and conditions of life and of material and symbolic exchanges in oriental regions of the globe. In all their configurations, automatons are very much at home in modern Japanese society. These are the derives of a vision and image of the world that is infra-speciesist and holistic, internally-differentiated and internally-communicating, neither anthropocentric nor Cartesian.

On the one hand, in these specific non-Cartesian narratives of bonds and alliances among species and the dimensions of reality there is clear evidence of the characteristics of co-presence, contiguity, transitivity, co-belonging of the different levels and forms of materiality and of life. In fact, these visions of reality and pragmatic images of the world, such as Shinto, Taoism and other sophisticated versions with much more ancient animist roots, do not reveal *a night in which all the cows are black*. Moreover, they presuppose and legitimize systems of relations that are symbolic-material, stratified and structured axiological and potestative, according to sophisticated and pondered taxonomies, put to the test for centuries by the corresponding social repercussions within the respective collective contexts.

On the other hand, the ontological and axiological dualisms that are opposed to those Eastern images of the world are manifold. There are the typical Western dichotomies between: the rational-spiritual dimension and material dimension; between the immanent dimension and the transcendent one; and also between humanity and other organic and inorganic forms of existence. Having said that, we must not underestimate the durable reluctance, skepticism and suspicion regarding robotic entities that have always marked the Western way of perceiving, thinking, pondering, framing and evaluating mechanical and artificial assemblages like fully-fledged and/or humanlike automatons (or upgraded mechanical beings). This is true at least after the period of the somewhat modest relevance of a mechanistic socio-cultural *milieu*, due to a minority materialistic trend within the much wider philosophical endeavor named Enlightenment. In any case, the mechanical Chess-player, or the Animated Puppet, and their analogues, have less to do with the robot as



it is¹⁵. The robot, according to its pure ideal type in the global imaginary, is a humanoid artefact able not only to reason or speak if properly commanded, but more than this, to fulfil an increasingly complex range of duties and performances by interacting with humans, including the possible insurgence of some kind of moral behavior¹⁶. This slight repulsion remains valid in the moral and social sensitivity of some western societies, as in the respective science fiction imaginary, despite the androids/gynoids being entities composed by using only mechanical, chemical, electronic, informatics and bio-synthetic technologies and displaying prima facie human appearance and functionality. An android (gynoid) is a positronic or electronic brain, inserted into a body with a skeleton of porous silicon and with external biological or bio-synthetic features, such as eyes, hair, skin and flesh. The brain is therefore, ideally, of the Asimov type, or of an electronic kind, like that of an extremely evolved calculator. Such a brain could be even a super-modern evolution either of the *Arithmetic Machine*, devised in the 17th century by Blaise Pascal, or of the *Analytical Machine* invented in 1833 by the English mathematician, inventor scientist Charles Babbage, and reinterpreted by Lady Ada Byron Lovelace in 1843, as referred at the beginning. The mere possibility, albeit remote, of not being able to distinguish a *born of woman* human from a mimetic android/gynoid –, an original from a simulacre¹⁷, has created until the contemporary day some anxiety and worry, or uncanny feelings, particularly in some of the different parts of the West (EU, USA, Canada, Australia). This is exemplified with crude effectiveness by science-fiction plots such as *Blade Runner*. The list is not limited to imaginary beings but also includes human cyborgs such as Neil Harbison, Kevin Warwick, Stelarc (Stelios Arcadiou). Uncanny aspects refer to the most common attitude against them¹⁸. The celebrated work by Freud on the “uncanny”¹⁹ of 1919 is, despite the common opinion, not among the proper sources of the uncanny traits related to robots in imaginary and science. The uncanny, understood as the feeling

¹⁵ See Poe E. A. (1836), Maelzel’s Chess Player, *Southern Literary Messenger*, Aprile 1836, 2, 318-326, in Poe E. A. Works (1900³), ed. by J. H. Ingram, Vol. III, 286-311, London, A&C Black. Together with the various talking statues of literature, history and technology, as Poe illustrates, the Chess Player is a mechanical device, often of suspicious workmanship, that is not really autonomous, but presumably worked by a very tiny human hidden inside the machine.

¹⁶ Weidenfeld N. (2014), Lessons in Humanity: What Happens when Robots Become Humans, in Battaglia F., Weidenfeld N. (eds.), *Roboethics in Film*, 32-47, Pisa, PLUS.

³ The term is adopted here in the Deleuze’s acceptance, according to which a simulacre is not a mere imitation, but it is consistent with an act of denying the primacy of the original on the copy. Some partial analogies can be found even with Baudrillard’s genealogical account of Science Fiction. See Deleuze G. (1968), *Différence et Répétition*; tr.it. Guglielmi G. 1972, *Differenza e ripetizione*, Bologna, Il Mulino; Baudrillard J. (1980), Simulacra and Science Fiction, tr.in. A. B. Evans, *Science Fiction Studies*, 55.18, part 3, November 1991.

¹⁸ Caronia A. (1996), *Il corpo virtuale. Dal corpo robotizzato al corpo disseminato nelle reti*, Padova, Franco Muzzio Editore; Henry B. (2018), Confronti interculturali su robotica e roboetica. Passaggi a est della ‘letteratura disegmata’, *Bollettino della Società Filosofica Italiana*, 225: 7-24.

¹⁹ Freud S. (1940), Das Unheimliche, in Freud A., Bibring E., Hoffer W., Kris E., Isakower O. (eds), *Gesammelte Werke*, XII: 227-268, Frankfurt, S. Fischer Verlag.



directly related to automatons, is first introduced in psychology by Jentsch²⁰. It is worth noticing that Jentsch defines uncanny (*das Unheimliche*) as the disorientation/uneasiness/anguish that we experience in the face of unexpected movements of artificial beings allegedly believed as inanimate (dolls, statues, clockwork devices). In line with this, the ways in which uncanny feelings have become a driver of cultural and social cleavages over time have taken on a political connotation. Uncanny feelings are closely related to the conception of entities which go beyond the standard semblance. Monsters. The meanings of the word *monstrum* denotes something marvelous, extraordinary, excessive, exorbitant, and in some way connected with the Divine. At the same time, a *monstrum* can induce in our human hearts fear and hideous feelings just as any divine manifestation does. At the beginning an original ambivalence is the normal state of things. Over time, however, *monstrum* has been tending to assume exclusively the second meaning of the word, something horrific provoking fear, disgust, and/or the sense of uncanny²¹.

This specific kind of fearful and suspicious attitude – incorporated in uncanny feelings, and/or fear, disgust and repulsion – was already foreseen by Asimov as being specific for our hemisphere in his *Robots cycle* trilogy, although he personally showed an opening towards both conflicting positions. For Asimov, the distinction between metallic robots and androids is of no importance. A robot is still a robot, even if totally camouflaged with respect to humans, and does not create difficulty of any sort, as long as it corresponds to his idea of positronic automaton, that is structurally aimed at providing service to and defence of humanity. It is not possible to confuse Asimov's position with that often referred to as the syndrome of Doctor Frankenstein, indicating the terror and repulsion and not simple the uncanny feelings – sometimes latent, sometimes conscious – felt by humans towards their creations. A particularly significant phrase is that of Bill Adamo, commander of the spacecraft flagship *Galactica*, according to whom this fear is «the incapacity of the human species to accept its responsibility for having tried to play God by creating life, when this very same life turned against its creators»²². Considering what has already been said, and on the

²⁰ Jentsch E. (1906), Zur Psychologie des Unheimlichen, *Psychiatrisch-Neurologische Wochenschrift*, 8/22: 195-198; 8/23: 203-205.

²¹ Henry B. (2019), From Golem to Cyborg: Symbolic Reconfigurations of an Ancient Monstrum, in Compagna D., Steinhart S. (eds), *Monsters, Monstrosities and the Monstrous in Culture and Society*, 233-256, Wilmington, Vernon Press; Galanos V. (2019), Teratological Aspects in Artificial Intelligence and Robotics: From Monstrous Threats to Rorschach Opportunities, in Compagna D., Steinhart S. (eds), *Monsters, Monstrosities and the Monstrous in Culture and Society*, 103-129, Wilmington, Vernon Press.

²² In this tale, the self-creating and enemy machines, the cylons, reach their apex of progress when they mass-reproduce themselves conformingly to specific numbered models, taking on the configuration of humanoid robots which are almost indistinguishable from human beings. Having said that, the likeness between the Asimov humanoid robots and the cylons is false. The former ones are strictly bound by the Three Laws of Robotics, which forbid them to harm human beings. The cylons, on the other hand, deem themselves superior to humans, to whom they attribute every kind of guilt and defect. In fact, they reach the decision to exterminate human beings and to position themselves at the summit of creation. The



opposite side, Asimov is the writer who represents the ideal type of creator immune to the syndrome of Doctor Frankenstein. He is the scientist who, according to the gothic immortal plot of Mary Shelley, developed feelings of fear and repulsion against his own humanoid artefact created by usurping a supernatural demiurgical power. This meaning has been transposed by Asimov into the realm of fictional robotics, to identify the presence of positive or of negative attitude toward automaton. It is noteworthy that, emblematically, already there is widespread and common use of non-anthropomorphic mobile robots and mechatronic anthropomorphic robots at least in Japan. As already anticipated, Japan is one of the Orient's most culturally favorable to the application of artificial creatures in day-to-day life. This can be seen in healthcare and working contexts, and from the examples of everyday production in laboratories, factories, and elderly persons' accommodation, the latter having been transformed into true domestic homes. We should explore the reasons and modalities of this relevant difference in mood and attitude by means of an interpretative and contextual approach. As already said, it is not a matter of cleavage, rather a matter of gradation in level of acceptance among West(s) and East(s) so far as mimetic humanoid robots are concerned.

4. Embedded Analysis. The 'Japan' solution and its global outcomes and influences

The first and second meanings of imaginary suggested above will be specifically employed with reference to the modality through which the production of cultural objects related to robotics did transform in a situation of crisis the means of production and the relative markets in Japan, through the original recombination of symbolic elements and the promotion of their commercial value. Were we to reduce this varied range of aspects – typical for a particular context – to a mere folkloristic and transient epiphenomenon, an unrealistic idiosyncratic fashion in global lifestyles, we would be making three mistakes. Firstly, there is a serious error of recognition; secondly, there is an enormous problem of injustice, according to the viewpoint of equal respect for the multiple existing forms of life, regarding the specificity and wealth of conception that the Japanese people have developed since the country's historical origins regarding the relationship between animate and inanimate matter. Thirdly, we should not underestimate the syncretic fusion among different “visions of the world” actually taking place globally at the symbolic-mediatic level, even if we are not aware of it.

Nevertheless, this *Japanese* vision still exhibits such distinctive features that, we dare say, it has recently been configured as a variant of lay Shintoism. This has had not

reference is to the famous American TV series *Battlestar Galactica*, which from 2004 to 2009 revived and strongly modified, in terms of a crude anti-humanistic pessimism (and not without reason), the original *Galactica* series (1978).



irrelevant echoes in the scenarios of cultural capitalism through the production of the master of cinema animation Miyasaki Hayao. This is the *Weltanschauung* which still innervates and uniquely makes understandable the solution offered by Japan for the issues regarding the automation of social and work processes²³.

On the one hand, cultural capitalism in Japan and its technologically spill over effects on the whole society - and on the economic structure in particular - are strictly interrelated, as one cannot be understood without the others. On the other hand, this kind of symbiosis has been extremely influential, or even symbolically aggressive, at the level of the global imaginary. This is shown by the following example.

As many sources clearly show, the difficult passage from non-humanoid robots to true androids is marked by a foundational myth, by a hero of *drawn literature*, as Hugo Pratt called the artistic genre of the comic strip. We are referring to Astro Boy, the paper and film character born in 1952 from the pen of Osamu Tezuka, mangaka (manga creator) and film director, commonly referred to in Japan as *The God of manga*²⁴.

For some others, it was probably not even the most famous figuration of Astro Boy that marked a recognisable point in the self-perception of Japanese people regarding their centuries-old relationship with manga.

Rather, this quantum leap was made by other characters, which were strictly speaking robotic and not android. Some retained this change could happen precisely because those entities are capable of structured interactions - dynamic and open to learning - with human subjects. Others, more close to the typical western suspicious vision regarding artificial humanoids, explained that it derived moreover from the impossibility of *being cheated*, given the titanic and therefore incommensurable shape of their mechanical 'body'. The first among these artificial creatures, Super-Robot 28, is the precursor of the Mega robots of Go Nagai, that is Goldrake, Mazinga and Jeeg, the first true bio-metallic creatures who fight together with a driver-companion in a cockpit contained within them. The cockpit is the bio-mechatronic nucleus of the machine. The pilot shares in every way the vicissitudes of the machine, in both a sympathetic and empathetic manner. In the plot of this cartoon series, doctors Shikishima and Kaneda, collaborators of the Japanese centre of military research, have been attempting to create for some time particularly sophisticated and powerful robots. None of them, however, has come up to expectations. Until, with the twenty eighth version produced, the two scientists manage to develop the complex and perfectly

²³ Consider the wide-ranging interdisciplinary contribution of Takanishi Atsuo, head of the robotics lab at the *Humanoid Robotics Institute of Waseda University*, in particular Takanishi A. (2008), *Humanoid Robots as Tools for Scientific Study of the Human Behaviour*, conference held at the College de France on 27 February 2008, retrieved in 2008, <http://www.takanishi.mech.waseda.ac.jp/top/index.htm>.

²⁴ Iron Arm Atom (the meaning of the Japanese name Tetsuwan Atomu) is an invincible and capricious humanoid automaton, with the appearance of a child, whose engineer creator formed in the image of his son, who had died in an accident. Astro lives a normal life among his robot friends, and alongside humans, until he is occasionally compelled to carry out memorable feats to save the Earth from its enemies.



working machine. In this way *Tetsujin 28-1* is born. The robot is entrusted to Shotaro, a young boy who is particularly skilful in manoeuvring the iron giant using a remote control system. The two are subsequently involved in combating the evil Doctor Franken²⁵. So far, no negative or menacing aspects have been assigned to the Mega Robots according to the mainstream of what we could define as *the Japanese imaginary*.

By way of comparison, we can show some cases of the Western frantic, ambiguous, oscillating or fearful attitude so far as Giant Robots (and not human-sized androids/gynoids) are concerned. In doing this, we take first of all an example from the past of the historic Italian comics publishing house, Bonelli. The author of *Zagor-Tenay* (Fig. 1), the *Spirito con la scure* (*The Spirit with the Hatchet*), one of the most important characters of this publisher along with *Tex Willer*, was Sergio Bonelli, alias Guido Nolitta. Up until his death, in September 2011, he had been the main animator, editor and spiritual father of all the other characters, milestones of Italian comic strips. In 1962, in parallel with the evolution of the Japanese *manga* which, as we have just outlined, were going through a particularly rich imaginative phase featuring giant remote-controlled metallic creatures, Nolitta created the robot *Titan*, the giant of steel. *Titan* is dominated entirely and obliged to do evil by the mad scientist Hellingen, he who is destined to become one of *Zagor's* arch enemies. The gigantic robot *Titan*, created by the pen of Gallieno Ferri – the “drawer of *Zagor*” *par excellence* – has only the exterior resemblance of the *Giant of Steel*, the colossal robot character of alien origin and with destructive aims, but capable of moral acquisition to the point of the extreme sacrifice in rescuing his friends. This is told in the 1999 feature-length cartoon film of Brad Bird. This character, in turn, introduced to the big screen the literary figure²⁶ of the (robotic) *Man of Steel*, protagonist as positive hero of the science fiction novel for children published in 1957 by Tom Hughes. Nevertheless, the attitudes and opinions expressed by western consumers of media and comic strips – from the 1920s until more or less the 1970s – are extremely oscillating and changeable towards *Giants of Steel*, with an opposite propensity. That is to be scared and menaced, on the one hand, or stimulated and pleased, on the other, by the same kind of humanoid artefacts, the Mega robots.

²⁵ The TV series broadcasted in Italy is not the first, but the second one produced in Japan, and it dates back to 1980. The previous series, produced in black and white, has been produced in the first half of the 1960s.

²⁶ In this case, the *Iron man* quoted here has nothing to do with the *Marvel Comics* super hero *Iron Man*.

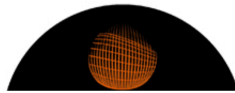


Figure 1 - Zagor, *Sulle Orme di Titan*. Figure 2 - Zagor, *Il Mostro d'Acciaio*. Figure 3 - Zagor, *Il Ritorno di Titan*.

5. Mega Robots, Auto Robot Transformers and what can *make the difference*. Some remarks

Changing the perspective for a moment, we can try a comparison with the *baiometarubistu*. The artificial beings called *baiometarubistu*, however - Mazinga, Jeeg, and others, with a good 'Titan 3' among them - mark a clear cut distinction from all those Giant (Steel) Robots mentioned above. They are classifiable - correctly, in the opinion of the author - as robot-exoskeletons. This is not to be confused with wearable robots, which are devices positioned on the human body, clearly identifiable as tools or partial strengtheners of the body. The enormous structure is a gigantic body which "clothes" its thinking and interacting nucleus, the pilot. On the one hand, the storyline describes the exoskeletons as devices already capable of independence and autonomously able to achieve the aims written in their programming codes. On the other hand, these artificial beings are able to carry out unlimited tasks only due to the contribution of the human component, in the cockpit, located in their head, or becoming an integral part of their "body", in their heart. On the one hand, this is the symbolical locus for love and commitment according to the mainstream western cultural discourses on dignity and humanity. On the other, it is the site of reasoning and mind according to the old Chinese cultural imaginary. Besides, this temporary union is neither symbiosis nor cybernetic fusion between human and machine. These are not true cyborgs, that is to say (bio-mechanical) hybrid humanoid beings, given that the two components - human and artificial - are merely temporarily and functionally united in a common destiny of momentary joy or sufferance. The



contiguity, the solidarity, the deep partnership that forms between comrades and “brothers-in-arms” is the emotive colouring of this specific relationship in the mythic plot. Fighting is side-by-side *with the shedding of blood and melted metal*. Only from this relational point of view there is an affinity between these gigantic beings and the Transformers (according to the original plot). The latter are alien automatons not created by human hands and absolutely non-biological, appearing only at first sight to be similar to the Mega robots. In reality, they are to all intents and purposes a true intelligent species, stellar, powerful, technologically very advanced, but divided among themselves, like our own species, between “goodies” and “baddies”. The good ones (the Primes) sacrificed themselves for the good of the earth at the beginning of history, when their evil brother (the Fallen) wanted to absorb the sun’s energy, necessary for the species, and destroy life on our planet. Their descendents, the Autobots, are still at our side, camouflaging and taking on the appearance of our technological creations (automobiles, aeroplanes, helicopters, trucks) in order to live amongst us and support us against evil, which never cease to menace humanity by assuming renewed forms.

They are robotic shape-shifters and at the same time rational and moral beings. This saga obviously recalls the rhythmic scansion and homiletic tone of Western angelology²⁷. This is very much at home, firstly in the syncretistic imaginary of the Land of the Rising Sun²⁸, and then secondly, as a symbol of the global imaginary, of the symbolic thesaurus we share, support and feed with our own ordinary visionary talents simply as Internet addicts or social network clients and pro-sumers. In this context, it is easier, without scandal or prejudicial attitude, to deal with themes relative to the automation processes which increasingly pervade individual and collective contexts, with macro and micro impacts on the various dimensions of individual and collective existence, and their projection in the imaginary. The Mega robots described above - and even the auto robots (Transformers) - are beings with a metamorphic steel armour that can be assembled in the guise of an increasingly powerful warrior. Nevertheless, only the first beings are cybernetically controlled, in which a human, although dominant, is also their companion of adventures and misadventures, operating them, by free choice, in such a way as to share their sufferance, together with their victories. It is a symbiosis which is not imposed but freely accepted by the two partners (human and robotic) on behalf of more vulnerable beings. The implicit homiletic sense of the robotic/symbiotic mythic plots²⁹, outlined above, is that according to which all the creatures, more so the most powerful, in sharing with

²⁷ According to the definition adopted here - see Tagliasco V. (1999), *Dizionario delle creature fantastiche e artificiali*, Milano, Mondadori, p.42 - the angels are *non - artificial* golemic beings too; in that, they are creatures made of ‘intelligent’ material, as they are made of a matter with an intrinsic purpose.

²⁸ See, besides *manga, anime, gadgets*, at their respective sites, the US original filmic quadrilogy *Transformers*, in particular the second movie, *Revenge of the Fallen*.

²⁹ For the meaning and manifold implications of the category see Henry B. (2016²), *Dal Golem ai cyborgs. Trasmigrazioni nell’immaginario*, Livorno, Belforte, I, V, VI.



criticism and political engagement the aim of limiting the impact of social and natural evil ill-doings on living beings and on whoever is animated and moves in the worldly horizon. This mutation fosters per se a desirable broadening of the horizon of inclusion of morally/politically qualified subjects of some kind. This will fully come about, perhaps, in a distant future, whenever we consider as our interlocutor, in the pragmatic context of social and political life, each and every entity capable of foreseeing and accepting the consequences of its decisions about itself and any other entity involved, no matter if it is modified or altered with respect to the presumed original human model³⁰. In this respect, that of an open global society, the future posthuman frame of reference is irreducible to a single source or context. We need to adopt a syncretic and pragmatic approach to endorse any feasible contribution.

Bibliografia

Bachelard G. (1957), *La poétique de l'espace*, Paris, PUF.

Baudrillard J. (1980), *Simulacri e Science Fiction*, tr.in. A. B. Evans, *Science Fiction Studies*, 55.18, part 3, November 1991

Berger P., Luckmann T. (1966), *The Social Construction of Reality. A Treatise in the Sociology of Knowledge*, New York, Doubleday.

Byron Lovelace A. (1843), "Note A", *Richard Taylor's Scientific Memoirs*, september 1843, signed A.L.L

Cassirer E. (2009), *Philosophie der Symbolischen Formen*, Hamburg, Hamburg, Felix Meiner Verlag.

Caronia A. (1996), *Il corpo virtuale. Dal corpo robotizzato al corpo disseminato nelle reti*, Padova, Franco Muzzio Editore.

Caronia A. (2008), *Il cyborg. Saggio sull'uomo artificiale*, Milano, Shake Ed..

Deleuze G. (1968), *Différence et Répétition*; tr.it. Guglielmi G. 1972, *Differenza e ripetizione*, Bologna, Il Mulino.

Eliade M. (1948), *Traité d'histoire des religions*; tr. it. Vacca V. 1996², *Trattato di storia delle religioni*, Torino, Bollati Boringhieri.

³⁰ Micali S. (2019), *Towards a Posthuman Imagination in Literature and Media. Monsters, Mutants, Aliens, Artificial Beings*, Oxford, Peter Lang.



Freud S. (1940), *Das Unheimliche*, in Freud A., Bibring E., Hoffer W., Kris E., Isakower O. (eds), *Gesammelte Werke*, XII: 227-268, Frankfurt, S. Fischer Verlag.

Fuegi J., Francis J. (2003), *Lovelace & Babbage and the creation of the 1843 'notes'*, *IEEE Annals of the History of Computing*, 25.4: 16-26.

Galanos V. (2019), *Teratological Aspects in Artificial Intelligence and Robotics: From Monstrous Threats to Rorschach Opportunities*, in Compagna D., Steinhart S. (eds), *Monsters, Monstrosities and the Monstrous in Culture and Society*, 103-129, Wilmington Vernon Press.

Goodman N. (1978), *Ways of Worldmaking*, Indianapolis, Hackett Publishing Company.

Henry B. (2014), *Imagineries of the global age. "Golem and others" in the post-human condition*, *Politica e società*, 2: 221-246.

Henry B. (2016²), *Dal Golem ai cyborgs. Trasmigrazioni nell'immaginario*, Livorno, Belforte.

Henry B. (2018), *Confronti interculturali su robotica e roboetica. Passaggi a est della 'letteratura disegnata'*, *Bollettino della Società Filosofica Italiana*, 225: 7-24.

Henry B. (2019), *From Golem to Cyborg: Symbolic Reconfigurations of an Ancient Monstrum*, in Compagna D., Steinhart S. (eds), *Monsters, Monstrosities and the Monstrous in Culture and Society*, MANCANO I NUMERI DI PAGINA, Wilmington, Vernon Press.

Jentsch E. (1906), *Zur Psychologie des Unheimlichen*, *Psychiatrisch-Neurologische Wochenschrift*, 8/22: 195-198; 8/23: 203-205.

Micali S. (2019), *Towards a Posthuman Imagination in Literature and Media. Monsters, Mutants, Aliens, Artificial Beings*, Oxford, Peter Lang.

Piga Bruni E., Presutti C. (2019), *The Human in the Age of Mechanical Reproduction: The Artificial Uncoscious in Science Fiction*, *Between*, 9.17: 1-53.

Poe, E. A. (1836), *Maelzel's Chess Player*, *Southern Literary Messenger*, Aprile 1836, 2, 318-326, in E.A. Poe Works (1900³), ed. by J. H. Ingram, Vol. III, 286-311, London, A&C Black.



Remonato G. (2015), *Corto Maltese fra fumetto e letteratura disegnata*, *Belphégor. Littérature Populaire et Culture Médiatique*, 13/1, <https://belphegor.revues.org/620?lang=fr>.

Rifkin J. (2000), *The age of access*, Washington, Penguin Putnam.

Robert, S. (2010), <http://monlibraire.net>

Santoemma I. (2020), *My Mother was a...Cyborg. Tecnologie e soggettività ibride a confronto*, *Scienza & Filosofia*, 23 : 127-141.

Signora G. (2010), *Anime d'acciaio*, Bologna, Kappa Edizioni.

Tagliasco V. (1999), *Dizionario delle creature fantastiche e artificiali*, Milano, Mondadori.

Takanishi A. (2008), *Humanoid Robots as Tools for Scientific Study of the Human Behaviour*, conference held at the College de France on 27 February 2008, Retrieved in 2008, <http://www.takanishi.mech.waseda.ac.jp/top/index.htm>.

Weidenfeld N. (2014), *Lessons in Humanity: What Happens when Robots Become Humans*, in Battaglia F., Weidenfeld N. (eds.), *Roboethics in Film*, 32-47, Pisa, PLUS.

Wunenburger J.J. (2003), *L'Imaginaire*, Paris, Puf.