

TRANS- HUMANITIES

Title : Posthumans on YouTube

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Source : *Trans-Humanities*, Vol. 6 No. 1 (2013), pp. 33–62

Published by : Ewha Womans University Press

URL : <http://eiheng.ewha.ac.kr/page.asp?pageid=book10&pagenum=060600>

Online ISSN : 2383-9899

All articles in *Trans-Humanities* are linked to the Homepage of KCI and
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Posthumans on YouTube

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I. Introduction

Media and art forms are constantly shaping and changing ideas and ideals of human nature and its possible transformations. In doing this, they are intricately intertwined with philosophical discourses, scientific research, technological developments, and broader social changes. More specifically, ideas of a trans- or posthuman future are surfacing in a wide range of artworks and media productions: in print and broadcast journalism, magazines, scientific journals, fashion photos, and textbooks; in novels like Bruce Sterling's *Schismatrix* (1985), movies like Andrew Niccol's *Gattaca* (1997), comics like Jonathan Hickman's and J.M. Ringuet's *Transhuman* (2008), body paintings like Michael Rosner's *Eye Level Studio* (2010), music albums like Believer's *Transhuman* (2011), computer graphics like Natasha Vita-More's *PrimoPosthuman* (2006), installations like Patricia Piccini's *Still Life with Stem Cells* (2002), performances like Stelarc's *Third Hand* (1981-1994), video art like Matthew Barney's *Cremaster Cycle* (1994-2002), video games like *Deus Ex-Human Revolution* (2011), or exhibitions like *TransLife* (2011) in Beijing.

Most of those artworks and media texts resurface in some way or the other on the internet. However, the web has also generated its own forms and forums of communication, some of which are not only immensely far-reaching and influential but also fascinating in their potentials of accessibility, creativity, interaction, participation, and social connection: blogs, vlogs, institutional websites, individual homepages, online journals, encyclopedias, hypertext narratives, interactive comics, social networks, platforms for texts, photos, videos, games, etc. The precise description and cultural analysis of those more recent media forms on the internet has only just begun. In this paper, I will try to contribute to that task by looking at the audiovisual and verbal discourses about transhumanism and posthumanist existence which are spreading on YouTube, the biggest and most influential video platform on the internet.

The aim is a typological one: to develop a first, provisional survey of YouTube's most significant and telling discourses about enhancing or improving the human race.

I would like to plausibilize the following theses: (I) As YouTube consists predominantly of user-generated content, it is an important source for recognizing public opinions, hopes and fears about transhumanism, (II) Looking at YouTube can show us how not only scholars and artists, but also the so-called 'ordinary' people think and feel about the opportunities, risks, and ethical responsibilities connected to human enhancement, transhumanism, and posthumanism. In democratic societies, that may give us an idea about the legitimacy and viability of political decisions and policies concerning those kinds of questions. (III) Moreover, YouTube is an important cultural influence as well. It can be seen as a forum or, alternatively, as a battlefield where at least four kinds of discourses concerning transhumanism intermesh and collide: non-fictional discourses (1) about emerging technologies in human therapy and enhancement, as well as (2) about the transhumanist movement, (3) fictional discourses about posthuman futures, and (4) reflective, meta-fictional discourses about media representations of posthumanity.

I will proceed in three steps: After some general considerations concerning representations of posthumans in popular culture, I turn to the specifics of YouTube as a new media form. Finally, I will briefly describe several examples for the kinds of discourses just mentioned and draw some provisional conclusions.

II. Transhumanism and Posthumans in Popular Culture

The term 'posthuman' is tricky and has various meanings. If I am speaking of 'posthumans' here, I am not referring to the discourse of posthumanist philosophy and cultural criticism that tries to overcome traditional humanist conceptions of humans "as autonomous beings exercising their will through individual agency and choice" (Hayles XXX), or as beings with a stable human nature who are strictly separable from animals or intelligent machines. In this view, "new models of subjectivity emerging from such fields as cognitive science and artificial life imply that even a biologically unaltered *Homo sapiens* counts as posthuman" (Hayles 4).

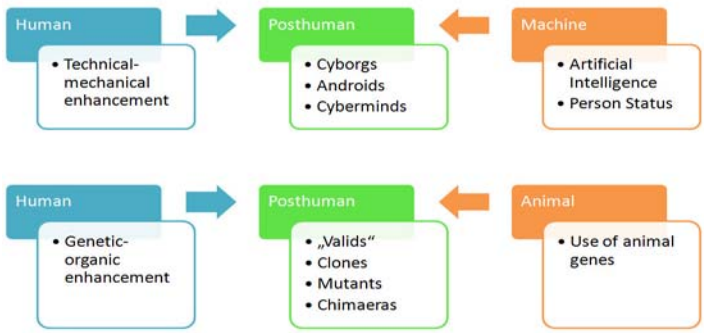
In contrast to that, I am referring to the discourse of transhumanism that builds upon and tries to extend humanist conceptions in aiming at a more-than-human condition. The main contributors to this discourse are scholars or business(women) like Nick Bostrom, Ray Kurzweil, Kevin Warwick, Max More, Natasha Vita-More, or Aubrey de Grey. The website of Humanity +, the former World Transhumanist Association, defines transhumanism as “(1) The 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” (Humanity +). Thus, transhumanism can be understood as a quite influential movement with the ambition to fundamentally change human nature with the help of converging technologies like nanotechnology, biotechnology, robotics, and information and communications technologies (NBRIC). The aspired changes concern the extension of the human life span, the abolishment of illnesses and human limitations, and the improvement of physical, mental and social capabilities and performance (e.g., Bostrom). In the long run, human beings are supposed to evolve into a higher life form, into posthumans with a better quality of life or at least with the ability to survive in future competitions with intelligent machines (Kurzweil 286-305; bigthink). To achieve this aim, all available technologies and devices for human enhancement are to be used, ranging from food additives to gene engineering.

Critics, however, see transhumanism and technologies of human enhancement as deeply entangled in ethical and practical problems, amongst other things, a lacking appreciation of the current life and body, a fundamental change of moral self-understanding, a loss of authenticity and depth of character, conflicts with human dignity and human nature, the possible loss of human identity and autonomy, problematic effects on bodily or mental health, negative social or ecological consequences, a divided society, and scientific experiments catastrophically going awry (cf. Habermas; President’s Council). Francis Fukuyama famously considered transhumanism the world’s most dangerous idea (Fukuyama).

In society and politics, the technologies for human enhancement are controversially discussed, and since they are very different, those discussions also take different courses and result in different juridical and political decisions, for instance about drugs for cognitive and emotional enhancement,

machines for bodily enhancement, or human cloning and genetic engineering. In those discussions, most transhumanists take a radical pro-attitude that generally favors technologies of human enhancement, even if some transhumanists also reflect on “the ethical matters involved in developing and using such technologies” (Humanity +). On the other hand, transhumanism is countered by equally radical positions battling against enhancement. While most discourse positions are more nuanced and range between these poles, I will focus on the extremes - not only for the sake of brevity and clarity, but also because the transhumanist positions and their counterparts are particularly salient in the cultural imaginary and in public fantasies of the human future.

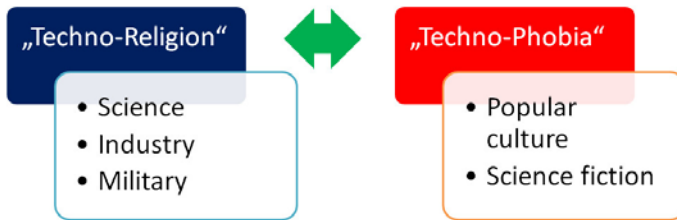
For if technologies of human enhancement are seen positively or negatively, they *do* already change collective images of humanity. First, they make humans appear as technologically transformable beings rather than as creatures of deities or natural evolution. Second, they establish ideals of perfection that make current humans appear more deficient. And third, they bring forward fantasies about a possible posthuman future. Imaginations about that future mostly follow two paths: Either a technical-mechanical transformation of human beings into cyborgs, a hybridization with technical devices and machines. Or an organical transformation by way of chemical and genetic manipulation, often drawing on animal resources. Both paths towards the posthuman manifest themselves in well-known types of fictional characters in popular culture, for instance, cyborgs, androids, and cyberminds on the one hand; mutants, clones, chimeras, or genetically enhanced people on the other. This is epitomized already 1985 in Bruce Sterling’s famous science-fiction novel *Schismatrix* telling about genetically enhanced “Shapers” confronting technically enhanced “Mechas.”



[Caption Image 1: Possible Paths to Posthumanity and Popular Figures of Imagination]

Scientific research, public discourse, and popular fiction are deeply entangled in collective imaginations. Fictions and popular narratives can be understood as preconditions of and elements in the production of facts (Appel; Van Dijck). They provide images, characters, stories, and case studies that influence scientists and the public. Fictions supply science with a casuistics, with models and thought-experiments. They inspire research programs and scientific theories, but also cause biases and stereotypes during research.

In that context, some scholars see popular fiction as a critical counterbalance to euphoric techno-fantasies heralded by natural sciences, corporations, and the military (e.g., Dinello; Image 2). The science fiction genre transforms arguments against transhumanism into effective, dystopic narratives. Narrative needs spectacle and conflict, and therefore, humanoid machines, mutants or enhanced humans abound and usually lead to severe dangers or ethical problems, as in films like *Gattaca*, *Terminator*, or *Splice*.



[Caption Image 2: Popular Culture as Critical Counterbalance to “Techno-Religion” according to Dinello]

So on the one hand, there is an omnipresence of dystopical stories and figures in popular culture (e.g., image 3 and 4). On the other hand, stories about emotional androids, sexy cyborgs or mighty mutants have been increasing for years in comics, films, and other popular productions like *AI—Artificial Intelligence*, *Ghost in the Shell* or *X-Men* (e.g., images 5 and 6). So, in the cultural imaginary, posthuman figures seem to be positively re-valued in the last years.



[Caption Images 3 & 4: Dystopical Fictions of Posthumans in *Splice* (2009, teaser poster, © Gaumont) and *Gattaca* (1997, French DVD cover, © Columbia/ Sony Pictures Entertainment)]



[Caption Images 5 & 6: Emotional Androids in *AI—Artificial Intelligence* (2001, film poster, © Warner) and Sexy Cyborgs in *Ghost in the Shell* (1995, Spanish DVD cover, © Bandai Visual Company/ Kodansha/ Production IG)]

III. YouTube: New Possibilities, New Forms, New Challenges for Research

On the background of those kinds of discourses in art and popular culture, recent changes of the media system come into play, which predominantly involve digitization and computer networks. For some years now, media users

have been enabled to produce digital videos in simple and cheap ways, and then to spread and discuss those videos on the internet. The website YouTube has proven the globally most successful and influential video platform to date. It fulfills a broad range of functions as cultural forum, narrative machine, music box, media archive, social network, rhetorical pulpit, political instrument, means of self-expression, advertising vehicle, and more (cf. Burgess and Green; Kavoori; Strangelove; Snickars and Vonderau). In combination with the easy accessibility and global reach of the video platform, that means also that very different and conflicting images of human nature clash or converge on YouTube. In that respect, the platform may be seen as a field of encounter and exchange or rather as a battlefield of opinions. For instance, Jean Burgess and Joshua Green state that “the ordinary activities of its users, in theory, could constitute practices of cultural citizenship; if they encounter one another under the right conditions, the website is an enabler of encounters with cultural differences and the development of political ‘listening’ across belief systems and identities” (Burgess and Green 77). On the other hand, Michael Strangelove, citing Mark Poster, refers to YouTube as “a battleground over the nature of human identity” (qtd. in Strangelove 16).

To better understand the public negotiation of posthumanity on YouTube, it is helpful to remind YouTube’s ever changing but still specific characteristics as a media form. Founded in 2005, YouTube is owned by Google since 2006. Its business model is based on different forms of advertizing by way of banners, promoted videos, in-video ads, etc. (Specht and Theobald). Today, the US video platform is available globally in 43 countries and across 60 languages, 70% of its traffic comes from outside the US (“Statistics”), while it is not very successful in a few countries or blocked in others like China.

It is not easy to get an objective account of the number of videos available on YouTube, but at the moment of writing this (October 2012), starting a YouTube search for “*” (any arbitrary sign) in Germany yields the result of about 628 million videos. By its own account in October 2012, over 800 million unique users visit YouTube each month, over 4 billion hours of video are watched each month, 72 hours of video are uploaded to YouTube every minute, and in 2011, it had more than 1 trillion views “or around 140 views for every person on Earth” (“Statistics”). Moreover, using YouTube does not only mean viewing videos but also using its social media functions. Its statistics page boasts that “500 years of YouTube video are watched every day on Facebook, and over 700 YouTube videos are shared on Twitter each minute;

100 million people take a social action on YouTube (likes, shares, comments, etc.) every week” and that “more than 50% of videos on YouTube have been rated or include comments from the community” (“Statistics”). All those gigantic numbers are still rising. YouTube’s audiovisual content by far surpasses the whole global production of feature films and television programs.

Moreover, most online videos diverge significantly from mass media productions. In contrast to film or television, they are available anytime, anywhere, and they are not filtered by professional gatekeepers (e.g., journalists), but only according to criteria of copyright, youth protection, personal rights, and specific censorship in some countries. According to a study from 2007, most of the videos are created by individual users, some by institutions, but many of the most viewed videos also by mass media professionals (Burgess and Green 38-47). The videos have an average length of only 3 to 6 minutes, but there are also lots of longer productions.



[Image 7]¹

1. All the YouTube images in this paper were captured by the author. The elements of YouTube’s watch page are arranged as follows: search functions and link to user’s own channel on the top, player with information about the video source, participatory functions and video statistics, commentaries on the left and promoted and related videos on the right.

Most importantly, YouTube videos are part of a web structure that enables and invites users to participate. Like any website, YouTube consists of a system of different kinds of webpages linked with each other: a homepage, a search results page, the channel pages, and most importantly the watch pages. The basic functional structure of YouTube is implemented in the architecture of the watch page (image 7, cf. also Kavoori 5):

- The main position and semantic centre is taken by a player showing a certain video setting the main content of the page,
- One step below is a bar with information and statistics about the video,
- Two steps below is an area with several functions for participation, some of which need only low effort by the users (liking, recommending and sharing the central video), while others presuppose some more activity (commenting or replying with own videos),
- On the right, there is a list of other videos with a content that is algorithmically related to the main video by tags, keywords or usernames. This list of “related videos” establishes a field of discourse based on the central video and invites “digital flow” (Kavoori 7),
- Another possibility for the users to look further is the menu on the top of the page with functions for searching as well as for accessing the user’s own YouTube channel,
- Finally, the page and the videos involve different forms of advertizing, for instance banners, overlays, or pre-roll videos.

Therefore, the basic structure of YouTube is thus: videos + reply videos + commentaries + evaluations + statistics + advertising + related videos + search engine. This rather complex structure, its nonlinearity and hypertextuality, the huge amount of available videos, the personalization, localization, and temporal dynamics of search results, and further characteristics pose difficult methodological questions for anyone doing research on YouTube or similar websites (cf. the contributions in Welker and Wünsch).

I will focus on the videos and commentaries here, but even then the question is how to identify the most relevant discourses about transhumanism and posthumans. After all, in YouTube, you will find nearly anything. If you look for relevant keywords like “posthuman,” “transhumanism,” “human enhancement,” or “cyborg,” you get thousands of results for each of them.

According to social scientific criteria of objectivity, reliability, and validity, it would be necessary to develop a codebook, to de-personalize your search and to document it with screenshots, to download huge samples of videos, commentaries, and metadata, and to use specific computer programs for the automated analysis of the videos and commentaries. All of that takes a lot of time and effort, and at the moment, I was only able to proceed according to the more explorative and casuistic approach common in the humanities. I developed a rough conceptual grid and used it in combing through YouTube's own lists of popularity rankings (most viewed, discussed, liked, responded videos), looking for recurring videos according to the criteria of relevance and popularity in those different respects. Moreover, I tried to consider also the number of similar videos (even if they were not viewed very often) and the differences between relevant videos. By way of that I tried to identify exemplary videos that were as informative and different as possible concerning a range of criteria: their attitude towards transhumanism and ideas of posthumanity (positive, negative, and neutral); their sources (individuals, corporations, associations, public institutions); their goals (self-expression, persuasion, art, entertainment, etc.); their belonging to specific spaces of discourse (private/public, scientific/commercial, etc.); their narrative, rhetorical, and aesthetic forms; and the numbers and kinds of their commentaries. By way of that, I was able to distinguish between several types of videos that belong to at least four different discourses about transhumanism:

1. Emerging technologies of therapy and enhancement in recent scientific research,
2. The clash between utopists and dystopists concerning transhumanism,
3. New kinds of fictional productions featuring posthumans,
4. And reflections of YouTube's own as well as traditional mass-media fictions.

In the following, I point out some general structures of these discourses and their characteristic video types and briefly present several examples for them. The screenshots date from March 22nd, 2012; the videos may have been changed or deleted, and their numbers of views and commentaries will be different when you will be reading this paper. So, my provisional taxonomy cannot claim completeness or timeless validity but it hopefully serves as a useful

starting point for further research.

1) First Discourse: Emerging Technologies of Therapy and Enhancement

The first discourse anchors transhumanism in present-day reality. It consists of representations of and concrete statements about new, trend-setting technologies serving the therapy of illnesses or the compensation of disabilities, on the one hand, and the enhancement of human capacities and performance, on the other hand. In that discourse, three types of videos are most frequent and popular:

1. Lectures and interviews with experts in science and technology
2. Reports of personal experiences with therapeutic technologies
3. Commercials and PR for military enhancement technologies

The second and third types of videos are watched much more often, and I present an example for each of them.



The image shows a YouTube video player interface. The video title is "29 years old and hearing myself for the first time!". The video has 12,398,370 views. The description reads: "I was born deaf and 6 weeks ago I received a hearing implant. This is the video of them turning it on and me hearing myself for the first time. :) Edit: For those of you who have asked the implant I received was Esteem offered by Emory Medical. Check out my blog <http://sarahchurman.blogspot.com/>. Sarah Charman". The video is categorized as "People & Blogs". The video is uploaded by "sarahchurman" on Sep 26, 2011. The video is 1:21 long and is currently at 0:46. The video shows a woman with long dark hair, wearing a white shirt, sitting at a desk with a computer monitor. She is looking at the camera and has her hand near her face. The video player includes a search bar, a "Browse" button, an "Upload" button, and a "Subscribe" button. The video player also includes a "Like" button, an "Add to" button, and a "Share" button. The video player also includes a "12,398,370" view count and a "Mashable" logo. The video player also includes a "132,489 likes, 1,831 dislikes" count and an "As Seen On" section with the "Mashable" logo. The video player also includes a "Category: People & Blogs" section and a "Tags: D8CF01E7" section. The video player also includes a "License: Standard YouTube License" section. The video player also includes a "1:21" duration and a "0:46" current time. The video player also includes a "12,398,370" view count and a "Mashable" logo. The video player also includes a "132,489 likes, 1,831 dislikes" count and an "As Seen On" section with the "Mashable" logo. The video player also includes a "Category: People & Blogs" section and a "Tags: D8CF01E7" section. The video player also includes a "License: Standard YouTube License" section.

[Image 8]

One of the most popular reports about therapeutic technologies is the video “29 years old and hearing myself for the 1st time!” (image 8). It shows exactly that: A deaf young woman is filmed by her husband when trying her cochlea implant for the first time, reacting with excitement and tears. The video is exceptional because it has been viewed more than 12 million times and has nearly 135,000 (dis)likes and 55,000 comments (in March 2012). But it exemplifies a great number of videos with a similar pattern (usually located in the category “People & Blogs”): Patients try out innovative technologies, show intense emotions and often gratefully refer to the therapeutic products and their firms. As a rule, the videos are much more often liked than disliked by other users, and their commentaries are overwhelmingly positive, too.

A second type of highly popular videos promotes new technologies not for therapeutic use, but for military enhancement. For instance, there are several commercials of companies martially praising the virtues of exoskeletons enhancing the force and bodily capacities of human soldiers, like the video “Raytheon Sarcos Exoskeleton,” having been viewed more than one million times (image 7). (Interestingly, the same companies and inventors are often also developing therapeutic exoskeletons for paraplegics.) Again, the users’ comments on that type of videos are full of enthusiasm, often referring to fictional productions such as “Robocop.” To sum up: the first discourse about what might be called ‘transhumanist technology in present reality’ altogether is a very positive one without much conflict. Most of the users are obviously fascinated by the new technologies and their potentials, and seem to be strongly in favor of their further development and diffusion. Interestingly, this seems to hold only for mechanical technologies but not for genetic engineering, a group of technologies that often features as a source of fear and disgust in the following discourse.

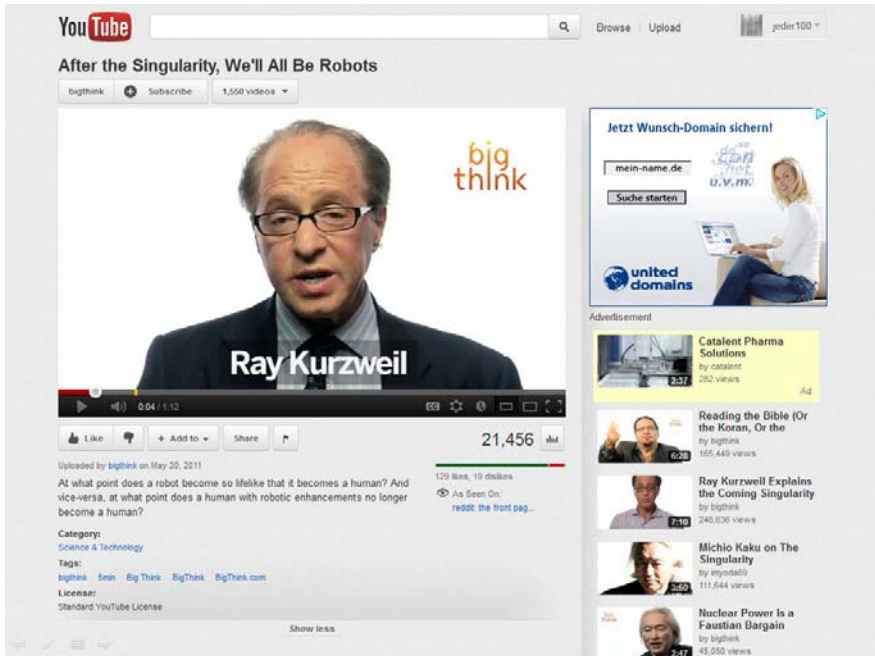
2) Second Discourse: The Clash between Utopists and Dystopists Concerning Transhumanism

The second, also non-fictional discourse consists in videos making general and explicit statements about the transhumanist movement and the transhuman future. Again, it contains three most frequent and popular types of videos:

1. First, interviews with or statements of well-known transhumanists,
2. Second, professional or semi-professional WebTV,

3. And third, videoblogs by non-professional individuals.

In this discourse, most users take an explicit stand pro or contra transhumanism and often directly and fiercely attack the opposing position.



[Image 9]

Videos of the first type show interviews with or—statements of—well-known transhumanists with connections to institutions. For instance, in the video “After Singularity, We’ll All Be Robots” (image 10), Ray Kurzweil claims that in the future the border between humans and machines will fall, as machines become intelligent and humans become technologically enhanced. There are lots of similar videos, showing other transhumanists like Natasha Vita-More or Michio Kaku, but usually they get only few clicks—this already is one of the most viewed. Many of those videos are spread by specialized YouTube channels like “Big Think.” They have a very simple structure: The transhumanists, shown in a close shot, directly address their audience to make their points in an ostentatiously calm and rational manner. In contrast, the

numerous commentaries are extremely antagonistic, and many of them are very skeptical or hostile. Often, they involve fictional allusions like in the third of the following examples, or conspiracy theories like in the second one:

He's just like a prophet or an astrologist but we listen to him because he has a PhD. Nobody knows anything about the future. Who cares anyway. Que sera, sera. [AirSandFire](#) 2 weeks ago

We'll all have an RFID Chip [wldcanml](#) 2 weeks ago

ROBOCOCK [MrProblem1997](#) 3 weeks ago

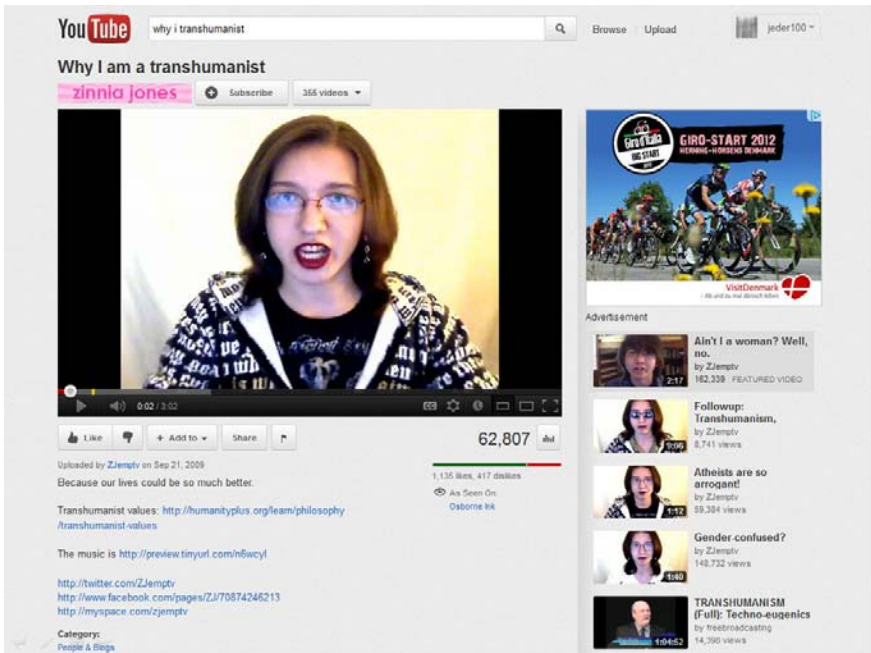


[Image 10]

But there are also many videos turning explicitly against transhumanism. The most popular critics are either Christian fundamentalists like Thomas Horn (related videos in image 10) or right wing WebTV hosts from the US like Alex Jones. In cases like Jones's "The Transhumanist Cult That Runs the Planet" (image 10), YouTube functions as pulpit and audiovisual

extension of talk radio. The hosts often directly attack famous transhumanists, in this case Ray Kurzweil. While the transhumanists aim at an impression of calm, rational argumentation, their critics show ostentatious emotions and moral outrage. In rather dramatic ways they put forward conspiracy theories and fearful fantasies of techno-eugenics and genetic Armageddon. Strikingly, they rarely deal with mechanical enhancement (with the exception of identification chips) but rather focus on genetic manipulation. But they do not earn only approval, either. As in the case of the proponents of transhumanism, the commentaries are antagonistic in often quite aggressive ways, like in this case:

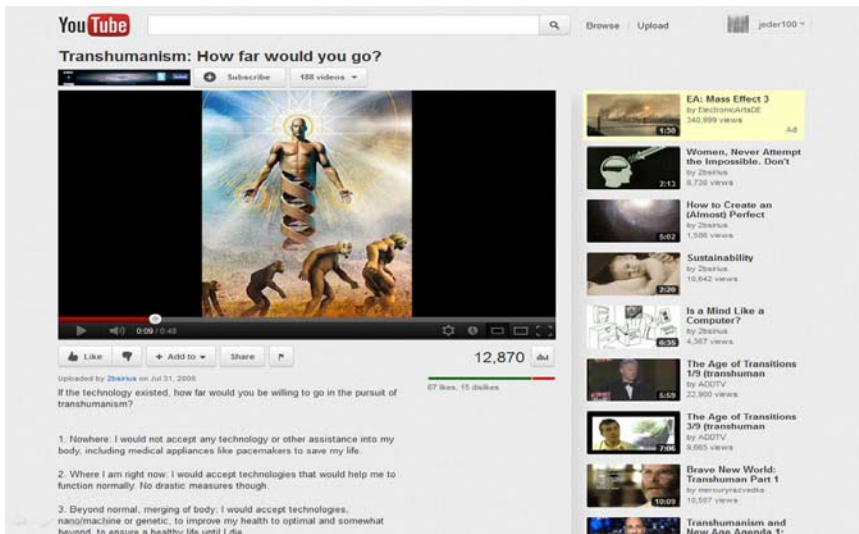
Alex Jones is just a Luddite that is scared of change. Alex Jones does not like transhumanism as he is scared of the thought of the advancement of mankind. He wants things to remain as they were in the 1800s when the average life spans was 36 years, and one in every five babies died of child birth. Alex's Jones ideologies are scary. [bighands69](#) 8 months ago



[Image 11]

The third type of videos that deal explicitly with the transhumanist movement consists of individual videoblogs of non-professionals. Those blogs can be very popular like that of Zinnia Jones. In her channel, Jones expresses quite a range of specific positions. On the one hand, she repeats arguments of well-known transhumanists like Nick Bostrom about the amelioration of human life by scientific progress, like in the video “Why I Am a Transhumanist” (image 11). But this is combined with specific other positions. Among other things, she calls herself the “Queen of Atheism” and advocates for “pansexuality.” Her specific queer position reminds Donna Haraway’s famous “Manifesto for Cyborgs,” where the melting of humans and machines is seen positively as supporting hybrid identities and the disintegration of simple bipolar oppositions like man/woman, homosexual/heterosexual etc. In the commentaries she is attacked more often because of her sexual orientation and gender politics than because of her advocacy of transhumanism.

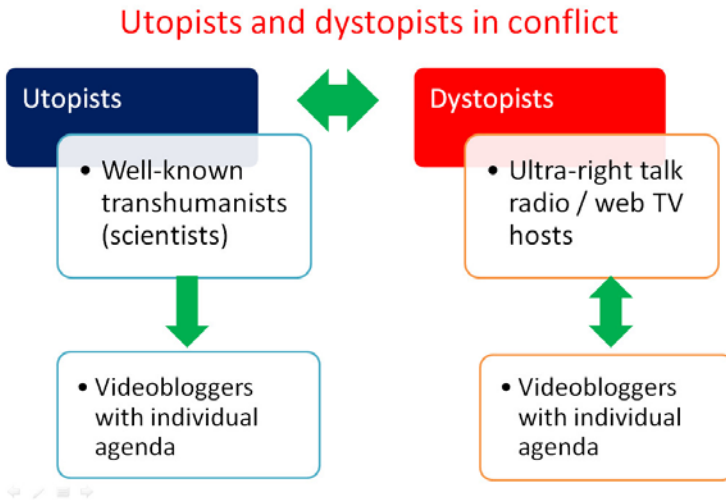
Other videobloggers like Kemet Prince from London (Channel: Infinite Waters) speak out strictly against transhumanism but again have personal agendas differing widely from those of the right wing WebTV hosts. For instance, Prince’s goal is to get back to a more natural state of humanity, a supposedly stronger, primal self that also makes possible the political liberation of Africa from neocolonialism.



[Image 12]

The fight for and against transhumanism is also fought by videos that put forward opinion polls or challenges to the opponents' position, inviting them to answer with reply videos or commentaries like the video "Transhumanism: How Far Would You Go?" (image 12).

The examples indicate that the fight between professional proponents and opponents of transhumanism continues on the level of individual vlogs (image 13). But the individual vlogs pro and contra transhumanism are often connected with other, very specific and personal agendas that strongly differ from those of the professional transhumanists and their critics, like in the cases of Zinnia Jones and Kemet Prince.



[Image 13]

3) Third Discourse: Fictional Productions Featuring Posthumans

In contrast to the factual discourses about transhumanist ideas or enhancement technologies, the third discourse is clearly fictional. On the one hand, it consists of traditional mass media fictions, particularly film trailers, gaming and music videos. On the other hand, it consists of YouTube's own fictional productions, for instance, web series.



[Image 14: Screenshots from the Video to Lady Gaga's Song "Bad Romance": beginning, middle, end. © Red One]

YouTube contains lots of professional videos that are produced for circulation not only by traditional mass-media but also by the internet. Music videos of big corporations dominate YouTube's list of the most viewed videos, and some of those videos feature posthumans, particularly cyborgs. One of the most successful examples is the video for Lady Gaga's song "Bad Romance" (image 14). With more than 465 million viewings and more than 1,300,000 comments in March 2012, it was the fourth on the list of the most viewed videos of all time. "Bad Romance" tells the story of a cyborg girl bought as a sex slave by a cyborg Mafioso, but burning him with hot sex in the end. This story seems to be serving as an allegory of the sadomasochistic pleasures of a "bad romance," featuring also in the song's lyrics. The video shows a wild mix of symbols referring to posthumanism, SciFi, and movies about the Russian mafia, madness, and occultism. Like in this case—and in stark contrast to the aforementioned discourses—most posthumans in music videos are represented as strange in a sexy way. They are supposed to excite viewers by touching on taboos and futurist fantasies at the same time.



[Image 15: Screenshot from *H+ The Digital Series*, © Warner Bros. Digital]

But YouTube is not only recycling or spreading mass media productions. More and more, it is developing into a content provider of its own right, bringing forth new fictional forms corresponding to the specific potentials of the web. One of those forms is the web series. In contrast to their television counterparts, web series are produced for internet distribution, often allow for some interactivity and usually consist of very brief episodes, which do not necessarily come out in regular intervals but are always available on the web. At least one of those series on YouTube is dealing with a transhuman future: *H+ The Digital Series* (the title is alluding to the transhumanist association mentioned in the first chapter of this essay). In the future of H+, a big part of the global population is using computer implants that connect their minds to the internet all the time. Unfortunately for those posthuman cyberminds, the implant is infested by a deadly virus, causing global destruction. Starting with the virus's outbreak, the episodes of H+ then are moving freely in time, space, and focalization (comparable to the users' situation while clicking through YouTube).

Of all four discourses I am dealing with here, such utopias and dystopias in mass media fictions and YouTube's own fictional forms have the highest number of viewings. Because of the narrative necessity of dramatic conflict, most of the narrations are dystopical, while there is also a proliferation of fascinating cyborg characters. The comments and evaluations of those videos depend primarily on the pleasures of narrative, spectacle, and aesthetic enjoyment they are offering, and much less on them showing posthuman futures in positive or negative light. Their characters, stories, and images are not only migrating into factual discourses, as we have seen before, but they

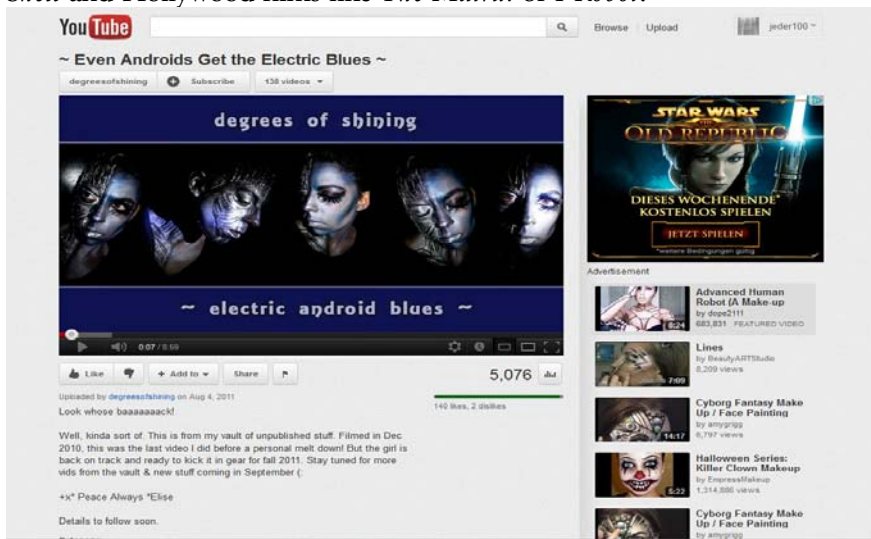
also become topics of a fourth discourse.

4) Fourth Discourse: Meta-fictional Reflections, Negotiations, and Appropriations

In my taxonomy, the last kind of YouTube discourses on posthumans consists in users' reflections about the different kinds of fictions just mentioned. This meta-fictional discourse encompasses at least four different types of popular videos:

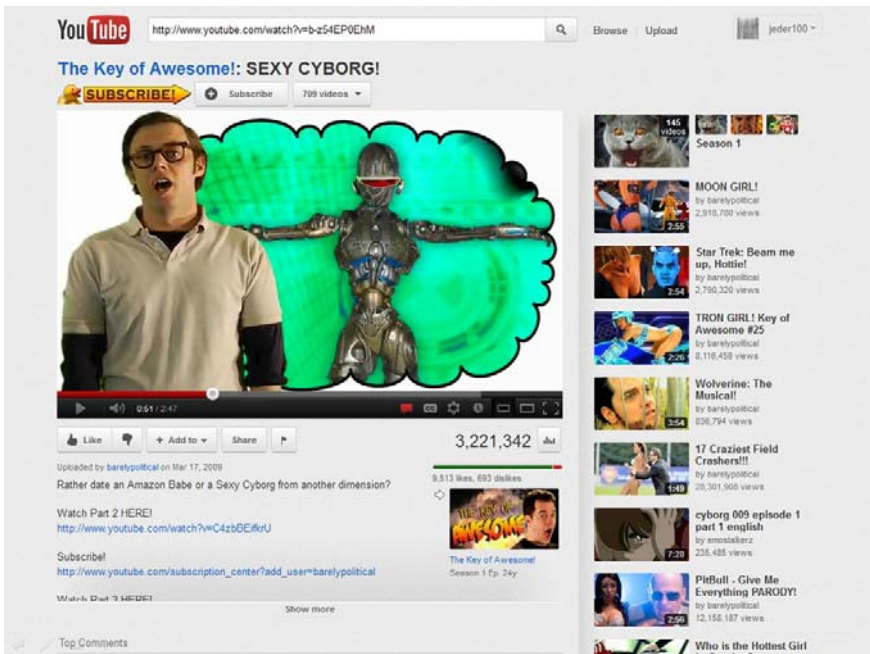
1. Compilations and user collected content,
2. Bodily appropriation of fictions in everyday practices,
3. Parodies, and
4. Media criticism and conspiracy theories.

On a first level of mass-media reflection, YouTube users simply collect, select and compile material from feature films, television programs, or other fictional productions, often trying to give a cross-sectional overview of a certain topic of fiction—like posthumanism. There are lots of compilations featuring the predominantly dystopic futures of scifi movies. For example, the video “Cyberpunk v1.0” is mostly compiled from Japanese anime like *Ghost in the Shell* and Hollywood films like *The Matrix* or *I Robot*.



[Image 16]

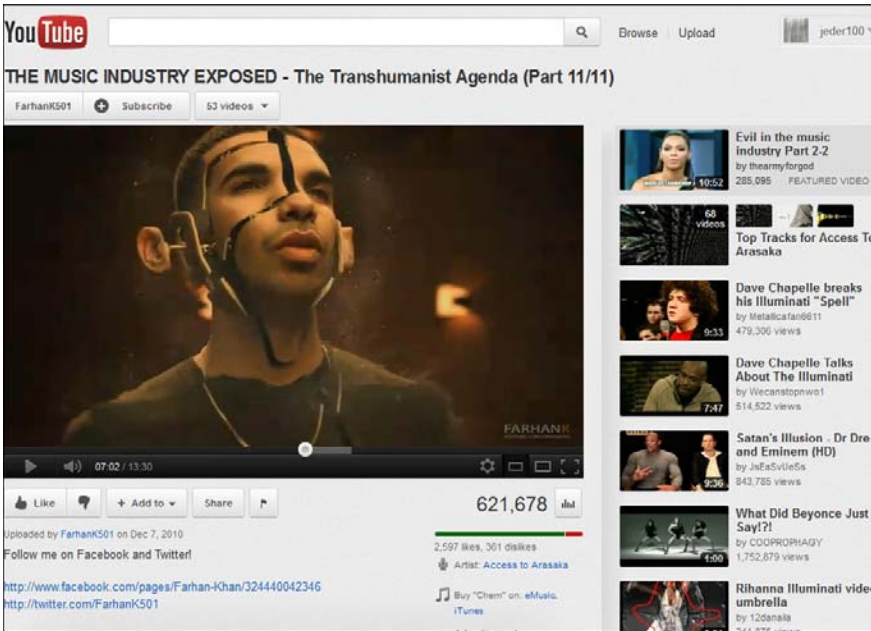
The appropriation of mass-media fictions of posthumanity reaches a second level, when YouTube users document or show off their own bodily practices of imitating cyborgs, androids, mutants or other posthumans of popular culture. For instance, there are lots of tutorials on how to transform oneself into a cyborgs, like in the make-up tutorial “-Even Androids Get the Electric Blues-” (image 16, see also the related videos on the right). Moreover, there are many tutorials and video documents in the category of “robot dancing,” where dancers move like stereotypical film robots, bodily imitating and imagining how it might feel to be an android. Videos like “Insane robot dance” show that there are also contests and competitions in that specific dancing style.



[Image 17]

Besides dystopic compilations and videos of bodily appropriation by make-up or dancing there is a third level of reflecting mass-media fantasies of posthumanity: the level of parodying those narratives and their stereotypes. For instance, there are quite a few parodies lampooning nerds and their cyborgs

fantasies. One of the most successful is “Sexy Cyborg” distributed by the web channel “Barely Political” as part of their web show “The Key of Awesome” (image 17). The story is thus: Two nerds dream of a barbarian girl and a sexy cyborg, but when their wishes come true, the girls prove too hard for them to handle. Those kinds of parody presuppose a collective knowledge about media fictions featuring posthumans as (erotic) attractions.



[Image 18]

Finally, an especially interesting example may illustrate here the last category: media criticism, sometimes to the point of conspiracy theories. The video is the eleventh part of a series, and its title is telling: “The Music Industry Exposed-The Transhumanist Agenda” (image 18). The filmmaker starts with a sample of music videos, commercials and Hollywood movies demonstrating that positive representations of eroticized posthumans and androids (like in the Lady Gaga video mentioned before) have increased in popular culture. From that plausible observation he draws the less convincing conclusion that the culture industry is completely dominated by the Illuminati and has been spreading a transhumanist ideology, with the aim to blur the difference

between humans and machines and to get people used to implanted RFID chips. Those kinds of conspiracy theories often get a huge audience (the channel of the video's producer Farhan Khan has got more than 27 million clicks) and lots of comments by pro- and anti-transhumanists battling each other. Concerning this kind of videos, YouTube definitely is more a battlefield of opinions than a cultural forum of exchange.

IV. Conclusion

On YouTube, ideas of transhumanism, human enhancement, and posthuman futures are extensively negotiated in specific and influential ways. An analysis of YouTube shows how millions of users think about transhumanism and its representations in popular culture. It makes visible the range, mediality, narrativity and aesthetics of common fantasies about posthumanity.

In a first, provisional taxonomy I have distinguished four kinds of discourses concerning transhumanism, illustrating them with brief examples of typical videos and comments:

1. A non-fictional discourse about emerging technologies of therapy and enhancement in recent scientific research,
2. A non-fictional discourse between proponents and opponents of transhumanism as a movement advocating human enhancement,
3. A fictional discourse of transmedia productions and genuine YouTube fictions dealing with posthuman futures, and
4. A meta-fictional discourse reflecting on YouTube's own as well as traditional mass-media representations of posthumanity.

The analysis of those discourses suggests that, compared to traditional mass media, YouTube contains a much greater variety of forms dealing with the topic, and a greater variety in regard to content as well. Moreover, positions that would have been filtered out in professional film or television production, for instance, personal statements and conspiracy theories, often get wide dissemination. While the most successful and popular videos belong to kinds of fiction and entertainment, the non-fictional videos, for instance interviews or vlogs, are probably more numerous altogether, being easier to produce.

Through all of the discourses, certain motifs and images are repeated again and again. Frequently, images of popular fictions are taken up in the non-fictional discourses, influencing them.

The four discourses deal with different topics, have different structures, aesthetics, and evaluations, and they seem to be not much related on the level of their producers, actors, and recipients. Different aspects of transhumanism are treated differently, opinions diverge as widely as possible. The analysis shows extremely different tendencies of evaluating human enhancement:

1. New technologies of mechanical enhancement are evaluated positively by a majority, while that seems not to be the case with genetic engineering,
2. Transhumanism as a movement advocating enhancement tout court is discussed extremely controversially,
3. Fictional imaginations of a posthuman future are mostly dystopic, but a growing number of them include sympathetic or attractive posthumans,
4. Meta-fictional reflections about mass media productions oscillate between parody, critique, and conspiracy theory.

This picture is much more complicated than Dinello's dichotomic claim that the technophobic narratives of popular culture generally serve as a counterbalance to the techno-euphoria in science, economy, and politics. Many popular videos on YouTube take a euphoric stance, for instance by celebrating new technologies, mighty mutants, sexy cyborgs or emotional androids. Moreover, individual opponents and proponents of transhumanism often follow very specific personal agendas. But taken altogether, the evaluative tendencies suggest that a majority of YouTube users take a skeptical stance towards transhumanism and enhancement technologies in general (even if they probably are more technophile than the average population), while they may be more ready to accept concrete mechanical technologies with demonstrable benefits (but not genetic technologies which are seen as too dangerous).

On an even more general level, the discourses strongly indicate that collective imaginations of human nature and of what it means to be (post-) human are changing. Ideas of the manipulability of human beings and the human species seem to be spreading fast, and they are serving as a precondition

of a whole range of more specific, utopist as well as dystopist positions. Taken together, YouTube's discourses about posthumans are indicative of an uneasy tension in the cultural imaginary, a tension between skepticism, fear, attraction, fascination, and technological hope. Confrontation, often in quite aggressive ways, by far outweighs efforts of understanding and exchange. This situation might be taken into account when discussing ethical and political questions of human enhancement.

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Abstract

YouTube, the most successful video platform to date, is an important source for identifying public opinions, fantasies, and feelings about transhumanism. Looking at YouTube can show us how its many users think about human enhancement and possible posthuman futures; and that may help us to better understand the democratic viability or even legitimacy of political decisions concerning enhancement technologies. Moreover, YouTube not only is an indicator of collective imaginations but has an important influence on them as well. Because it allows for uploading user-generated content and participating in recommendations, comments and discussions, it can be seen as a cultural forum of exchange or as a battlefield where different opinions collide and intermesh.

This paper tries to give a first, provisional survey of YouTube's discourses about transhumanism, human enhancement, and posthuman futures. The analysis proceeds in three steps: After some general considerations concerning transhumanism and representations of posthumans in popular culture, it turns to the specifics of YouTube as a new media form. On that basis, four kinds of discourses concerning transhumanism are distinguished and illustrated by brief examples of typical videos and comments: *non-fictional* discourses (1) about emerging technologies in human therapy and enhancement, as well as (2) about the transhumanist movement, (3) *fictional* discourses about posthuman futures, and (4) reflective, *meta-fictional* discourses about mass media representations of posthumanity.

The analysis of those discourses shows highly divergent tendencies of evaluating human enhancement. Taken together, those evaluations suggest that a majority of YouTube users take a skeptical stance towards enhancement technologies in general, while they may be more ready to accept concrete technologies with demonstrable benefits. Moreover, the discourses show that collective imaginations of human nature and posthumanity are changing: the human species is more and more seen not as something fixed and stable but as something transformable and ephemeral.

Keywords: transhumanism, posthumans, enhancement, YouTube, discourses, representations

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Received: 29 October 2012 Reviewed: 19 December 2012 Accepted: 31 December 2012
