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Forum

Science Fiction and Ontologies of Leadership

Jana Vizmuller-Zocco

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Abstract The role of leadership in science fiction receives a particular analysis which is based on what can be termed transhumanist novels published in Italy between 2008 and 2013. The main purpose of this study is to answer the following question: What happens to (the nature of) leadership in a technologically-driven society? Four novels form the backbone of the description of futuristic leadership. The four conclusions drawn from this analysis regarding the nature of leadership in a technologically-driven society point to a much greater need for leadership studies to pay attention to technological advances (and the philosophical underpinnings of, specifically, transhumanism). The impact of nano-bio-technology affecting the role of leaders, followers, goals, alignment, commitment has ontological repercussions on the manner in which (augmented and unaugmented) humans deal with each other. If early augmented humans/cyborgs and any other sentient beings are in fact comparable to Giambattista Vico's brutes, and if his *corsi e ricorsi* (ebbs and flows) of human history can apply to non-human, sentient beings' history, then the work is cut out for all disciplines, but especially for those which deal with ontologies of leadership.
KEYWORDS: Science Fiction; Ontology; Leadership; Giambattista Vico; Transhumanism.

Riassunto *Science Fiction e ontologie della leadership* – Il ruolo della leadership nella *science fiction* è analizzato in base ad alcuni romanzi trasumanisti pubblicati in Italia tra il 2008 e il 2013. L'intento principale di questo studio è rispondere a questa domanda: cosa accade alla (natura della) leadership in una società guidata dalla tecnologia? Quattro romanzi costituiscono l'ossatura per descrivere la leadership futuristica. Le quattro tesi principali sulla natura della leadership in una società altamente tecnologica che derivano da questa analisi indicano come vi sia grande necessità per gli studi sulla leadership di prestare attenzione agli sviluppi tecnologici (in particolare alle fondamenta filosofiche soprattutto del transumanismo). L'impatto delle nano-bio-tecnologie sulla funzione di leader, follower, obiettivi, convergenze e impegno ha ripercussioni ontologiche sull'interazione tra esseri umani (potenziati o meno che siano). Se umani potenziati, androidi o qualunque altra creatura senziente sono *de facto* comparabili ai bruti di Gianbattista Vico e se i *corsi* e *ricorsi* della storia umana possono applicarsi anche alla storia di creature senzienti non umane, allora i compiti di ogni disciplina sono già definiti, in particolare per quelle che si occupano delle ontologie della leadership.
PAROLE CHIAVE: Science Fiction; Ontologia; Leadership; Giambattista Vico; Transumanismo.

J. Vizmuller-Zocco - Department of Languages, Literatures and Linguistics, York University - 4700 Keele Street, Toronto (Ontario) M3J 1P3, Canada (✉)

E-mail: jvzocco@yorku.ca

Introduction

WORKS OF LITERATURE HAVE BEEN used in the study of leadership in various ways: to analyze leaders' characteristics, to set up models of leadership behaviour, to exemplify ethical (or unethical) behaviours of fictional leaders, as well as other more pragmatic considerations. According to Warner,[1] leadership professionals in social sciences view works of art in two ways: first, as a source of data to be correlated with other facts in order to draw conclusions about an aspect of leadership; second, the work of art serves for its anecdotal evidence to support or enhance a larger argument.

Furthermore, Warner suggests that fictional literature has particular relevance to leadership studies on account of its characterization of humanity, ability to render emotions, clarity in the description of settings and events, and pervasiveness of ethical issues.[2] In his view, «In its very essence, leadership is a human relationship between leaders and followers, with all of the complexity that human relationships entail».[3] The *human* in leadership studies has been underlined in other works as well.[4] Although this anthropocentric view is being reexamined in view of other possible environments where aspects of leadership seem to be present,[5] research on leadership has not, for the moment, taken into full account the role of technology and technologically-mediated social relationships which form such an inextricable part of postmodern society.[6]

One way to approach leadership of a more complex type, that is, the one that takes into account both human and possible future technological contributions to leadership, is to analyze leadership in particular science fiction works. The purpose here is therefore to attempt to trace an initial path to understanding leadership from a particular perspective which concentrates on technology and/in science fiction, adding therefore another basic entity to those assumed in existing ontologies of leadership: technology.

What follows, however, is not intended as a pragmatic, pedagogical tool, to aid in constructing a better leadership strategies based on observing what characters in science fiction films/literature teach us.[7]

The discussion here centers on the necessity of collaboration between technologically-oriented endeavours and those humanistic disciplines which have at their center the understanding of human life. The guiding question to which possible answers are sought is then *What happens to (the nature of) leadership in a technologically-driven society?*. Whereas leadership studies have started to turn to humanistic disciplines (especially fiction: literature and film, but also drama, but not dance or music) for certain theoretical clarifications, it seems crucial at this juncture to open up the search to a vaster panorama which includes technology, and the initial illuminating point leads to transhumanist science fiction.

Transhumanist science fiction

Although, academically speaking, science fiction studies[8] are like leadership studies in that neither field enjoys a univocal and unambiguous definition, it is perhaps an advantage to work with multifaceted, multilayered, and divergent definitions. The works of science fiction which have been chosen for this analysis do not deal with the formation of empires (such as Asimov's *Foundation* series),[9] or space travel (for ex., Dario Tonani's *MONDO9*),[10] or aliens (HG Wells), or complete disintegration of human bodies into some other biological form (such as in Greg Bear's *Blood Music*),[11] or time travel, or the possibility of living in a computer simulation[12] all of which require particular types of inquiry regarding leadership and all of which have a lot to say about it. The data discussed here is more in line with Philip K. Dick's *Do Androids Dream of Electric Sheep?*, where humans and nano-biotechnologically-supported creatures coexist.[13]

The works selected for this examination have as their setting the earth in the near future (or near past), and all of them have at

the centre the struggle of human and/or bio-technological characters in specific dystopic, disaster conditions (pre-catastrophic or post-cataclysmic situations). Above all, these science fiction narrations include technological breakthroughs, created by humans, which augment human capabilities, and describe societies which are at the cusp of reaching technological singularity. This type of science fiction can then be termed transhumanist fiction, and has similarities with the notion of "speculative fiction" suggested by the Canadian author Margaret Atwood. Lastly, all works have been published in Italy and have been written by Italian authors.[14]

Transhumanism has been defined as an international «intellectual and cultural movement that affirms the possibility and desirability of fundamentally improving the human condition through applied reason, especially by developing and making widely available technologies to eliminate aging and to greatly enhance human intellectual, physical, and psychological capacities».[15]

Transhumanism has ideological connections to Vernon Vinge's and Ray Kurzweil's "singularity" which predicts an exponential growth and acceleration of technological innovation.[16] (see also Danaylov, Singularity web log). According to Kurzweil, «the intelligence that will emerge will continue to represent the human civilization, which is already a human-machine civilization. This will be the next step in evolution, the next high level paradigm shift».[17] Transhumanists refer to the next level as that evolutionary step which is to be completely self-determined, not driven by biology but by technology. And if everything will change with the singularity, certainly the nature of leadership, or in fact the existence itself of leadership, has to be addressed.

Although writing a report, not a science fiction story, Kunstler predicts that «leadership will be the cultural domain most impacted» by singularity.[18] It can be said then that science fiction gives us the mortar between the bricks of this future techno-edifice. While companies thriving on creating extraordinary advances in bio-nano-technology in all its manifestations are working towards this goal (supported by unimaginably high financial backing and with the nod of approval from governments), science fiction works give us some possible scenarios as to how this self-determined evolution is to unfold.

Leadership studies have worked with, generally speaking, two types of ontologies: one that relies on the *tripod* comprised of leaders, followers, common goals,[19] the other, based on *leadership outcomes*: direction, alignment, commitment.[20] Definitions of leadership, therefore, differ greatly given the strengths of relational types, pre-eminence and charisma given to the leadership position, importance of contextual variables, psychological and biological adaptations; if bio-nano-technology is added to this integrative view, matters become much more complex. So far, no definition puts forth new types of technology as indispensable elements without which leadership could not function.

And yet, today more than ever, whether it is a question of policing the world, or coordinating efforts in order to find a missing plane, or finding a cure for cancer, the role of technology is crucial: as the necessary prerequisite for becoming a world power, a medium through which management of processes transpires, or supporting a health center which produces outcomes of the most advanced experimental studies. Moreover, it is technology which transforms human beings and this surely must become part of considerations about leadership, as transformed beings may not behave in a predictably chaotic human way.

Although not specifically about leadership at all, each of the chosen science fiction novels illustrates different aspects of the repercussion of technology on leadership. The novels do not receive an in-depth literary critique, since only certain of their thematic aspects are selected. Thus, the discussion makes no critical comments about the novels' literary or narrative quality, style, depth of plot involvement,

or character and setting portrayal.

Francesco Verso, *Livido*

Francesco Verso's *Livido* offers the most specific elaboration of transhumanist themes of all the novels chosen: it deals with mind uploading, limb prostheses, relations between and among humans and *nexumani* ("nexhumans", beings who lost their bodies to disease or old age but who chose to have their mind uploaded to a computer and from there to an artificial body).

The novel offers interesting views about the impact on the environment created by an exacerbated need to consume (technology aids this tremendously), but this does not impact on leadership other than stating the obvious: no leader or institution is willing to deal with this proliferation of junk in a firm way. *Livido* is also a kind of Bildungsroman describing three stages of the protagonist's life. Peter Pains lives with his mother and an older brother in the slum part of a megacity. He is a boy of 15 who lost his arm and leg in a garbage chopping machine, but gets them replaced with prosthetics which give him strength greater than he would have had with his biological limbs. He lives in a world overflowing with trash; he works for a company that recycles as much material as can be salvaged from garbage heaps: either manually, going through the *palta* ("kibble") or using machinery which separates it.

The filthy, grimy, greasy, oozing, trashy surroundings do not close his heart to beauty: in fact, he falls in love with what he does not know is a *nexhuman* woman, Alba, who looks like 22 but was uploaded when she was in her sixties. When he witnesses a violent gang (whose leader is his brother) viciously attacking and dismembering her, and scattering the pieces, his life now has one purpose: that of putting her together, making her whole again and so he devotes most of his adult life to collecting the once *nexhuman* fragments. Suffice it to say that after finding all her limbs, Peter Pains achieves his goal: that of being with his loved one for ever. In other words, transhumanist technology makes it possible for the protagonist to upload his brain and create a new body, similar to the one that embodies Alba.

Leadership is not evident at all in the novel: and it is really a statement about a possible society where technological advances not only *create* individuals' goals (such as mind-uploaded embodiment into another form), but also *fulfill* them, in what seems an endless loop. Groups of scientists who work on making this possible belong to institutions which, obviously, support technological processes; but no one seems to be in charge. This type of society relies on the self-made man and woman who grope to find their own goals and look for ways to fulfill them on their own, or with minimal help from friends.

The novel makes two interesting statements: firstly, in a transhumanist future, leadership is not obvious at all, and it belongs to whoever is able to control technology. In the novel, Peter Pains, in his search for Alba's past, enters the "Temple of More", clearly a spoof on Max More's role in transhumanism: scientists are the new priests and they solve any human problem. In this sense, all the elements of existing definitions of leadership fall to the wayside: leader, followers, charisma, goals, membership interaction, ethical behaviour, etc.; they are secondary to the ability to manage technology which will manage people/*nexhumans*.

Secondly, even though transhumanism as it exists today is a philosophical movement, this movement's ideas are subordinated to the advances in technology. Specifically, discussions about humanity follow advances in prostheses creation: ideas about ethics therefore depend on concrete results of scientific research. In this milieu, leadership belongs to whoever is able to deal with saturation in and by technology.

Cinzia di Mauro, *Genius _02*

Cinzia di Mauro's *Genius _02* is the second

novel (of a trilogy) in which the earth (great areas of which have been devastated by nuclear radiation) is ruled by an unspecified JEA (Japan Europe America) Corporation, intent on ruling the world also with the use of *robota* (the result of genetic engineering gone wrong: mentally retarded sapiens who are physically very strong and able to withstand unbearable working conditions, but most of all who are resistant to cancer-causing environmental degradation).

One of JEA's most intriguing projects is to create the so-called *optimi*, a kind of augmented humans, recognizable for their intellectual prowess, minimal supraorbital ridge, no molars, small chin, minimal body hair. 50 of these *optimi* see the light of day. Another of JEA's projects is to establish litenet, the energy naturally produced by humans which could communicate ten levels of information. As expected, there are a number of bands, groups, and organizations fighting against the JEA; the one which is of most interest is the FOG (Fight of Gea), at the outset headed by a scientist, Abraham Cohen. FOG's main purpose is to create a world free of polluting industries, establish equitable living conditions, help the *robota*, and finance cleaning operations of the devastated areas of the world, as well as combat against DNA manipulation.

The novel is concerned with the activities of colonel Isaac, who is sent by the FOG leadership, in the year 2231, to recover one of the *optimi* (Jack) since it is rumoured that this creature can access the litenet. After numerous battles, attempting to defend himself from the other bands as well as from JEA's soldiers, Isaac finds and kidnaps Jack. During the whole ordeal, Isaac suffers from depression, attempts not to see all the devastation and violence around him of which he is such an indispensable part, and starts to question the leadership as well as the whole GEA political base, now in the hands of a group of 50 scientists.

In a final twist, he lets Jack free (knowing full well that this creature's existence will be unbearably lonely), lying to the people in charge by explaining that he himself killed Jack during a vicious enemy attack. He receives honors and promotions (he becomes one of the leaders), but this only emphasizes his unhappiness, solitude, and remorse.

The leadership of FOG is made up of scientists: their main goal is to attempt to better counter and surpass the scientific advances of JEA, and therefore without technology either they or their enemies would not exist. Leadership in these circumstances means simply giving orders; for followers there is only one solution: to obey (otherwise be disposed of). Under these circumstances, there is no room for negotiation or for another point of view, and the protagonist will live the rest of his life a great lie of having helped someone to live, that someone who was the target of search and interest of many people. Isaac's life as a leader will be heavy with falsehood, but he will keep realizing the goals of the institution of which he is a part, extending Bezio's notion of performative negotiation to internal struggle.[21]

Elisabetta Vernier, *Clipart*

Elisabetta Vernier's *Clipart* deals, among many other things, with that aspect of biotechnology which creates consensus. David Xander, the owner-director of one of the richest service-delivering companies, a man whose integrity and honesty is never questioned, is secretly videotaped by a hired prostitute during an orgy. Not only his actions are videotaped, but also his business schemings are recorded: public knowledge of this would destroy his reputation forever, making him lose lucrative deals. He is blackmailed by those who ordered the video to be made. None of his employees are aware of this. He only divulges to his security team the fact that he and other high-level business and political leaders are compromised in the clip which has to be recovered.

Alexandra Hill, one of the members responsible for the company's security, and also one of his most ardent admirers, is sent together with others to recover the offending

video. Having tracked down the prostitute, she learns that her boss is not only morally dishonest to the world, but also highly unethical in his business dealings. She is determined to recover the video clip, but she intends to bring Xander down by publicizing to the world the truth about his shady deals. Letting her emotions get the better of her, she lets him know her anger while she is delivering the recovered item. He orders that she be drugged and all her memories of the video clip and its recovery be deleted. At the end, she does not remember anything as her memories are reset to the time before the video clip incident.

Although the novel assumes that people living in the future world (dystopian and business-oriented as it is) still believe that moral actions should be the guiding force of society, it is clear that leaders are leaders because they control the latest form of technology (such as weaponry and spying equipment) as well as controlling their charismatic presentation of self to the world. In fact, whoever is able to achieve coerced consensus (reached by any means, even by deleting people's memories), detains leadership status. Again, the usual reliance on negotiating with followers whose consensus is voluntary does not appear to exist in this type of technologically-driven society.

Leaders rely on technology to achieve their ends: if they can manufacture their followers' consensus, they do: however, this manufacture is bio-nano-technologically produced, not created by mass-media (Herman and Chomsky),[22] and therefore even more underhanded and misleading. It is ironic that the novel assumes that charisma, playing such an important role in leadership,[23] remains a mysterious, and yet crucial characteristics of the leader in a technologically-driven world – whatever his goals and motivations may be.

In other words, a leader must be charismatic to surround himself with followers, but then he disposes of these in the way he deems necessary. Again, free will which should underpin consensus, negotiation, discussion of alternatives is irrelevant.

Giampietro Stocco, *Dalle mie ceneri*

Giampietro Stocco's *Dalle mie ceneri* is the only novel of the four chosen ones that deals with recent past which it endeavours to rewrite. South America after Argentina's "victory" in the Falkland war is the focus of this alternate history. The protagonist, Rico, is one of the volunteer Italian soldiers-survivors who fought in the war, in which he also lost his right arm. He lives Buenos Aires, by expedience, mostly stealing, but also by dabbling in computer technology. Rico is hired to find out who was behind the order which resulted in the disappearance of so many of dissident Argentinians; he receives this assignment from the Chilean chief of police working in Buenos Aires: partially by coercion (the police see him steal) and partially by tempting him (he grows a new arm, the result of a few drops of an unspecified liquid born out of his DNA).
Rico's search leads him to understand that a number of his contacts, namely the chief of police and his right-hand agent, have been given the "gift", and are in fact modified humans, capable of horrific violence, coercion, and aggression. Ironically, he is alerted to their "difference" from humans by the way they laugh. This same scenario is repeated at the global political level, where nano-biologically endowed immortal soldiers obey commands given by leaders of supra-national alliances who vie for the ability to create an unspecified new world order.

As in the previous novels, the leadership of those who control the chief of police is undefined; it is also not clear whether the heads of the international consortia are still human. However, whoever the leaders are, these are entities which have at their disposal the knowledge of every citizen's weaknesses and strengths to be used for their goals. Whoever leads the "gifted" ones communicates with them (and they with each other) through what can be compared to telepathy.

What happens to leadership in a technologically-driven society?

It is undeniable that science fiction offers some new perspectives on the theoretical progress of humanistic disciplines, and those research endeavours that have humans (augmented or not) as their main topic of analysis, such as leadership studies. It must be underlined, though, that worlds of science fiction struggle to depict culture, values, mores which may be exceedingly different from ours,[24] and therefore the essential ontological character of leadership does not mirror our own, even though it is useful in the process of understanding ours. The preceding look at the selected science fiction novels offers at least four possible answers to the question *What happens to (the nature of) leadership in a technologically-driven society?*

Firstly, a number of aspects of leadership which form the crucial foundation in any definition of effective governance still seem relevant when technology in its fictional representation is taken into account. The most important include charisma, authority, successful delegation of duties to skilled and skillful followers, power (both referent and formal).[25] In fact, these traits gain prominence with focused use of technological advances: authority, power, and consensus stand out as those characteristic which increase with astute deployment of bio- and nano-technology, especially that which relies on surveillance.

The leadership encountered in the novels seems to mirror the "paternalistic" style[26] and all leaders are men. Clearly, the use of surveillance may infringe on moral conduct of the leader, but in all the selected novels leaders follow the dictum "The ends justify the means", where both the ends and the means often involve unethical behaviour. This, moreover, is not the result of technology, but technology exaggerates the possibility of immoral decisions. Charisma is still present, but only in *Clipart* it plays a decisive role for at least one leader – follower connection.

Secondly, other crucial characteristics of leadership may be completely abandoned or relegated to irrelevancy. In general, all the novels discussed tacitly assume that technology widens the gap between those who ought to lead and those who form the group to be led, and this way negate the group's experience of leadership (contrary to what studies in leadership claim).[27] Consensus lends itself well to being technologically-manipulated. Negotiation, synergy, and any discussion with the followers can easily be dispensed with also.

The novels present a situation in which leaders need submissive followers, and therefore they do not seek or require consensus, and therefore any communication with followers is top down. Consensus can be artificially constructed, as in *Livido*, *Clipart* and *Dalle mie ceneri* where in all three novels characters' memories of selected events are deleted and this leads to forcefully acquiesced following, all the more immoral since the followers are not (at least at the outset) aware of this coercion. This does not mean that opposition is non-existent, but resistance to coerciveness may be futile, as in *Livido*, where Peter Pain's friend who invented a unique way of producing potable water from the ooze created by trash is not only fired from his job but also left deprived of the memory of his invention; all of his attempts to fight the company are fruitless.

Thirdly, in all novels there is a singular lack of wider vision-filled goal for humanity in general and for the society in question in particular. Altruism does not have a prominent role given to it by those unseen and undescribed leaders.[28] The novels concern self-made individuals who have specific personal goals only, underscoring the perennial struggle between individuals and groups, so crucial to understanding leadership.[29] It may be that dystopic settings do not allow for musings about visionary goals, but even the simple willingness to clean up whether trash-filled or otherwise devastated environment is lacking in the selected novels; leadership is therefore task-oriented and this task is pretty narrow, but it still requires leaders to accomplish it.

Moreover, the absence of any possibly

humanitarian goals is perhaps due to the type of technology that the novels describe: augmenting physical prowess (stronger arm and leg muscles, night vision, smart bombs, etc.), and tampering with the DNA (to create *nexhumans* or geniuses) put the described societies in the novels at the cusp of singularity, a time when everything that is human will be overridden and transformed. Does this lack of vision await the transformed beings' creation of their vision for the new society? Will leadership be necessary or important then? These questions are left unanswered in the novels.

Fourthly, transhumanists keep repeating that we cannot even imagine how life will be for the transhuman/cyborg. It remains to be seen whether Giambattista Vico's prediction of *corsi e ricorsi* ("ebbs and flows") of history will pawn out for cyborgs as well.[30]

All the selected novels underscore the great physical power of the augmented humans; and all of them are capable of great violence and unquestioning obedience. However, will they, too, pass through some recursive stages of transhuman development, as yet unforeseen? Although Vico's concern is with human history, it may well be that after the three ages of human history, there may be three ages of transhumans who, just like humans, will come to understand the necessity of institutions and therefore leadership. It could be argued that we live in that rational age which gives way to beings who will resemble the primitive man.

Cyborgs are, after all, like the giants Vico describes. Their creators (humans) will probably seem divine to them (despite the incomparable differences between them), until they pass onto the other stage, that of heroic beings, and then finally to that of rational beings. Even though Vico's philosophy contains some rather important contradictions, it can be argued that the novels' endings seem to foretell the beginning of another repetition of human history, this time, the beginning of augmented/cyborg cycle. In *Livido*, the *nexumani* are portrayed as happy, child-like, but still in awe of the humans; in *Genius_02*, Jack, the "genius" is left alone to look for his kind and certainly in awe of everything around him; in *Clipart*, the augmentation has not proceeded so far as to create sentient cyborgs; in *Dalle mie ceneri*, the created beings are certainly similar to Vico's brutes. Will leadership be one of the distinguishing characteristics of the early transhuman society?

Interpreting reality exclusively in terms of human values and experience is clearly insufficient with regard to future developments of humanity. If, however, Vico's idea that *verum factum est* (we can only know what we made), then it can be predicted that the first transhumans (made by us) will behave like us and we will understand them: this is precisely what the novels suggest. Furthermore, this behavior is consistent with Vico's characterization of brutes. It may be that science fiction stories of any type, unaided by Vico's ideas, are still searching for leadership prototypes.

Conclusion

It is said that Frederick Pohl, the well-known American science fiction writer, wrote this suggestion: *A good science fiction story should be able to predict not the automobile but the traffic jam*. The phrase, however, must be rearticulated this way: *A great science fiction story should be able to predict not the automobile but the traffic jam and tell us how to deal with it*. The selected science fiction novels suggests that the traffic jam will be of epic proportions, but they do not see a way of avoiding it, they present only attempts at describing what resembles a technologically-determined drift.

The social organization that is predicted by the novels relies on selfish leaders who engage coerced followers to further the leaders' seemingly narrow-minded goals, supported by technological machinations. The goals are myopic, commercial, unethical in most cases. The tasks always involve violence. The resolution of conflicts is therefore highly dependent on who disposes of the most advanced technological innovations which themselves are changing endlessly. The contexts do not rely

on collaborative and coordinated selfless actions as theorized by Drath et al.[31]

In this climate, leadership assumes very different sense from the human-centered vision given to it so far, since no one has the answers in a technologically-driven society, as the problems to be solved are fluid, transforming and dependent on the direction of technological change, including the one that transforms humans into "machines". The ontologies of leadership, therefore, must comprise technology, in order to help coping with or, better still, avoiding the inevitable "traffic jam".

Notes

[1] N.O. WARNER, *Leadership in Literary Perspective*, in: M. HARVEY, R.E. RIGGIO (eds.), *Leadership Studies. The dialogue of Disciplines*, Edward Elgar, Cheltenham 2011, pp. 171-183, here p. 173.
[2] *Ivi*, p.174.
[3] *Ivi*, p. 175.
[4] See A. MARTURANO, J.T. WREN, M. HARVEY, *Editorial: The Making of Leadership and the Humanities*, in: «Leadership and the Humanities», vol. I, n. 1, 2013, pp. 1-5.
[5] Such as at the molecular, neural levels, see i.e. N. LEE, C. SENIOR, M. BUTLER, *Leadership Research and Cognitive Neuroscience: The State of this Union*, in: «The Leadership Quarterly», vol. XXIII, n. 2, 2012, pp. 213-218.
[6] An aspect of distance leadership in a workplace is analyzed in S. WEISBAND (ed.), *Leadership at a Distance. Research in Technologically-Supported Work*, Lawrence Erlbaum, New York 2008.
[7] There are a number of manuals and web sites dedicated to this purpose, i.e., <http://brain knowsbetter.com/news/2013/2/18/five-leadership-lessons-from-science-fiction>; <http://voices.yahoo.com/a-sci-fi-guide-leadership-11178412.html?cat=31>.
[8] See, i.e., I. CSICSERY-RONAY, *The Seven Beauties of Science Fiction*,Wesleyan University, Middletown (CT) 2008.
[9] See I. ASIMOV, *Foundation*, Ballantine Books, Westminster 1983.
[10] D. TONANI, *MONDO9*, Delos Books, Milano 2012.
[11] See G. BEAR, *Blood Music*, Arbor House, New York 1985.
[12] See N. BOSTROM, *Are you in a Computer Simulation?*, in: S. SCHNEIDER (ed.), *Science Fiction and Philosophy. From Time Travel to Superintelligence*, J. Wiley & S., Chichester 2009, pp. 20-23.
[13] See P.K. DICK, *Do Androids Dream of Electric Sheep?*, Random House, New York 1968.
[14] C. DI MAURO, *Genius _ 02*, LED, Milano 2011; G. STOCCO, *Dalle mie ceneri*, Delos Books, Milano 2008; E. VERNIER, *Clipart*, Delos Books, Milano 2003; F. VERSO, *Livido*, Delos Books, Milano 2013. For English transhumanist science fiction, see the list in W. HERTLING, *The Value of Science Fiction in Understanding the Singularity*, URL: < http://www.singularityweblog.com/the-value-of-science-fiction-in-understanding-the-singularity/?utm_content=bufferca616&utm_medium=social&utm_source=twitter.com&utm_campaign=buffer >. Accessed 5 February 2014. The connection between transhumanism and Italy is strong: not only are there two transhumanist associations, but Italy boasts the world's first transhumanist (now ex-) Member of Parliament as well, the physicist Giuseppe Vatinno.
[15] See http://humanityplus.org/philosophy/transhumanist-faq/#answer_19. See also F. ALLHOF, P. LIN, J. MOOR, J. WECKERT, *Ethics of Human Enhancement: 25 Questions and Answers*, in: «Studies in Ethics, Law, and Technology», vol. IV, n. 1, 2010, article number 4 – doi: 10.2202/1941-6008.1110; R. BENEDICTER, J. GIORDANO, K. FITZGERALD, *The Future of the Self-image of the Human Being in the Age of Transhumanism, Neurotechnology and Global Transition*, in: «Futures», vol. XLII, n. 10, 2010, pp. 1102-1109.
[16] See N. DANAYLOV, *Singularity*, available at URL:<http://www.singularityweblog.com/about-singularity-blog/>. Accessed February 2014.
[17] R. KURZWEIL, *The Law of Accelerating Returns*, available at URL:< http://www.kurzweilai.net/ the-law-of-accelerating-returns>.Accessed Dcem-ber 2013.
[18] B. KUNSTLER, *Leadership in the Era of the Human Singularity: New Demands, New Skills, New Response.* http://oai.dtic.mil/oai/oai?verb=getRecord&metadataPrefix=html&identifier=ADA510097, p. 88.
[19] For a thorough discussion, see D.V. DAY, J. ANTONAKIS, *Introduction*, in: D.V. DAY, J. ANTONAKIS (eds.), *The Nature of Leadership*, II ed., Sage, Los Angeles (CA) 2012, pp. 3-25.
[20] W.H. DRATH, C.D. MCCAULEY, C.J. PALUS, E. VAN VELSOR, P.M.G. O'CONNOR, J.B. MCGUIRE, *Direction, Alignment, Commitment: Toward a More Integrative Ontology of Leadership*, in: «The

Leadership Quarterly», vol. XIX, n. 6, 2008, pp. 635-653.

[21] See K.M.S. BEZIO, *Personating Leadership: Shakespeare's Henry V and Performative Negotiation*, in: «Leadership and the Humanities», vol. I, n. 1, 2013, pp. 43-58.

[22] See E.S. HERMAN, N. CHOMSKY, *Manufacturing Consent: The Political Economy of the Mass Media*, Pantheon Books, New York 1988.

[23] See A. MARTURANO, P. ARSENAULT, *Charisma*, in: A. MARTURANO, J. GOSLING (eds.), *Leadership. The Key Concepts*, Routledge, London 2008, pp. 18-22.

[24] For a thorough discussion on leadership and culture, see D.N. DEN HARTOG, M.W. DICKSON, *Leadership and Culture*, in: D.V. DAY, J. ANTONAKIS (eds.), *The Nature of Leadership*, cit., pp. 393-436.

[25] See D.V. DAY, J. ANTONAKIS (eds.), *The Nature of Leadership*, cit.

[26] D.N. DEN HARTOG, M.W. DICKSON, *Leadership and Culture*, cit., p. 414.

[27] See, i.e., M. HARVEY, *Questioning Leadership: An Integrative Model*, in: M. HARVEY, R.E. RIGGIO (eds.), *Leadership Studies. The Dialogue of Disciplines*, Edward Elgar, Cheltenham 2011, pp. 199-229.

[28] See J.B. CIULLA, *Ethics and Effectiveness. The Nature of Good Leadership*, in: D.V. DAY, J. ANTONAKIS (eds.), *The Nature of Leadership*, cit., pp. 508-540, here p. 522.

[29] See M. HARVEY, *Questioning Leadership: An Integrative Model*, cit.

[30] See G. VICO, *La scienza nuova* (1744), in: G. VICO, *Opere*, vol. I, edited by A. BATTISTINI, Mondadori, Milano 1990, pp. 411-853.

[31] See W.H. DRATH, C.D. MCCAULEY, C.J. PALUS, E. VAN VELSOR, P.M.G. O'CONNOR, J.B. MCGUIRE, *Direction, Alignment, Commitment: Toward a More Integrative Ontology of Leadership*, cit.