

Ewelina Twardoch

When Man Becomes Machine : The Creation of Symborgs in Pop Cultural Universes

Kultura Popularna nr 4 (38), 58-70

2013

Artykuł został zdigitalizowany i opracowany do udostępnienia w internecie przez Muzeum Historii Polski w ramach prac podejmowanych na rzecz zapewnienia otwartego, powszechnego i trwałego dostępu do polskiego dorobku naukowego i kulturalnego. Artykuł jest umieszczony w kolekcji cyfrowej bazhum.muzhp.pl, gromadzącej zawartość polskich czasopism humanistycznych i społecznych.

Tekst jest udostępniony do wykorzystania w ramach dozwolonego użytku.

Ewelina Twardoch

When Man Becomes Machine

The Creation of 'Sym- borgs' in Pop Cul- tural Universes

"I want to see you not through the Machine"
E. M. Forster, *The Machine Stops*

Between Humans and Technological Tools

The relationship between humans and technology has always been a concern of popular culture. What is more, popular culture is a 'testing ground' for numerous ideas and experiments stemming from the relationship which are impossible to carry out in other fields of human activity. The various worlds created by rich and vivid imagination of popular culture creators have often preceded and still are ahead of the ideas of scientists, and politicians. This might be due to the fact that ideas in the imagined worlds seem not as dangerous as in the real one, and the creative suggestions of popular culture's creators are not taken as seriously. Besides, which seems to be the crucial issue, the field of popular culture has always been understood as an area of entertainment, amusement and ludic rituals, allowing for a more encompassing approach to the universe of technology, it being both close to us and unfamiliar. According to Sheryl N. Hamilton: 'Scientists themselves evoke the idea of science fiction as a way of capturing the incredible speed of technoscientific change' (Hamilton 2013: 271). Regardless of the reasons for colonization of the world of popular culture by technological visions and solutions, it is worth to have a closer look at these two; all the more so since we as human beings are less autonomous in relation to technology than we would like to believe.

According to Joanna Zylinska and Sarah Kember "we are – physically and ontologically – part of that technological environment", since we "are not entirely distinct from our tools" (Kember and Zylinska 2012: 13). The 'creative media' project, proposed by Zylinska and Kember, is an interesting attempt to review our relationship with the media, which are strictly connected with technology. The concept of mediation presupposes that we are constantly dealing with the process of the emergence of the media, a process which consists of a range of various relations between some human and nonhuman actors, to employ the concepts of Bruno Latour's ANT-theory. The notion of the processual nature of media is crucial here, as it underlines the fact that we are dealing not just with individual media objects as a television set or a computer, but, significantly, with relations between these objects, between us and these objects and a number of other factors that have an impact on them. Hence Zylinska and Kember's claim follows: "we have always been mediated" and "we have always been technical" (Zylinska and Kember 2012: 18). The argument, of course, does not equate media with technology; it solely points to the fact that both media and technology may not be reduced to certain objects, or tools; that technology such as media is a process which involves human beings. Zylinska and Kember follow Heidegger, whose ideas inspired the 'creative media' project, and claim that we are not only the users of technology, having control over technological world in the era of mobile media when life is run with mobiles, notebooks and other electronic devices, but that we have always been "chained to technology", as Heidegger boldly declared in *The Questions Concerning Technology* (Heidegger 1977: 1). The argument, however, goes further than the famous McLuhan's statement that the media are our prostheses. The mobile tools are not only an extension of our body, something external to our being; they develop with us and our connections with technological tools constitute the core of technology. Thus, the crucial concept turns out to be our *originary technicity* [Martin Heidegger's

Ewelina Twardoch is a PhD candidate at the Jagiellonian University (Institute of Audiovisual Arts) and the SET program. Her dissertation concerns the representations and functions of biometric data in the new media art.

terms as interpreted by Bernard Stiegler – E. T.], our way of being-with and merging-with technology' (Zylinska and Kember 2012: 14).

In his book *Technics and Time*,¹ Bernard Stiegler recalls the story of Prometheus, which serves as an apt illustration of the relations between humans and technological tools (Stiegler 1998: 185–187, 202–203). Prometheus is set out to be a figure who establishes the relationship between a human being and technology. Not only did he give people fire, he also pointed to a new way of development. At first, technology was out of humanity's reach; thanks to Prometheus it became a part of human environment and a human way of discovering abilities (cf. Zylinska and Kember 2012: 15). The Prometheus myth is also a story about humans becoming technological beings. Thereafter, the development of technology is associated with the development of a human, and complementarily, the evolution of human condition runs parallel to technological advances. The story offers an answer to the question of the arbitrary status of technological tools. If technology is perceived merely as a set of objects which we use to satisfy our needs and which we are capable of managing, where do the human fears of technology, reflected in popular culture stories, originate?

Human attitude toward technology seems to be just as ambiguous. On the one hand, technology precedes humans, and we can only reach out to it; on the other, we want to take control of it, because we are convinced that we are able to hold it in our power. Thus, we see ourselves both as beings subordinate to technology and dependent on it, and as creatures who have sufficient capacity and power to have technology subordinated. Therefore, it seems that our coexistence with technology is based primarily on the negotiation of power and, in fact, it is so (also literally, as it is no secret that most technological innovation was in the first place produced for the army (cf. Dinello 2005: 88)), though this relation is not reducible solely to this process. The issue of this peculiar symbiosis involves a number of our daily practices as well; first of all, various transformations of identity both in the human and nonhuman beings. The merging of our being with technology transpires mainly in the two approaches.

One practice associated with the humans' desire to control technology and to be a creator of a half-human/half-technological identity is the attempt to create the so-called 'artificial man'. The expression of the desire to create an artificial man has been present in cultures for centuries in the figures of the homunculus and the golem. Homunculus, traditionally, was supposed to be an entity created by alchemists of the Middle Ages and the following epochs. Paracelsus' sixteenth century treatise *De rerum naturae* even supplies a kind of provision for the making of humanoid beings, whose source was to be the human sperm (Campbell 2010). Since the Middle Ages the figure of the homunculus remains culturally alive, growing in new contexts, particularly, however, since the Enlightenment and the discovery of human anatomy, it is no longer associated with folklore and magical practices, but with alchemy, understood as a type of technology, as a technological preparation and transformation of matter (Campbell 2010). A variant of the figure of the homunculus is the golem, derived from Jewish tradition; it is a being made of clay in the shape of a man, which has been functioning primarily in religious contexts. Regardless of their differences¹, both figures are related to the notion of human imitation. It is also worth noting that in literature and popular culture they appear interchangeably as symbols of an artificial man, manifesting themselves in various guises: from demons to the leading-edge robots and machines.

¹ More on that subject in: W.R. Newman, *Promethean Ambitions: Alchemy and the Quest to Perfect Nature*, Chicago 2004, p. 183.

In my article, I would like to focus not solely on androids (i.e. the machines based on the notion of homunculus which are not directly combined with humans), but on relations between androids and humans, which may take on one of two forms. The first one assumes that androids and humans are separate entities, but at some point begin to converge through an inexplicable organic bond, making their autonomies (first and foremost, bodily) clearly indistinct (as in the case of *Neon Genesis Evangelion*, *Pacific Rim*, and the Iron Man stories). The second approach conceives all direct human body transformations as a result of technological interventions (from the famous figure of RoboCop, through the characters from the *Claymore* anime – similar to the story of *The Witcher* presented in a series of fantasy novels by Polish author Andrzej Sapkowski – to the X-Men comic characters), that make the bond between human and machine endogenous. Below, I would like to demonstrate the complexity and ambiguity of both takes on android-human relations and attempt to draw the image of the technology emerging from such contexts. Additionally, I will try to present the ways in which both modes of human-machine coexistence surface in our everyday life.

***Neon Genesis Evangelion*, or In an Ambiguous Relation with the Machine**

In popular culture productions we find plentiful images of impressive, indestructible robotic machines appearing on Earth for various purposes. They are ‘contemporary homunculi’ constructed by humans (e.g. the technologically advanced robot in the film *RoboCop*) or, as Autobots and Decepticons in the *Transformers* series (American film series, animated series and the comic book series), living robotic beings from another planet (in this case, the ‘metal planet’ Cybertron), who were not constructed by humans. Most often, the relationships with the robots, regardless of their being visitors from another planet or Earthly creations (whether post-apocalyptic or not), become complicated in time.. Paradoxically, the more similar the androids are to humans, the greater perceived threat they are to humanity, (i.e. when the boundary between ‘us’ and ‘them’ is blurred). Another scenario, barely exploited by popular culture, is possible; one which makes the relationship between a man and a machine extremely complicated; in this scenario a human being begins to feel a strange organic link with the mechanical entity under their control. One of the most complex and fascinating enactments of this theme appears in the Japanese production *Neon Genesis Evangelion*.

Neon Genesis Evangelion created by Hideaki Anno is an animated series consisting of 26 episodes. In this article, I choose to interpret the television production from 1995–1996, although the extended story was also adapted for cinema as three feature films, since I consider the films not as remarkably revealing as the television series. Susan J. Napier rightly claims that manga and anime are frequently perceived as “a medium often denigrated by Westerners as fit only for children” (Napier 2002: 421); nonetheless, it can hardly be questioned that the animated stories are one of the most significant illustrations of the complicated man-machine relationship which is one of obsessive preoccupations of Japanese culture (Napier 2002: 421). Notably, by the end of the 20th century, the Japanese animations successfully invaded Western

popular culture, often becoming 'hip', as was the case with *Neon Genesis Evangelion*. The living proof of *Neon Genesis Evangelion*'s popularity was the attempt to transfer the story into Western culture; many viewers interpret Guillermo del Toro's *Pacific Rim* (2013) as such an attempt². I shall return to this movie below, where I would like to argue that the human-machine bond is presented by the Mexican director cursorily, lacking the nuanced complexity of Hideaki Anno's production.

The story of *Neon Genesis Evangelion* transports the viewers to Japan of the future, specifically to future Tokyo (described by Karl Taro Greenfeld as a "society in symbiosis with the machine" (quoted after: Gilson 1998: 367), divided into zones. Numerous anime productions (e.g. *Akira*) present Tokyo as a post-apocalyptic city; similarly in Hideaki Anno's series, it is a city which fifteen years ago had to deal with 'The Second Impact', and now is threatened by the anticipated 'Third Impact'. 'The Second Impact' was a profound disaster to humanity, but only 'The Third' will complete the apocalypse, totally annihilating the entire living world. The Third Impact is to be brought about by the so-called angels, certain creatures genetically almost identical with humans (99,89 % compatibility (Napier 2002: 425)), originating from the mysterious figure of Adam (religious contexts of the anime are complex and replete with Christian and Judaic symbols (Napier 2002: 424)). Conventional weapons are useless in the impending encounter with the angels, so the special government organization NERV (the pun is intended) constructs the Evangelions. The Evangelions are giant modern robots: machines equipped with advanced weapons and resistant to damage. Despite their characteristics they cannot function independently, they require a pilot: a human who on entering the cabin is synchronized and combined with the machine. Due to required physical and mental flexibility in contact with an Evangelion, the pilot must be a child. In Japanese culture the figure of a child appears in various contexts and children often play the roles intended for adults. It seems, however, that in the *Neon Genesis Evangelion* children are capable of connecting to the machine due to the simple biological fact of not being fully formed. Besides being androids, the Evangelions are fully mechanical devices that can be used as any other weapon. This, however, Napier notices rightly, is only one aspect of the story told in Hideaki's anime. Gradually, the viewers of *Neon Genesis Evangelion* learn that the Evangelions are to some extent organic beings and their mechanical coating serves primarily to reduce their unpredictable potential, and keep them under external control. The pilots combine with the robots via LCL fluid, which enables them to breathe and feel deeper machine movements so as to better coordinate the giant body. In combat, the bodies of the pilot and the machine are conjoined in a kind of peculiar mutual transformation. As the connections between humans and Evangelions unexpectedly become deeper and grow stronger, it turns out that one of the pilots feels human blood in the LCL fluid, which is only the starting point of subsequent disclosures of Evangelions' secrets. Above all, the signs of the robots' autonomy become increasingly clear. In individual cases they are able to make independent decisions, but most importantly, their relationship with the pilots is gradually becoming permanent or even absolute. The unit Eva 01, piloted by a boy named Shinji, "allows" to be piloted only by the boy, because it contains his mother's personality (or consciousness; it remains uncertain which). Eva absorbed the woman during the experiments in which she participated, and since then they have become inseparable, merged into one entity. When Shinji combines with Eva 01, he also combines with his

2 <http://observationdeck.io9.com/the-comparison-everyone-wants-to-make-evangelion-vs-p-805474792> (access: 10.03.2014),

T. Hornyak, http://news.cnet.com/8301-17938_105-57593836-1/is-pacific-rim-a-retelling-of-japanese-anime-evangelion [10.03.2014].

mother, but only to 'feel her'; they do not talk and the boy cannot see his mother. There is, however, a strong suggestion in the closing scenes of the *Neon Genesis Evangelion*, that Shinji has 'merged' with his 'machine' forming one being, both bodily and mentally. His body transformed into the shapeless creature with half-technological entity, he shares its feelings, and is faced with the danger of complete identity loss. This does not happen, as Shinji breaks the connection with Eva 01 and regains his autonomy, which he manages only with his extraordinary willpower. Another pilot, the girl named Asuka, goes through similar experience, but loses part of her personality in the process.

The story presented in Hideaki's anime is extremely multilayered, so even its main themes are hard to summarize (e.g. the momentous political theme) and the complex psychology of its protagonists deserves deeper analysis, but even the above brief presentation reveals the arbitrariness and intricacy of the notion of technology proposed by *Neon Genesis Evangelion*. The nature of man-machine relation and its ambiguous ontological status initially poses the question of the ethical use of technology, at the cost of health and damaged personality of minors. Paradoxically, the complex reality, actually created and determined by technology, makes it the simplest question. As Napier claims, in *Neon Genesis Evangelion*: "... reality itself becomes part of the apocalyptic discourse, problematized as a condition that can no longer be counted on to continue to exist, thanks to the advances of technology and its increasing capabilities for both material and spiritual destruction" (Napier 2002: 419). Technological development is certainly conceived in Hideaki's anime as a profoundly destructive force, determining the living world, advancing the fulfillment of the apocalyptic visions, and bringing about the end of the world. The technological world is equivalent to "terminal culture" (Bukatman 1993: 20). Shinji's greatest fear is the possible identity loss due to dependence on the machine. On the other hand, the Evangelions, a species of homunculi, the core achievement of future Japanese technology, are presented by Hideaki unlike mechanical, cruel or passive robots (e.g. robots in Richard Stanley's *Hardware*); they appear to be living beings with essential organic components. Moreover, the bond formed between the pilots and the Evangelions cannot be understood merely as a connection allowing for improved battle performance. On account of their specific transfiguration, the characters acquire the ability to scrutinize their interiors, to accept or to deny the non-apparent facts of their beings. Also, I would like to emphasize that through bioorganic fusion with the Evangelions the humans in turn become partly technological entities. Thus, the series seems to be the fullest pop cultural realization of Slavoj Žižek's assumption about the direct integration of human mind with a machine (Žižek 2004: 18), but with an even broader range of integration – including the body connected to the mind. It provides a powerful illustration of humans merging with technology, not only alongside technology, to refer back to Zylinska and Kember's argument. In the connections with the machines the pilots discover their limitations, the possibility of bodily transformation, and they change radically not only in terms of their personality, but also their ontological status as a human being is radically altered.

The stimulating imaginative idea of giant robots piloted and controlled by human race was recapped in the mainstream 2013 movie *Pacific Rim* directed by Guillermo del Toro. The blockbuster movie seems to be only mimicking the idea, setting it against a spectacular backdrop. The Earth is attacked by monsters named Kajiū (a name derived from Japanese culture), which emerged

from the breach in the oceanic plate and they are mentioned to be creating their own species. So, similar to angels they are not constructed by humans. Although in the movie the mind of Kajü is studied and one of the scientists integrates his brain with the brain of the monster, the theme is not developed any further. The equivalent of the Evangelions is the Jaegers (both created by humans); but – they are robots and nothing but robots, dependent on the humans, and human-made in order to protect the Earth and its inhabitants. The Jaegers are piloted by two people and this fact allows the creators to insert the themes of brotherhood, partnership, love etc., but the status of the Jaegers is absolutely unequivocal; they are not in any sense autonomous creatures, but only mechanical objects. Even the connection between the pilots and the Jaegers does not question human identity, as there is a clear-cut boundary between us, the humans, and the mechanical weapon that we created. Unlike in *Neon Genesis Evangelion* where the main idea was us “becoming with technology” (Kember and Zylinska 2012: 141) whether we want it or not. As much as we may not be entirely determined by technology, it does not change the fact that we are part of the process of creation of technology and in this process we make ourselves technological entities. Debra Benita Show explains: “In other words, technology should not be considered an adjunct to the body or in opposition to it but as a determinant of its ontology” (Show 2008: 81). *Pacific Rim* bears no signs that the distinction between human beings and technological entities may be problematically complex. Here, technology is a set of devices which people use to satisfy their needs or, at best, a product of common desire powering the forces of the market.

Therefore, there are hardly any other popular culture production which would actually attempt to problematize the potential ambiguity of relation between humans and technology, and the unpredictable impact it may exert on the human body. The famous *Iron Man* franchise, telling the story of one of many supernatural characters of Marvel universe, also fails in this respect. The comic version of Iron Man adventures predates *Neon Genesis Evangelion*, while the first movie adaptation comes from 2008. Iron Man is an example of a man who pilots the machine that is in the same time his armor. So, similarly to *Neon Genesis Evangelion* or *Pacific Rim*, the technologically advanced suit is external to the character of Tony Stark. There is more than one armor which Iron Man uses, but any one of them can be taken off. A kind of electromagnet which keeps Tony Stark alive is not the exactly a part of his ‘equipment’, but rather a technological device functioning like a pacemaker, belonging to the realm of everyday life. In his technological armor, not unlike the character of Batman, Tony Stark transforms into a different person. He is both a superhero who uses high-tech gadgets and weapons and a brilliant businessman, but never simultaneously. He has no identity problem or personality disorder that would arise from the coexistence of a man with a machine. His double personality becomes a problem in the context of social roles, but it does not concern his integration with the armor.

The exception to this rule comes with the cycle of a six-issue story arc from the comic book *Iron Man (vol. 4) Extremis*, published between 2005 and 2006. The storyline was also adapted into the third part of the Iron Man movie, but with some alternations. The eponymous *extremis* is a substance which can turn a man into a superhuman creature, of incredible strength and other amazing abilities. It was developed for the army to create superhuman soldiers, a fact confirmed in the movie, but only tentatively suggested in the comic book, where Tony Stark injects himself with it to increase the possibilities of his armor

and to protect people against the man who was transformed by the substance. Through this process he and his armor grow into each other, forming a whole, allowing Tony to control the suit with his mind, as efficiently as his body or even better. In the movie a similar process is portrayed, but it is not *extremis* which enables Tony to achieve better integration with his machine armor, but a microchip implantation. The man-machine connection grows deeper, causing intensified interference with the body, but besides the process being presented as extremely painful, no other consequences of the 'fusion' for the human body and mind are explored in the movie. Daniel Dinello noticed that there are few superhuman creatures who are created solely for the human protection (cops, soldiers) as opposed to these who produce people's anxiety (Dinello 2005: 136), so such unproblematic integration with the machines might be corresponding to the Western projections of the process. This issue seems to be even more puzzling, when the connection between human beings and machines proceeds not only externally, but when the conjoining is internal and tantamount to interference in humans tissues.

Half-Man, Half-Machine

The distinctions of various forms of human connections with machines can become quite problematic. As Daniel Dinello emphasizes, "cyborgs are not robots or androids. Robots consist of mostly mechanical and electronic components ... , androids do not combine organic and inorganic. A cyborg, or cybernetic organism, combines the biological and mechanical, and may or may not look identical to a human ... " (Dinello 2005: 7–8). Basic differences sketched here appear to be simple, and as a general rule they capture the significant categories, but there are so many variants of man-machine relation that such basic distinctions are insufficient. Therefore, I have chosen not to categorize the relations at the beginning of the article, but to begin with presenting one of its most complex forms in Hideaki Anno's anime. In *Neon Genesis Evangelion* or even in *Pacific Rim* or *Iron Man*, as I have demonstrated, certain connections between human beings and machines are established, although in the latter two productions the connections are not internal. What is more, in Hideaki Anno's anime the connection made is neither external, nor internal. Indeed, the machine is not implanted into the pilot (so it cannot be defined as a cyborg), but their coexistence is irreducible to a simple human use of a technological device.

Therefore, an apt and attractive concept comes with the notion of 'symborg', as formulated by the renowned performance artist Stelarc. According to Stelarc, a 'symborg' is a human who is somehow transformed through technology, but the transformation does not mean that one becomes half-robot, but a hybrid; a human body is multiplied and one continues to be in symbiotic relation with new technologies, based mainly on the Web³. I would claim that the notion of 'symborg', if Stelarc's proposal is used slightly more comprehensively, may be successfully employed to describe human relation with technology which are ambiguous, but undeniable. Of course, subtle divisions separate 'symborgs' from 'cyborgs', but to define various forms of humans using technology with the umbrella-term of 'the process of cyborgisation' seems to me a misuse. We do 'become with technology' and we adapt to technological solutions, but having a pacemaker or implants installed in our bones or using avatars when we play computer games does not make us cyborgs, but 'symborgs'. We are

3 The website about the Stelarc project titled *Metabody: From Cyborg to Symborg* www.merlin.com.au/stelarc, www.metabody.com [12.03.2014] and some comments of Piotr Zawojcki: <http://www.zawojcki.com/2006/04/19/destrukcja-versus-wspomaganie-ciala-w-cyberprzestrzeni-przypadek-stelarca> (access: 12.03.2014).

technological beings, even without direct interventions in our body or radical bodily transformation. Therefore, I would employ the concept of 'cyborg' only with reference to creatures different from robots and androids in their organic parts and who are radically altered through certain technological procedures.

The exemplary cyborg character who has also come to be very figure of a cyborg in popular culture is RoboCop. The significance of RoboCop for the common imagination is evident in numerous programs and projects in high-tech ventures which are named after the character. What is more, twenty years after the last part of the original RoboCop movie series a remake was filmed, which premiered in January 2014. Daniel Dinello claims that since 1980 the cyborg figure has become an essential icon of pop cultural world (Dinello 2005: 12). There are plenty of incarnations of the icon in the world-famous characters of Terminator, Cyborg (originally from the movie *Cyborg* from 1989 directed by Albert Pyun), Bionic Man and Bionic Woman (from the TV series *The Six Million Dollar Man* and its spin-off *The Bionic Woman*) and others. On the other hand, Dinello argues that: "Science fiction cyborg stories dramatize our fears as we become targets in the world of cyborg weapons, while anticipating the demise of the flesh-and-blood body and the gradual extinction of humanity" (Dinello 2005: 12). Thus the figure of the cyborg embodies the ambivalence inherently connected with its hybrid ontological status, as Donna Haraway showed over twenty years ago (Haraway: 1991).

Both in the 1987 movie (and its sequels) and the 2014 remake RoboCop is presented as a combination of man and robot. In both versions the main protagonist is constructed by a mighty corporation as creature combining technologically advanced armor with human organic elements taken from a cop who suffered severe injuries. The differences between the original movie and the remake are quite symptomatic, pointing not only to advances in technological development, but also to cultural interpretations of the changes. In the *RoboCop* directed by Paul Verhoeven, the process of cyborg creation is an attempt to produce a super cop in response to previously failed projects of other scientists. The high technology at the time, in comparison with the latest version of the story, is in its infancy; whereas in José Padilha's movie, the construction process of RoboCop appears to be almost obvious, because of the wide availability of a number of advanced technological devices. The management of the corporation sees the creation of RoboCop as a real sign of technological (and economic) revolution, not solely a successful experiment. Furthermore, in Verhoeven's movie Alex Murphy seems to accept his new mechanical body, since he only wants revenge. There is no knowing how Murphy is going to function in everyday life and what the actual whereabouts of his organic body are (at least some parts of it). He retained his consciousness and memories, but there is hardly any clue as to how he manages his emotions. In Padilha's movie, questions about the everyday life of Alex Murphy are posed. He is not separated from his family, and he struggles to adapt to both everyday life and his hybrid body. There are also some scenes which suggest that the transformation of Alex Murphy is to be understood not only as a ground-breaking improvement of humanity, but as well, or rather primarily, as cruel mutilation. This signifies a closer contemporary human relationship with technological devices than the one of people in the late 80s, and the perspective produces a different set of questions concerning technology. The human fear of domination of the world by robots, or of using cyborgs as weapons is no longer a concern, but our abilities to coexist with technology,

and our own growing transformations of humanity are. The civilizational turn is only signaled in the movie, but as a theme cannot be ignored by creators of popular culture narratives. It marks the emergence of new characters, who unlike the science fiction heroes perfectly exploiting their capabilities gained through technological solutions, are to undergo a long and complicated process of accepting their internal technological modifications.

Popular culture productions strongly idealize the fusion of man and machine. Even though the process of integration with a machine is standardly presented as extremely difficult and painful, there is no further discussion of the organism's response to the considerable body burden. Even the story of X-men (I am referring to the film version), presenting an indirect manifestation of the notion of man-robot union, does not attempt to tackle the issue. One of the main characters who calls himself Wolverine had undergone a complete transformation process through mysterious metal alloy, adamantium (a typical Marvel device), which bonded with all the bones of his skeleton. As a result of the process he acquired artificial endogenous skeleton and gained uncommon strength and movement abilities. The technological changes to his body are so pervasive that Wolverine should be considered as cyborg. At the same time Wolverine's body bears no traces of the transformation. On the one hand, one could argue that Wolverine is already a mutant and his body is the object of an evolutionary leap, as demonstrated by his extraordinary adaptability. On the other hand, it is still a human, organic body, so such profound interference with the tissues should have some consequence. Dinello claims: "The replacement of our flesh and blood with mechanical augmentation subtly blurs the definition of what constitutes a human body, and encourages a dream of immortality" (Dinello 2005: 12). The 2014 remake of RoboCop story provides a small, but significant correction to the dream.

Additionally, it should be noted that we can read about and watch certain technological solution used in RoboCop 2014 on Perception team website⁴ and on Youtube⁵. This shows that present-day viewers may follow the technological aspect of RoboCop mythology not only by watching the movie. Advanced technology has ceased to be a distant, mesmerizing mystery, but has become a readily available part of everyday life, and it is this availability which constitutes the real difference.

4 <http://www.perceptionnyc.com/content/robocop-case-study> [14.03.2014].

5 <http://www.youtube.com/watch?v=V0559qQRGqA> [14.03.2014].

Are We All Symborgs?

Adam I. Bostic opens his essay with the following statement: "According to contemporary culture theory, I am a cyborg" (Bostic 1998: 357). The technological transformation of human beings are on the whole not so large as to make us cyborgs, but would it be true that we are all symborg entities, and does the popular culture illustrate and support this peculiar process of human evolution? Sandra Soo-Jin Lee says that according to Rayna Rapp "there is a strong American belief in the 'self-made man' whose core resources are internal" (Soo-Jin Lee 2013: s85). Rapp observation here refers to the issues of genetic engineering and shaping a human through DNA manipulation, but the overall idea remains the same: we want to improve ourselves even if the process is terrifying. Soo-Jin Lee adds that American people are less ". . . concerned about their need for its protection than their desire for self-actualization. As one consumer emphasized, 'I want it all and I don't want anyone telling me what I need to know or not'" ((Soo-Jin Lee 2013: S85).

'Self-made man', 'self-actualization' are the American postulates, which brings us to the notion of Quantified Self.

Quantified Self is a community focused on the possibilities for human improvement through technology, in particular, almost commonly available technology, mainly mobile devices⁶. We can read the following definition of Quantified Self on the *Technori* website: "In short, it is self-knowledge through self-tracking"⁷. Self-tracking is a form of obtaining information about the internal bodily condition through tools and applications which are becoming increasingly usable and popular. According to the report entitled "Tracking for Health" by Susannah Fox and Maeve Duggan, 69% of American citizens 'keep track of at least one health indicator such as weight, diet, exercise routine, or symptom'⁸. Nowadays, there are so many tools used for self-tracking that it is impossible even to list them. The website *Guide to Self-Tracking Tools* collects 505 such devices.⁹ They let us collect personal data concerning the sleeping process, our weight, blood sugar, cholesterol, blood pressure, heart rate and so on. There are also activity trackers such as Misfit Shine¹⁰ and others¹¹, trackers which sequence our microbiome (uBiome¹²), enabling to monitor all bacteria in our bodies, but also ones that evaluate the level of our happiness¹³. According to the aforementioned report: "**One in five smartphone owners has a health app**"¹⁴. Furthermore, one of the most popular devices is not an application, but the self-tracking bracelet as the one developed by Jawbone "that tracks your movement, sleep patterns and eating habits. It's a connected wristband that sends all your daily personal metrics on your smartphone app"¹⁵. I would like to draw attention to the words of the Jawbone's CEO, who "presented Up as a 'lifestyle gadget designed to encourage wellness", "a fashionable, wearable design integrate ... into a social, connected experience"¹⁶. The trackers, both devices and applications, should be comfortable in use and handheld, which is not so obvious if we recall Heidegger assumptions about enframing (Heidegger 1977: 9–10); they can be easily integrated into our everyday life and soon become fashion gadgets.

The trackers claim to be devices designed to help us stay healthy¹⁷, but they are in fact exactly the tools which change human beings into technological entities in the sense of 'becoming with technology', to recall Zylińska and Kember's argument. First blog 'reports' may be found confirming such observations; in one of them the author, Christopher Butler, who decided to monitor his life step by step daily using smartphone applications, wrote: "Using it feels like conversing with the strange, disembodied offspring of HAL and Elf"¹⁸. Therefore, implants appear to have become unnecessary to turn us into beings of the species 'homo technologicus'.

Recently (March 2014) vivid emotions were sparked in Germany (and not only) by the speech of the European Union politician, Neelie Kroes, on the use of bracelets, arguing their positive impact on health and the functioning of health system¹⁹. According to the author of the article, such promotion of technological gadgets was perceived in Germany (and supposedly, in all of Europe) as an anticipation of the society of control. On the one hand, trackers are positively evaluated by the American society and a part of medical environment, on the other, there is an anxiety, recognized already decades ago by Martin Heidegger. In *The Question Concerning Technology* Heidegger recognizes technology as 'human activity' (Heidegger 1977: 1), meaning that technology is not equivalent with technological tools, but is all activity involving the tools (e.g. utilization). Hence, technology as activity is not separate from our existence. Furthermore, even if we consider

6 The official website of Quantified Self: <http://quantifiedself.com> [14.03.2014].

7 M. Moschel, <http://technori.com/2013/04/4281-the-beginners-guide-to-quantified-self-plus-a-list-of-the-best-personal-data-tools-out-there> [14.03.2014].

8 S. Fox, M. Duggan, <http://www.pewinternet.org/2013/01/28/tracking-for-health> [14.03.2014].

9 <http://quantifiedself.com/guide> [14.03.2014].

10 P. Murray, <http://singularityhub.com/2013/01/15/misfit-shine-a-sleek-new-activity-tracker/> [14.03.2014].

11 'Top Ten' of those tracks can be found here: <http://dailytekk.com/2012/06/11/fitness-tracking-devices> [15.03.2014].

12 <http://ubiome.com> [15.03.2014].

13 <http://www.trackyourhappiness.org> [15.03.2014].

14 S. Fox, M. Duggan, op. cit., [15.03.2014].

15 <http://www.selftrackinghq.com/up> [15.03.2014].

16 Ibid.

17 C. Paddock, <http://www.medicalnewstoday.com/articles/254902.php> [15.03.2014].

technology as ‘spiritually in hand’ (Heidegger claims that handwork technology is its eldest form (Heidegger 1977: 2)), as the trackers, which we literally hold in our hands and wrap around our wrists, there is always the danger of enframing (Heidegger 1977: 9–10). So the anxiety does not stem from the danger of technology taking control of humans (the common statement is becoming actually naïve), but that technology will become our one and only frame.

Some signs of the potential process are visible, as for example the invention of Google Glass, which can radically change our perception²⁰, as well as the project Avatar 2045. This project is a plan of 32 year-old Russian billionaire Dmitry Itskov to become immortal. This idea is consistent with the predictions of a well-known scientist Raymond Kurzweil, Google’s new engineering director, who claims that we are close to transcend our biologically embodied mind²¹. Dmitry Itskov believes that the rapid technological development will allow him to transfer his brain into a kind of robotic, hologram body. This body should be formally perfect, of superhuman capabilities and well-designed: ‘Before 2045 an artificial body will be created that will not only surpass the existing body in terms of functionality, but will achieve perfection of form and be no less attractive than the human body’²². According to Kurzweil, it will be an important and necessary step in human evolution. This step will be technological (Kurzweil 1991: 22). Furthermore: “software-based humans will be vastly extended beyond the severe limitations of humans as we know them today” (Kurzweil 2005: 218). What is also interesting here is that such ideas are common knowledge, they do not sound odd or strange, because they have been circulating in popular culture narratives for decades.

“Science fiction is indeed fiction, but it is perhaps the most powerful tool we have to look to a variety of futures and wonder, worry, and act to prevent or ensure those possibilities”, claims David Bjerklie (quoted after: Hamilton 2003: 273). Popular culture stories based on science fiction conventions have shown prior to technological discoveries (in fact, most of them, such as mobile media and various applications function both in pop cultural circulation as well as in science fiction narratives) that we are technological entities, even if we deny or refuse it. We merge with technology, and even if contrary to Kurzweil’s predictions the process is not evolutionary, technological development is the process in which we partake, and in which we are directly involved. Furthermore, as the technological process is unfinished, we are beings subject to continuous transformations. Since now we are all symborgs, it is as conceivable that one day we will become cyborgs.

WORKS CITED

- Bostic, A. I. (1988). Automata: Seeing Cyborg through the Eyes of Popular Culture, Computer-Generated Imagery, and Contemporary Theory, “Leonardo”, Vol. 31, No. 5, Sixth Annual New York Digital Salon, 1998.
- Bukatman, S. (1993). *Terminal Identity: The Virtual Subject in Post-Modern Science Fiction*, Durham, Duke UP,
- Campbell, M. B. (2010). Artificial Men: Alchemy, Transubstantiation, and the Homunculus, „*Republics of Letters: A Journal for the Study of Knowledge, Politics, and the Arts*”, No. 2, 2010, <http://arcade.stanford.edu/journals/rofl/node/61> [07.03.2014].
- Dinello, D. (2005). *Technophobia!: science fiction visions of posthuman technology*, University of Texas Press, Texas.

18 Ch. Butler, <http://chrbutler.com/2014/03/this-mediated-life> [15.03.2014].

19 F. Schirmmacher, <http://www.faz.net/aktuell/frank-schirmmacher-12826199.html?printPagedArticle=true> [15.03.2014].

20 Official website: <http://www.google.com/glass/start/> [15.03.2014].

21 R. Goodwin, <http://www.knowyourmobile.com/google/google-x-labs/21813/googles-ray-kurzweil-humans-will-be-immortal-2030s> [15.03.2014].

22 Ibid.

- Gilson, M. A. (1998). Brief History of Japanese Robophilia, "Leonardo", Vol. 31, No. 5, Sixth Annual New York Digital Salon.
- Hamilton, S. H. (2003). Traces of the Future: Biotechnology, Science Fiction, and the Media, "Science Fiction Studies", Vol. 30, No. 2, Social Science Fiction.
- Haraway, D. (1991). *A Cyborg Manifesto. Simians, Cyborgs, and Women: The Reinvention of Nature*, New York-Routledge.
- Heidegger, M. (1977). *The Question Concerning Technology*, source: http://smondon.ocular-witness.com/wp-content/uploads/2008/05/question_concerning_technology.pdf
- Kember, S. Zylinska, J. (2012). *Life after New Media, Mediation as Vital Process*, MIT Press, Cambridge-London,
- Kurzweil, R. (1999). *The Age of Spiritual Machines*, Viking, New York.
- Kurzweil, R. (2005). *The Singularity Is Near. When humans transcend biology*, Viking, New York.
- Napier, S. J. (2002). When the Machines Stop: Fantasy, Reality, and Terminal Identity in „Neon Genesis Evangelion” and „Serial Experiments Lain”, „Science Fiction Studies”, vol. 29, No. 3: „Japanese Science Fiction”.
- Newman, W.R. (2004). *Promethean Ambitions: Alchemy and the Quest to Perfect Nature*, Chicago
- Show, D. B. (2008). *Technoculture. The key concepts*, Berg, Oxford – New York.
- Soo-Jin Lee, S. American DNA: The Politics of Potentiality in a Genomic Age, "Current Anthropology", Vol. 54, No. S7, Potentiality and Humanity: Revisiting the Anthropological Object in Contemporary Biomedicine, 2013.
- Stiegler, B. (1998). *Technics and Time. The Fault of Epimetheus*, Stanford University Press, Stanford, California
- Žižek, S. (2004). *Organs Without Bodies: On Deleuze and Consequences*, London, Routledge,