

# HUMAN ENHANCEMENT AND TRANSHUMAN TECHNOLOGIES IN SLOVAK MEDIA DISCOURSES

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## ABSTRACT:

In this article we report on and discuss our initial insights from a media analysis, whose goal was to map media discourses around human enhancement and transhuman technologies in the Slovak media. The main time-frame for material collection was 2009-2013. We conducted a search of the Slovak Press Agency (SITA) media outputs database, using thematically chosen keywords. Based on a critical discursive analysis of the material collected, we suggest that three basic discourses (with several subvariations) can be found in the Slovak press: A) Transhuman technologies and the survival of humans as a species; B) Transhuman technologies and superhumans; C) Transhuman technologies and changes in basic human nature (with consequences for ethics, morals and religions). We decided to concentrate on the closely related, intertwined discourses A and B. We included all the kinds of media targeting the general public because we were interested in the whole spectrum of potentially different 'renderings' of the topic aimed at all possible audiences. However, the differences found were smaller than expected. Our findings do not indicate that certain kinds of media (according to 'seriousness' or preferred themes) favour a specific presentation of transhuman topics, nor that they favour some discourses and completely ignore others. But we did find an appalling lack of any critical discussion from different morally anchored perspectives that would provide specific answers to dilemmas around prohibiting / regulating some technologies, at the national or international level, which are already partly relevant now and may become extremely relevant in the near future.

## KEY WORDS:

human enhancement, transhumanism, transhuman technologies, media analysis, Slovakia



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## 1 Introduction

In this study we would like to present the initial results of a media analysis on the topic of human enhancement and transhuman technologies in the Slovak press. We were interested to see how well or how deeply these new topics are covered, how the media reflect public opinion (if it has one, despite the novelty of the issue) and if there is any mediated public discussion about the inherent controversies (quite common in the United Kingdom, for example).

We understand human enhancement to mean primarily biological enhancement (including genetic enhancement) and cyborgization,<sup>1</sup> possible on an increasing scale due to advances in nano-bio-info-cogno (NBIC) technologies. When they are used specifically to enhance human beings (and not, for instance, to produce synthetic bacteria) they are often called transhuman technologies – after an intellectual and philosophical movement that welcomes human enhancement with open arms and mind.<sup>2</sup>

For the Slovak philosopher Višňovský<sup>3</sup> transhumanism (along with antihumanism and neohumanism) is one of three forms of the more general concept of posthumanism. Transhumanists speak of transhumans (transhuman beings) in a posthumanist era, which they see as being entirely possible and even as a desirable alternative for the future of humankind.<sup>4</sup> But understandably articles in the press targeting the general public do not make these distinctions and use transhumanism and posthumanism as synonyms. This article is therefore concerned with human enhancement, transhuman technologies as well as posthumanism in the Slovak media.<sup>5</sup>

We included all the print media aimed at the general public.<sup>6</sup> The newspapers and magazines analysed can be classified into very different categories, according to their ‘seriousness’ or their tabloid character, according to their thematic orientation and also according to ‘breadth’ of the intended readership. For example, *Quark* is a monthly magazine (included in the analysis but not cited in this article) which has a particular focus on popularising (natural) science and is aimed at a fairly narrow target group – young people with an interest in science.  *týždeň*, a weekly, and *Profit*, a fortnightly magazine, cover politics/society and business respectively, and therefore have specialised audiences as well but these vary more in interests and age. The daily newspaper *SME* is seen by many as the only Slovak broadsheet style daily and thus has more of a well-educated readership. Moreover, it covers general topics, but the articles cited appeared in its special Saturday supplement which popularises science (*techSME*) using simple language and concepts but which is not read by all readers. By contrast, the weekly *Život* is a very popular magazine with the broadest and possibly not so well-educated audience and *Brejk* is a glossy monthly magazine for men.

In media as diverse as these we would of course expect differences in approaches to any specific topic. Moreover, human enhancement and transhuman technologies can be categorised as a scientific topic and as such appeal more to some kinds of media and audiences than others. However, we included all the newspapers and magazines because we were interested in the whole spectrum of potentially different ‘renderings’ of the topic, aimed at all possible audiences.

## 2 Media Analysis and Critical Discourse Analysis

Why would one wish to investigate the way in which a specific topic is portrayed in the media? Because journalism has the power to shape public discourse and thus greatly influence it – not only the way in which people see the world, but also the way in which they see their position in that world, the topics they think about, what they consider to be controversial and entirely normal or even incontestable.<sup>7</sup> But it would be very simplis-

1 SÝKORA, P., MATĚJKOVÁ, E.: Kognitívne vylepšovanie človeka, evolúcia a etika. In KELEMAN, J., KVASNIČKA, V., POSPÍCHAL, J. (eds.): *Kognícia a umelý život XI*. Opava : Slezská univerzita v Opavě, 2011, p. 255.

2 *Transhumanist FAQs*, version 3.0. [online]. [2015-03-21]. Available at: <<http://humanityplus.org/philosophy/transhumanist-faq/>>.

3 VIŠŇOVSKÝ, E.: *Homo Biotechnologicus*. In Human Affairs: Postdisciplinary Social Sciences & Humanities Quarterly, 2015, Vol. 25, No. 2, p. 230.

4 BOSTROM, N.: The Future of Humanity. In Berg OLSEN, J. K., SELINGER, E., RIIS, S. (eds.): *New Waves in Philosophy of Technology*. New York : Palgrave MacMillan, 2009, p. 186.

5 Originally we planned to map the existing public discussion around these new topics as part of the first phase of a research project on the philosophical and ethical dimensions of NBIC technologies when applied to human enhancement. Later, on discovering the almost total lack of discussion, we opted for an additional goal – to start and to encourage such a discussion. In order to do so, the Centre for Bioethics funded a Facebook group (*Transhumanism – ethical problems with human enhancement*) as well as a blog (<http://biotika.blog.sme.sk>). We have not considered these outputs in this analysis; this article maps the situation before those were launched.

6 And we did not include any scientific journals.

7 RICHARDSON, J.: *Analysing Newspapers: An Approach from Critical Discourse Analysis*. London : Palgrave Macmillan, 2007.

tic to think that the way something is portrayed in the media represents public opinion. The media are more of a discursive arena where personal opinions and attitudes are formed, not entirely independent of an evolving public discussion.<sup>8</sup>

Taking into account the undeniable commercial and power influence of the media, it is possible – through a media analysis – to gain quite a good insight into the topics that concern a particular society at a particular time, the perspectives that are usually adopted and the kind of world-picture that results from that. Moreover, it is possible to look at different – competing – ‘treatments’ of the same topic by different media, e.g. different newspapers or magazines often aimed at different target groups and influenced by different interests. Of course, it is even more interesting when the topic is controversial as is no doubt the case with human enhancement and also transhuman technologies in general. Such a critically oriented analysis of the perspectives taken (or omitted), the arguments applied (or left out) and the world-pictures offered (or glossed over/ignored) on a specific issue is typical of the critical discursive approach. Critical discourse analysis is discursive because of its special focus on language and the linguistic means used to build and maintain these different world-pictures, and it is critical because it holds a critical attitude on society and the way it operates, often trying to reveal concealed power issues and the hidden agendas of different social actors.<sup>9</sup>

## 3 Methodology

Originally we decided to map the period from 1<sup>st</sup> January 2009 to 31<sup>st</sup> December 2013, the five years prior to the time of material collection, but we also kept our eyes open for any later developments. The original intention was to monitor all media including radio and television, but since the topic was covered more in the print media and since we had previous very positive experience with researching the press we narrowed our focus accordingly. We used a very detailed and comprehensive database of media outputs produced by the Slovak Press Agency (SITA). A large number of keywords were used – any words, scientific or general, that might have something in common with NBIC technologies, both in Slovak and English because sometimes the English words are used for new concepts in Slovak texts (e.g. ‘smart drugs’ in English, ‘chytré drogy’ – the term ‘smart drugs’ translated into Slovak using the meaning of psychoactive drugs, ‘chytroličky’ – ‘smart drugs’ translated into Slovak using the meaning of pharmaceutical drugs).<sup>10</sup> In total approximately 300 articles were collected. We then looked for the main discourses loosely or more narrowly knitted around the topic of human enhancement. In this article we concentrate on those related to transhuman topics more closely.

## 4 Findings

### 4.1 Human Enhancement in the Media

At the outset it is important to note that the topic of human enhancement has barely been covered in the Slovak media (in comparison to e.g. the British or even Czech media). This can partly be explained by the novelty of the topic, by the general impression that it does not directly concern people’s lives in Slovakia (as compared to the countries from which the scientific breakthroughs are reported – e.g. the USA or China), and by the fact that it seems to be not a present-day issue (but to affect the distant or hypothetical future).

8 TRIANDAFYLLIDOU, A.: *Negotiating Nationhood in a Changing Europe: Views from the Press*. Ceredigion, Wales and Washington, D.C. : Edwin Mellen Press, 2002.

9 See more details in: FAIRCLOUGH, N.: *Critical Discourse Analysis: The Critical Study of Language*. Boston : Addison Wesley, 1995; REISIGL, M., WODAK, R.: *Discourse and Discrimination: Rhetorics of Racism and Antisemitism*, London and New York : Routledge, 2000; ZÁBRODSKÁ, K., PETRJANOŠOVÁ, M.: *Metody diskurzivní analýzy*. In ČERMÁK, I., HYTYCH, R. (eds.): *Kvalitativní analýza textů: čtyři přístupy*. Brno : Masarykova univerzita, 2013, p. 105.

10 For the findings discussed in this article, we used keywords mainly relating to human beings: genetic engineering, human cloning, cyborg, eugenics, Frankenstein, genetic doping, smart drugs, genetic manipulations, human enhancement, transhuman technologies, transhumanism, superhuman, and posthumanism.

A chronological comparison shows a small increase in numbers towards the end of the period investigated. There was only sporadic and isolated coverage on television or radio, whilst the vast majority was found in the print media, and more frequently in weeklies and monthlies (two thirds) than in the dailies (one third). This could suggest a trend where relatively complicated and unknown topics are covered rather in the weeklies and monthlies where articles tend to be longer and the additional space can be used to provide more thorough explanation. The articles were much more commonly found in some print media, e.g. in the magazines *Quark* (monthly), *Profit* (fortnightly) and *Trend* (weekly), and in the daily newspapers *Pravda* and *SME* than in others. Most often the articles in a particular kind of media are produced by the same journalists over a period of several years, mainly by those responsible for science, information technologies, etc.

There were not enough articles for us to identify any clear long-term trend, such as could be e.g. a more frequent simplified approach at the beginning of the investigated time period and a more frequent in-depth approach in the articles five years later, or an initial uncritical welcoming of the opportunities offered by transhuman technologies and a more critical stance later. The most critical article of all those collected (not discussed further in this text) was from the final year of the chosen time period, but it cannot be said that the discourse evolved more towards a critical perspective.

The fact that almost all the articles about human enhancement or about NBIC technologies provided definitions and explanations for a number of terms we interpret as a sign that the topic is both new and rare. It seems that there is an assumption that the reader will not be familiar with the topic but is likely to be interested in it. The most scientific terms were used in the longer texts, typically in interviews with experts – repeatedly with the Slovak futurologist Ivan Klinec, or towards the end of our time-frame with the bioethicist Peter Sýkora, head of the mentioned research project.

The topic, or at least some of the keywords e.g. ‘nanotechnologies’, are evidently sufficiently interesting and in vogue for them to have been referred to in the titles of the texts (to motivate further reading). Sometimes the keyword is used very broadly and the concept does not play any real role in the text (e.g. the title “*The Ancient Romans used nanotechnologies*”<sup>11</sup>). In other cases, the words or phrases are used only as a very general background, e.g. as the introductory sentence to an article about the specific nature of our times and has no real role elsewhere in the text (e.g. the classic introduction “*we live in a century of genetic manipulations...*”).

#### 4.2 Main Discourses around Transhuman Technologies and Human Enhancement

We were able to identify these three main discourses around transhuman technologies and human enhancement and their more specific subvariations:

##### A. Transhuman technologies and the survival of humans as a species

- A1) Transhuman technologies will help the human species to survive (e.g. by solving current environmental problems)
- A2) Transhuman technologies will help humans survive, but only a handful of chosen ones
- A3) Transhuman technologies may cause the extinction of the human species;

##### B. Transhuman technologies and superhumans

- B1) Transhumanism will allow for human enhancement in all areas and create superhumans
- B2) Technologically enhanced human, Primo Transhuman;

##### C. Transhuman technologies and changes to basic human nature (with consequences for ethics, morals and religions)

- C1) We must ascertain the negative effects of all technologies, including transhuman ones
- C2) Transhumanism is changing the fundamental nature of human beings (and may be a substantial threat)

11 PROKOPČÁK, T.: *Antickí Rimania používali nanotechnológiu*. Released 2<sup>nd</sup> September 2013. [online]. [2014-10-20]. Available at: <<http://tech.sme.sk/c/6920533/anticki-rimania-pouzivali-nanotechnologie.html>>.

C3) Transhuman technologies must be strictly regulated

C4) Transhuman technologies should neither be prohibited nor strictly regulated.

In this article we concentrate on the closely intertwined discourses A and B in more detail. Discourse C is both more independent and so extensive that it makes more sense to elaborate on it in a separate article.<sup>12</sup>

Our findings do not indicate that certain kinds of media prefer some discourses. Rather, we found that sometimes the same article would refer to several discourses, even if they were sometimes quite contradictory, for example in an attempt to explain positions for and against transhumanism in a neutral fashion.<sup>13</sup>

Since the longest and most in-depth texts are, as a rule, interviews (with the Slovak futurologist Ivan Klinec or in the last year of research with the bioethicist Peter Sýkora), journalists tend to skim over a lot of topics, touching on them only briefly, often in the context of rather fantastical future technological developments. The overall tone is optimistic, techno-optimistic and above all often one-sided. Thus the readers learn that there is a real possibility that cyborgs will be manufactured in the near future, but the risks and ethical complications are not mentioned in the text and readers learn about these rather from sci-fi films and books. On the other hand, we did not find any articles that were one-sidedly techno-pessimistic.

#### A Transhuman Technologies and the Survival of Humans as a Species

##### A1) Transhuman Technologies Will Help the Human Species to Survive (e.g. by Solving Current Environmental Problems)

In the framework of this discourse specific models of human survival are mainly based around the logic that transhuman technologies will first of all enable human enhancement to take place and then these enhanced humans will somehow solve the crisis. An example of this kind of argumentation is used in the following extract from an interview with Ivan Klinec, introduced as the “*boss of Slovak futurologists*”. Thus, despite this title sounding very unofficial, the author defines Klinec as an authority or expert on questions concerning future trends. The interview starts with prognoses on ways of life in 2060, goes through catastrophic scenarios about the end of civilisation and the role of futurology in creating any positive potential future scenarios, until it comes to “*modern technologies*”, which are described as “*a chance to overcome the new crises*”.

Extract No. 1: ***There will come a time when humans are transformed using modern technologies***  
 (...) we can see that the climate is changing and in the long-term the question is not what is the cause of these changes but how can we stop the destruction? According to several futurologists, e.g. Dennis Meadows, we have already crossed a line and there is no way of stopping the change. But perhaps we can still decrease it and also adapt to the new environment so we can survive in it. On this basis E. Kahn created long-term scenarios for the next two hundred years. Among them is a green alternative that sees something like a “green technocracy” emerging on Earth that will guide human beings. Another possibility is expansion and the colonisation of space. But that will not solve this situation in the near future. We can't just pick up our things like that and move to other planets.

**-So what can help us to survive?**

**-So-called transhuman technologies.** Transhumanism is a part of futurology, a futurologist-philosophical concept that includes all technologies like nanotechnologies, biotechnologies, virtual reality, super-intelligence, genetics or cloning technologies. This will be a big wave that will probably come right after the end of the crisis. There will come a time when humans are transformed using modern technologies. Advanced, widely accessible technologies will help to eliminate aging and will expand people's intellectual, physical and psychological capa-

12 PETRJÁNOŠOVÁ, M.: *Transhuman Technologies and Consequences for Ethics, Morals and Religions*. In press.

13 The best example for that is an older article – BELLA, T.: *Čoskoro v obchodoch: Človek, verzia 2.0*. Released 28<sup>th</sup> June 2006. [online]. [2014-10-20]. Available at: <<http://tech.sme.sk/c/2783086/coskoro-v-obchodoch-clovek-verzia-20.html>>.

bilities. In this coming age of collective wisdom we will have a chance to overcome the new crises". [...]

Source: *Futuurology is not just a crystal ball reading*, 4<sup>th</sup> September 2010, monthly Profit<sup>14</sup> (translated by the author of this article as are all the other extracts)

Generally the catch-all phrase used most often in the press was *NBIC technologies*, but in this text the more specific terms of *transhuman technologies* and *transhumanism* are used in a similar sense. As mentioned before, transhumanism is most often defined explicitly, as if the author was seeking to bring his/her readers something very new and not yet widely-known. Here, transhuman technologies are understood as something purely positive, since they are described as *advanced* and *widely accessible* and their role is to "*help to eliminate aging and will help expand people's intellectual, physical and psychological capabilities*" that will then be able to solve environmental problems and any other problems threatening humankind. In this positive light the futurologist does not introduce any of the potential moral or other problems that other discourses sometimes concentrate on (see discourse C), he only relatively briefly defines the enormous role transhuman technologies will play in human survival.

It is also interesting to see how the author constructs the time-frame when he says that they will be a realistic solution to problems humans will face in the "*foreseeable future*" and not simply in the far off future, unlike e.g. the colonisation of space.

Among other things he underlines that these technologies will be "*widely accessible*", which corresponds to attitudes held by advocates of "democratic transhumanism" – new technologies have great potential to improve human lives, but it is extremely important that they are governed democratically and made accessible to all, not just to some, e.g. the rich.<sup>15</sup> Democratic transhumanism is sometimes seen as the third way, a compromise between the techno-pessimism that would preventively prohibit all emergent technologies and the enthusiastic techno-optimism that would instead allow them all to exist without regulation.<sup>16</sup>

## A2) Transhuman Technologies Will Help Humans Survive, but Only a Handful of Chosen Ones

A subvariation of this topic is such a thematization of transhuman and sometimes all NBIC technologies where they are understood as being capable of solving human problems (especially overpopulation), as being truly efficient and accessible, but intended only for a chosen section of the population while the rest would simply be sacrificed. This appears for example in an article in the popular weekly *Život [Life]* about a (then) new book by Dan Brown called *Inferno*. Less than one tenth of the article deals with transhumanism (as defined by the article), while the rest is about the book and upcoming film, but the short description is shocking enough for readers to remember:

### Extract No. 2: Transhumanism shocks

(...) *Of course, the century-old quote [from Dante's Hell] has been updated for our time and reflects contemporary problems. It introduces a term that is shocking at first – transhumanism. (...) There are too many of us; population growth has created an enormous threat. The basis of this new philosophy is, put simply, that human kind has to sacrifice part of the population in order to survive. To achieve this, genetic manipulation and bioterrorism will be used. A truly weighty topic for a fictional book!*

Source: *Dan Brown scores again: His new book is an instant bestseller!*, 21<sup>st</sup> August 2013, weekly *Život*<sup>17</sup>

The article does not openly say that the use of *genetic manipulation and bioterrorism to sacrifice part of the population* is an exhaustive definition of transhumanism. On the contrary, the author introduces this

14 JURINA, L.: *Futurológia nie je len veštenie z gule*. Released 4<sup>th</sup> September 2010. [online]. [2014-10-20]. Available at: <<http://profit.etrend.sk/dennik/futurológia-nie-je-len-vestenie-z-gule.html>>.

15 HUGHES, J.: *Citizen Cyborg: Why Democratic Societies Must Respond To The Redesigned Human Of The Future*. New York: BasicBooks, 2004.

16 BOSTROM, N.: *A History of Transhumanist Thought*. In *Journal of Evolution and Technology*, 2005, Vol. 14, No. 1, p. 1.

17 MACHÁČKOVÁ, M.: *Dan Brown opäť boduje: Nový román sa okamžite stal bestsellerom!* Released 21<sup>st</sup> August 2013. [online]. [2014-10-20]. Available at: <<http://zivot.cas.sk/clanok/14492/dan-brown-opat-boduje-novy-roman-sa-okamzite-stal-bestsellerom>>.

explanation carefully with the words "*put simply*", but from the description of the book it is clear that this is one of the basic ideas of "*this new philosophy*". Dan Brown's *Inferno* published in 2013, as the "*primary text*" the article is referring to, is based on a topic quite common in many conspiracy theories – the misuse of the latest technologies against an unsuspecting population. These theories play on fears of the possible misuse of technological advances. This fear is an important element of unequivocal attitudes against transhumanism, as is shown in the third subvariation of this discourse.

## A3) Transhuman Technologies May Cause the Extinction of the Human Species

An example of an article referencing this discourse is one that cites a well-known statement by Slovenian philosopher Slavoj Žižek<sup>18</sup> about the "*four forms of the apocalypticism today: Christian fundamentalism, new age spiritualism, techno-digital posthumanism and secular ecologism*" (*The most dangerous philosopher in the West*).<sup>19</sup> The cited philosopher is not concerned specifically with transhuman technologies, but his term "*techno-digital posthumanism*" clearly embraces them. The author of the article on the other hand does not elaborate on Žižek's statement in any detail and readers do not learn that the philosopher was writing about the end of humankind as we know it today and not about its physical extinction. Žižek's own thematization fits better under discourse B – he thinks that posthumanism is dangerous because of its potential to change humans into an evolutionary different species, a vision he does not welcome.

## B Transhuman Technologies and Superhumans

### B1) Transhumanism Will Enable Human Enhancement in All Areas and Create Superhumans

This discourse is a techno-optimistic variation and is similar in part to discourse A1 (Transhuman technologies will help the human species to survive). But discourse A1 highlights other aspects – the fate of humanity as a whole and the menace of environmental and other problems that humans will be able to solve because they themselves will have been enhanced/augmented by transhuman technologies. In this discourse the emphasis is not placed on the problems to be solved but simply on the benefits of transhuman technologies and the broadening of all possible capabilities (intellectual, physical and psychological). It does not operate on the level of humankind but rather on the level of the individual. The argumentation is often built around the concept of "*overcoming limits*". This concept evokes arbitrary given limits (by someone or something) that humans no longer have to accept but can overcome, using technological advances, and then become free. A special subtopic is immortality (especially in the version of "uploading" the human mind onto a computer, either in a robotic body or on the internet) or at least a significant prolongation of the human life span – initial estimates are often of 150 years. In this subvariation, there is no discussion of any potential ethical problems that might be associated with such enhancements,<sup>20</sup> for example whether the enhancements would be accessible to all or just to the rich or to a differently defined subgroup; just the potential gains are emphasised. As an example we can cite an extract from another interview, again with the most cited authority on such questions, the futurologist Ivan Klinec.

### Extract No. 3: Men could become practically immortal

(...) *\* The 19<sup>th</sup> century was the century of new discoveries. The 20<sup>th</sup> century was about refining them. What will the 21<sup>st</sup> century be like in terms of technologies?*

*\* There is talk of a century of transhuman technologies. Transhumanism is a futurological concept, including all the new technologies like nanotechnologies, biotechnologies, gene technologies, cloning*

18 ŽIŽEK, S.: *First as Tragedy, Then as Farce*. New York, London: Verso Books, 2009.

19 PEHE, J.: *Najnebezpečnejší filozof Západu*. Released 17<sup>th</sup> July 2011. [online]. [2014-10-20]. Available at: <<http://www.tyzden.sk/casopis/9305/najnebezpečnejši-filozof-zapadu/>>.

20 For a contrary view, see VIŠŇOVSKÝ, E.: *Homo Biotechnologicus*. In *Human Affairs: Postdisciplinary Social Sciences & Humanities Quarterly*, 2015, Vol. 25, No. 2, p. 230.

*technologies, and others. It is about the enhancement of human beings using modern technologies and the potential to overcome their current physical limitations.*

\*What “superhuman” capabilities, impossible today, can you imagine?

\*Even before the year 2030 we will most likely be able to “download” our brain onto a computer. This is what the transhumanist concept “uploading” refers to.

\*That would mean...

\*Men could become practically immortal. There is an Immortality Institute [in English in original], where they deal with such issues quite seriously. Initially, they reckon a human life will last for 150 years and more. (...)

Source: *Teleporting into the future*, 29<sup>th</sup> November 2010, monthly Brejk<sup>21</sup>

In this article, we can again see that the terminology is defined as if the author was counting on the term transhumanism being unfamiliar to his readers. It seems that this unfamiliarity with transhumanism has not changed over time – the authors of texts a few years older than this one, as well as more recent ones still feel the need to define the term clearly. The authority in the field cited here – a scientist, a futurologist – defines transhumanism in terms of its goal: “it is about the enhancement of human beings using modern technologies and the potential to overcome their current physical limitations”. The title of the article, “*Teleporting into the future*”, suggests that the themes mentioned in it are not issues of today but are rather an excursion into an unspecified future; nonetheless, the responses given by the futurologist are often formulated in the present tense (they deal with such issues, they reckon a human life will last 150 years, transhumanism is about). When he speaks about the future explicitly, he refers not to the distant future but just twenty years on (from the time of the article) around 2030. The journalist relies on the futurologist’s authority and the futurologist, when speaking about the most controversial subject in the article – immortality (it is still easier to imagine a robotic arm or an artificial eye than human immortality) – falls back on the authority of an external (semi-research) institution, *the Immortality Institute*. This mention of a (more or less)<sup>22</sup> scientific institution that deals with the subject of immortality gives it the ‘stamp of approval’ of science and seriousness.

## B2) Technologically Enhanced Human, Primo Transhuman

This discursive subvariation is concerned specifically with the idea of a technologically enhanced human, including his/her features, traits and capabilities, and with the way in which this could be achieved, and introduces a completely new term – *Primo Transhuman*. Again, this is of the techno-optimistic variety. The potential of the technologies is highlighted, rather than any ethical problems, e.g. the possible conflict (between unenhanced and enhanced humans) that is a common theme in deeper philosophical-ethical approaches to this subject.<sup>23</sup> But (in Slovakia and at this time) these remain on the level of scientific discourse and do not penetrate into popularised media discourses. The following extract from another interview with the futurologist, Ivan Klinec, is an example of the Primo Transhuman discourse. As can be seen, the discourses are not bound to a single author or expert, but people (cited experts as well as journalists) use them to make their point, to highlight the aspect they wish and to ‘background’ what they do not want to call attention to. As we mentioned before, within our time-frame (2009-2013), the most cited authority on this new subject – everything related to transhumanism, NBIC technologies and human enhancement – is Ivan Klinec, and it is often he who introduces the Slovak readership/audience to new discourses and topics. Many themes are raised but then mentioned only briefly in the context of these not very serious, superficial articles. This is also the case with this extract. In the magazine interview that fills three large pages of print and which skips from topic to topic, the idea of Primo Transhuman and other “new people” is introduced via four short questions and answers. Immediately before this short section the journalist and the futurologist discuss the prognoses

21 HORVÁTH, A., KLINEC, I.: *Teleportom do budúcnosti*. In Brejk: časopis nielen pre mužov, 2010, Vol. 8, No. 12, p. 26.

22 *The Immortality Institute* is clearly much less of a scientific institution than e.g. a good university, but the name sounds good and could be convincing enough for the general reader who does not check online immediately.

23 See e.g. WIKLER, D.: Paternalism in the Age of Cognitive Enhancement: Do Civil Liberties Presuppose Roughly Equal Mental Ability? In SAVULESCU, J., BOSTROM, N. (eds.): *Human Enhancement*. Oxford: Oxford University Press, 2009, p. 341.

for economic crises associated with enormous population movements, and then immediately switch to the possible forthcoming end of the world in 2012 (the article is from the end of 2011):

Extract No. 4: **Primo Posthuman**

(...)\*One hot topic concerns humanoids. In a few years, will there be **technologically enhanced people** among us?

\*For example Chair of the World Transhuman Association Humanity, futurologist and artist Natasha Vita More has done a great deal of work on such scenarios. She was the one who thought up the concept and name of a technologically enhanced person: **Primo Posthuman**.

\*Which human modifications will come first?

\*The first ones are mobile phones, iPhones, tablets... This is the age of connecting human beings to technology and extending their capacities.

\*And what about human beings made of other materials indistinguishable from real people? Is that a real possibility, and could you at least roughly guess when?

\*That will be a reality in the relatively near future. But there are institutional obstacles. It is very difficult to do something like that with the old fashioned health-care system we have here in Slovakia and in many other countries.

\*Development of robots is alive and is coming forth especially in Asia. But that will probably be slowed down by the economic crisis. Is there any chance it will speed up?

\*Robot development will be speeded up by the crisis and will speed up even more after the crisis. At this point, according to recent estimates, there are more than eight and a half million functioning robots. More than there are inhabitants of Slovakia (...)

Source: *We won't be the last civilisation*, 21<sup>st</sup> November 2011, monthly Brejk<sup>24</sup>

In the introductory question of this extract, technologically enhanced people are categorised as “humanoids” which sounds a little bit like a term from a work of science fiction, from the books of A.C. Clarke or I. Asimov. But these authors are in fact renowned futurologist visionaries, especially on the subject of the human future, intelligent robots and potential conflicts between robots and people. In their books, robots are depicted as sometimes being indistinguishable from people in looks, but as still having mechanical parts, and as being a different species from people. The only human or superhuman aspect is their intelligence. At the time when these authors were writing, almost nobody was thinking about “connecting human beings to technology”, cyborgs or chips, etc., concepts that are so commonplace and real today.

Again, locating technologically enhanced people in time and space is very interesting. The futurologist places them in the immediate future (*in a few years, in the relatively near future*) and also his suggestions about what is already happening now are troubling. For example, he answers the question about which modification *will come first* (in the future) using the present tense, saying that mobile phones, iPhones and tablets (already a common part of the everyday lives of many people) *are* the first modification (now). But in terms of space, he evokes a much greater distance both in a direct and indirect sense. The futurologist Natasha Vita More has a name that tells readers she is from a far-away country (and it also sounds like an adopted name); when speaking about the development of robots he mentions specifically Asia; and when discussing the manufacture of “*human beings made of other materials, indistinguishable from real people*” (we can guess he means humanoid robots), the futurologist clearly says that this is not possible in a country with such an old fashioned health-care system as Slovakia.

There is an interesting moment when the journalist asks him about these new beings, clearly of a manufactured origin, but calls them *people*, and introduces the subject of distinguishing them from *real people*. When something is not real, it is usually only a cheap simulacrum, often meant to deceive and to stand in for the real substance. This choice of linguistic means raises questions about the value of these “manufactured non-real people”.

24 POTANČOK, A., RECKÝ, J.: *Nebudeme posledná civilizácia*. Released 21<sup>st</sup> November 2011. [online]. [2014-10-20]. Available at: <<http://www.akademickyrepozitar.sk/sk/repozitar/nebudeme-posledna-civilizacia.pdf>>.

In fact, in this short extract there are two different intertwined subjects, two different kinds of origin of these new beings: the subject of the new people who would originate through the technological enhancement of people as we know them today (and who will have a human basis) and that of manufactured people, who will probably be something like intelligent robots (who will not have a human basis). Of course, with scientific development other combinations, imaginable today only as part of sci-fi scenarios, will become possible. Concurrently, in scientific writing today there is frequent mention of two different ways of developing super-intelligence – either of it being developed by scientists building a super-intelligent machine (with a consciousness that is radically different from the human one), or of the successful ‘upload’ of the human mind and consciousness onto a computer or onto the internet, where stable consciousness of the human kind will be re-created only with incredibly broadened possibilities – the speed of processing information, accessibility of information, etc. A common anxiety (thematized in many films and books) is that consciousness of this nature will evolve very rapidly, changing itself and losing its original human nature.

## Conclusion

In this article we have looked at the subject of human enhancement and transhuman technologies in media discourses in Slovakia. We described two closely intertwined of the three discourses found in the media: A) the discourse about transhuman technologies and the survival of humans as a species and B) the discourse about how (exactly) transhuman technologies will turn humans into superhumans. The third discourse (C) around the topic of how transhuman technologies change the very essence of human nature that raises numerous moral, ethical and religious dilemmas is more independent from the first two and is also so extensive that it makes more sense to elaborate on it in a separate article.<sup>25</sup>

We included all the print media intended for the general public in our analysis, including both ‘serious’ and tabloid media, as well as general and ‘special’ media (e.g. aimed at those with an interest in business or politics) because we were interested in the whole spectrum of potentially different ‘renderings’ of the topic for all possible audiences. However, the differences found were smaller than expected. We might say that we found no surprises – for example, the most simplified presentation of transhumanism was found, as one might expect, in the popular weekly *Život*, which is aimed at a broad audience, rather than in a magazine for science enthusiasts. Equally, the article that discusses transhumanism in light of the views of Slavoj Žižek, a philosopher who often comments on the contemporary society, was published in the weekly *.tyždeň*, which profiles itself as a current affairs magazine, and not in the glossy men’s magazine. But the overall impact of the medium was smaller than we thought – our findings do not indicate that certain kinds of media (according to their ‘seriousness’ or preferred themes) favour specific renderings of the topic of transhumanism, for example well-founded versus oversimplified, or one-sided versus a balanced discussion of the benefits and risks.

In conclusion we can say that the subject of human enhancement and transhuman technologies is not as common in the Slovak media as its currency would suggest. Moreover, there is a lack of any critical discussion from different morally anchored perspectives that would provide specific answers to dilemmas around prohibiting/regulating some technologies, at the national or international level, which are already partly relevant now and may become extremely relevant in the near future.

Finally, it is important to state explicitly that these insights and the associated discussion are provided not from the perspective of a media studies expert, but from a social-psychologist. Although more familiar with the study of people than texts we were nevertheless fascinated by the possibilities (and limits) these media texts offer their readers for thinking about the future of humankind in relation to new technological developments.

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25 PETRJANOŠOVÁ, M.: *Transhuman Technologies and Consequences for Ethics, Morals and Religions*. In press.

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