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THE RHETORIC OF IMAGINARIES:
HOW CREATORS, EX-CREATORS, AND CRITICS
OF RECENT MEDIA TECHNOLOGY IMAGINE
THE FUTURE OF TECHNOLOGICAL TRANSFORMATION.
AN ANALYSIS OF STATEMENTS
MADE IN CRITICAL DOCUMENTARIES FROM 2015–2021

A b s t r a c t . This study analyses future technological imaginaries by combining Aristotle's three modes of expression and the rhetorical triangle with a modality matrix of rhetorical mappings of Raven and Elahi. The goal was to identify the narratives that shape the logos, ethos, and pathos of three groups of communicators in documentary films: creators, former creators, and critics of technologies. The study used a content analysis of the statements made by representatives of all three groups in eight critical documentaries on the future of technological development from 2015–2021. We extracted key categories for the logos, pathos and ethos of each speaker group. Most are dystopian. We argue that future research should critically rethink whether continuous observation of the tech elite from the sideline will do justice to the potential fulfillment of their prophecies.

Keywords: media technology; technology imaginaries; sociotechnical imaginaries; future rhetoric; digital rhetoric

INTRODUCTION

Today's technology is developing so rapidly that most users cannot keep up with the changes; even its creators often find it hard to understand all the

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transformations and their consequences. However, all these changes leave a significant mark on humans and societies at large. Technology affects the lives of individuals and communities, transforming them, sometimes irreversibly. Imaginaries are narratives about the current state and future of technology, spun by representatives of various interest groups. These, in turn, are based on a specific rhetoric – they serve specific purposes that we should try to interpret and are subject to ethical judgment.

Imaginaries can be treated as imaginaire (Flichy, 2007), media fantasies (Young, 2006), or media prophecies (Nye, 2004). The latter was of particular interest to us as we address the following questions in this study: How do technology developers, managers, and decision-makers envision the present and technologized future of humans and society and the future of technology itself? What do they base their narrative and argument on? We asked the same questions concerning the statements of former creators and external observers: lawyers, journalists, and academics specializing in the technological future to see what categories their narratives and arguments are based on. Thus, we dealt with imaginary narratives (Natale and Balbi, 2014) and analyzed the rhetoric of these speakers' statements.

Documentary films appear as a source of knowledge about the past, present, and future. It is a genre that spans knowledge-giving (the journalistic genre), popularizing knowledge, and the science-fiction genre, which tries to go beyond the framework of the present and intellectually and critically probe the future. It is aimed at a "mass" audience, i.e., any potential audience. The creators intend to convey content, sensitize the audience, and show them a particular image of the world. They do this by giving voice to real people, who appear by name and who, conveying their views, experiences, and visions, build a specific narrative around the discussed problems and rely on specific rhetoric to argue their case. Therefore, in our study, we analyzed the statements of creators, ex-creators, and critics directly involved in constructing imaginary narratives centering on the technological future in documentaries.

The imaginaries of the future presented by their creators show that it is necessary to critically analyze narratives that aim to build a specific model of the future: potential and real, to find understanding or passive acceptance. Therefore, it is essential to analyze how this happens and what rhetorical devices are used to construct narratives; moreover, what rhetorical devices are used to attempt to unmask and reverse it or interpret and explain it to the world. As a methodological framework we used Aristotle's three modes of expression (Aristotle, 1991) and rhetorical triangle (Tindale, 2004) at the first stage of

our analysis, and the modality matrix with rhetorical mappings by Raven and Elahi (2015) at the second stage, to achieve the research aim.

In the following, we present first a brief literature review on the social imaginaries. In the research results part of this paper, we critically analyze key documentaries on the topic of technological imaginaries following the three modes of expression: logos, pathos, and ethos. We conclude that future research should critically rethink if continuous observation of the tech elite from the sideline will do justice to the potential fulfillment of their dystopian prophecies or change the current course of humanity.

1. FROM MODERN SOCIAL TO SOCIOTECHNICAL IMAGINARIES

Taylor (2003) first defined "modern social imaginaries" at the beginning of the twenty-first century by understanding modernity through the eyes of "ordinary people". A social imaginary provides an abstract idea of collective social practices of social groups, distinguishable from social theories developed by researchers based on scientific results. Social imaginaries function as shared socio-cultural belief systems of social groups and collectives (Jewitt et al., 2020). Two decades later, Taylor's concept was redefined by the evolving field of science and technology studies as *sociotechnical imaginaries.*

Sociotechnical imaginaries are implemented to explore people's sense-making of communication and media technologies, often inspired by science fiction (Jewitt et al., 2020) and nowadays grounded in the field of science and technology studies (STS) (Binder, 2019). Jasanoff and Kim (2009) describe sociotechnical imaginaries as collectively shared descriptions of potential future social life, mainly produced and reproduced by national agents, such as scientists and technologists. Barbrook and Cameron (1996) first researched sociotechnical imaginaries of the North American West Coast ideology. Their technology-deterministic visions of utopias portrayed a rather pessimistic social perception, in which people merge their self-fulfillment with futuristic technologies instead of having actual face-to-face encounters with other human beings. Nowadays, sociotechnical imaginaries often result from "media fantasies" (Natale and Balbi, 2014), when powerful social groups, such as media developers, technology experts, and governments, develop narratives and imaginaries of *potential* media technologies before the actual implementation and production starts. Therefore, Natale and Balbi (2014) suggest studying the

pre-condition of media and sociotechnical narratives; and specifically, analyzing underlying cultural foci and possibilities for further development of technologies that came into being and those that remained a fantasy.

Although imaginaries often hold ideas of undesirable and risky future scenarios, in focusing on explaining people's shared future technology perceptions (Jasanoff and Kim, 2009), sociotechnical imaginaries can provide a collective vision of a desirable, sound, and worthwhile technological future. They can be powerful tools to sketch a potential future and convince consumers and societies of their indispensable advantages (Hong, 2021). Governments, for example, portray and shape the public discourse around future technological developments as an inevitable advancement of their strategic and capitalistic competition (Bareis and Katzenbach, 2022; Jasanoff and Kim, 2009). Often users also perceive sociotechnical imaginaries as helpful, for example, when using screen time management tools while the producing companies trace and track their consumers' online behavior (Jorge, Amaral, and de Matos Alves, 2022).

Looking at the downside of sociotechnical imaginaries, they can potentially enlarge the digital divide within a society when only the digital literate groups with financial resources benefit, which already Barbrook and Cameron (1996) pointed out. Moreover, many users are aware of and tolerate the surveillance practices of large corporations in exchange for new technology, as Lupton (2020) emphasizes. Activists and civil society, for example, produce "counter-imaginaries" (Kazansky and Milan, 2021) to argue politically or economically-driven sociotechnical imaginaries. If we understand media as a mediator to analyze logic and narratives of the future from the perspective of present-day technology creators, ex-creators, and activists, we need to address how media function not only as information channels but also how they shape and construct new versions of reality when in use (Sutko et al., 2016). Media, then, are used to mobilize the public and draw attention to specific cases against powerful technology corporations becoming almighty (Christof, 2017). Thus, different sociotechnical imaginaries are not only created by governments and societies simultaneously, but technology's benefits also drive the society if they are perceived as an advantage. In line with Wyatt (2021), we agree to critically rethink rhetorical images when researching new media technologies as we show in the following analysis of the rhetoric of imaginaries.

2. RHETORICAL TRIANGLE, NARRATIVES OF FUTURITY
AND THE ANALYSIS OF DOCUMENTARIES

The empirical study is a critical, thematic analysis of rhetorical aspects of imaginary narratives in the newest documentaries on present and future media technologies. The statements by leading representatives and ex-representatives of the big-tech industry as well as other experts in eight recent documentaries on technological present and future (2015–2021) were analyzed, including:

– *iHuman*, Tonje Hessen Schei, 2019 (*iH*)
– *Social Dilemma*, Jeff Orlowski 2020 (*SD*)
– *China's World Takeover*, Walid Berrissoul, 2020 (*ChWT*)
– *After Truth: Disinformation and the Cost of Fake News*, Andrew Rossi, 2020 (*AT*)
– *The Great Hack*, Karim Amer, Jehane Noujaim, 2019 (*GH*)
– *Coded Bias*, Shalini Kantayya, 2020 (*CB*)
– *Swiped: Hooking Up in the Digital Age*, Nancy Jo Sales, 2018 (*SHu*)
– *Człowiek przyszłości/Human of the Future*, episodes 1 and 2, Małgorzata Łupina 2019 (*CzP*).

First, we analysed three modes of expression: logos, pathos, and ethos (Aristotle, 1991). In the second stage, we used rhetorical mappings by Raven and Elahi (2015). According to Aristotle's classical division, the "rhetorical triangle" (Tindale, 2004), or three forms of expression, constitute modes of persuasion (Aristotle, 1991). Logos concerns the message, especially the logic of the argument. Pathos is a tool for influencing the audience, especially in the emotional sphere, to achieve the desired effects. The ethos, on the other hand, which is directed at the communicator, i.e. speaker themself, is a tool for building the desired reception of the proclaimed message (Aristotle, 1991). The analysis of these three elements makes it possible to see how the speakers in the analyzed films construct their messages: how they try to influence the audience, what image of themselves they try to project, and how they argue their judgements.

Second, the analysis needs to look at the statements that constitute a kind of forward-looking discourse. Raven and Elahi (2015) focus their work on narratives of futurity, which they acknowledge are individual speculations. Within a kind of matrix of the rhetorical structure of such narratives, they detail strategies that link narratives and rhetoric and result in different visions of the future. Idealistic, normative modality indicates what the future should be; realistic proximate modality indicates a possible future; positive modality

specifies a predicted, inevitable past; and speculative modality is based on subversion – focusing on the beneficiaries of the future.

Abductive reasoning was applied to analyze critical imaginaries of the present and future of media technology and technologized life, presented in the visions of each of three groups of speakers: (1) actual creators, (2) ex-creators, and (3) experts and activists.[1] First the speakers' statements in the analyzed documentaries were written down and then subjected to inductive thematic analysis, distinguishing main categories that are the fundamental assumptions of the created narrative. The three modes of expression, as outlined before, were analyzed for each of the three groups of respondents: logos, pathos, and ethos. Then deductive analysis was made and a dominant, key narratives in most interlocutors and various documentaries belonging to particular modes of expression were identified. However, they do not close the catalog of argumentative strategies. In conclusion, the obtained narrative models have been confronted with integrating the narratives and presenting the vision of the coming technological world emerging from the latest documentaries. The matrix by Raven and Elahi (2015) was used for this purpose.

In practice, the individual statements made by the speakers in the documentaries were coded, determining whether and, if so, which elements of the rhetorical triangle they realized and how, i.e. logos (e.g., by recalling evidence, testimonies, truths), ethos (e.g., virtue, morality, trustworthiness) and pathos (e.g., emotions, motivations, feelings). General patterns of triangle elements were derived from the narratives as categories. It was then examined how the categories relate to visions of the future and the matrix modalities (normative, realist, positive, speculative). The results are presented in an integrated manner.

3. THE RHETORIC OF IMAGINARY NARRATIVES
BY ACTUAL CREATORS

Geographically, the surveyed representatives are based in Silicon Valley, Beijing, and Davos. They are designers, managers, and technology visionaries. We extracted the following key categories from their statements:
- logos: the idea of superiority over humanity;
- pathos: suggesting inevitability and unpredictability;
- ethos: unaccountability.

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[1] For a list of the names of those involved in the three groups, see the Appendix.

In their statements, the creators left no illusions that they are creating a new reality, whose further steps they are not, however, able to predict and for which they do not feel responsible in any way.

Logos

The main idea of the creators' imaginary narratives was most eloquently presented in the argument by Jurgen Schmidhuber (*iH*). Schmidhuber, saying he is not anthropocentric, emphasized that artificial intelligence development brings superiority over humanity. In his view, humanity is not the "crowning glory of creation", and humanity is approaching the endgame. What is meant to appeal to the audience, and indeed humanity, is the notion that a higher form of existence is coming, that everything will change because what will be created will self-improve, solve all problems, and evolve indefinitely. This is the fundamental goal, and everything that precedes it is just a test and a learning opportunity for AI. Ilya Sutshever (*iH*) calls it "playing God". Independent entities will be created with their own goals; however, it is not sure if they are consistent with the goals of the human species. The impact on humanity will be extreme. The new form of life will render humans useless. The statements of AI developers are unemotional, calculated, and rational. In this regard, the audience is addressed from the perspective of the obvious, evident the irreversibility of the processes and the need to accept them.

Pathos

The emotions that such statements evoke in the audience can range from support to indifference to horror. However, they touch on the quintessential essence of being human – forced to ask what lies ahead, whether it is in their interest, and whether they agree on this. The narrative is characterized by inevitability and unpredictability. The complex nature of the issue and the general lack of competence of the recipient in this area may result in overwhelming uncertainty. Sutshever (*iH*) states that AI has a promising future, and it "would be nice" if it was the same with humans. In so doing, he evokes among the audience at least wonder if not fear and uncertainty. The imagined impact is supposed to be enormous and unimaginable, and since the number of advantages outweighs the number of disadvantages, the development of AI will not be hindered. Schmidhuber's (*iH*) goal is to create something great in his lifetime. This greatness is supposed to appeal to the recipient to accept that this is the way it is and will not change. Therefore, the recipient might be overwhelmed by the weight and incomprehensibility of the process. These statements

can create a sense of grandeur, of the superiority of the projected future over the present. It belittles the role of humans and their current status relative to the coming one.

Ethos

Do creators care about building trust in themselves and their credibility? Instead, by communicating irreversibility, they seem to assume that what happens does not even depend on them anymore. They are indifferent to the consequences of what they create. Jonathan Badeen, talking about Tinder, acknowledges the deliberate use of addiction and gambling mechanisms. Do the speakers build their authority? Yes, but unaccountability dominates the narrative. Mandy Ginsberg (*SHu*) shifts responsibility for the effects outward, stating that if (bad) happens in society, it happens in an app, for example, Tinder. Schmidhuber (*iH*) states that he feels like Albert Einstein's parents – he is not responsible for the revolution. It could be said that the creators have any ethical or moral obligation. Power and knowledge unavailable to mere mortals build the authority of the speaker. It can be perceived that creators generally do not care about their image as honest and reliable persons who are guided by the good of humanity. The ethos of irresponsibility reinforces logos (building something higher than humankind) and pathos (unpredictability). Statements appear as a vision of the irreversible course of the future, to which the recipients must passively consent because there is no way to stop the process.

4. THE RHETORIC OF IMAGINARY NARRATIVES BY EX-CREATORS

The group of ex-creators includes former employees of the high-tech sector, especially big-tech, including whistleblowers. Some people decided to leave Silicon Valley and similar places to start social and educational approaches to making people aware of the scope, scale, and consequences of developing new technologies. Three categories dominate their statements: logos – the invisibility of processes of change; pathos – a call to resist modeling and programming people and societies by the tech industry; and ethos – raising awareness of various kinds of psychological and social boundary crossings and the need to restore them.

Logos

The main argument of whistleblowers and other ex-developers is based on the desire to make audiences aware of the invisibility of the change that is occurring and that directly affects them. This is particularly emphasized by Jaron Lanier (*SD*). Also, Tristan Harris asks (*iH*) how to get out of the "matrix" when one does not know they are in it? Harris (*SD*) notes that the drama of the situation is that users are unaware of how the various platforms work and how they use and manipulate them. David Caroll (*TGH*) stresses that also data is invisible. The systems to which users contribute data thrive outside of human oversight (Sandy Parakilas [*SD*]), and no one knows how the algorithms fully work (Jeff Seibert [*SD*]). Even the top insiders do not know what might happen to the data (Parakilas [*SD*]). In the case of ex-creators, uncertainty, unknowns, and hidden processes are the main message the speakers want to address to their audience.

Pathos

We are dealing with an existential threat, says Jack Poulson (*iH*). It is a rallying cry to the aware but passive users; and to the unaware users, who require enlightenment. The speakers refer to the imaginative impact of the transformations, i.e., the profound, unprecedented nature of the transformation, the creation of a new order in which the target user will soon have no say, subject to analysis, monitoring, forecasting, and shaping their lives. These are ongoing experiments that we take part in and do not even know we consent to. It is based on concealment, manipulation, and exploitation of unknowing people. Even the people creating it are falling into the trap. They become victims of the companies that create new technologies (Tim Kendal [*SD*]). The fight is uneven because artificial intelligence knows much about users, and users know nothing about technology observing them (Roger McName [*SD*]). As Paul Hilder (*TGH*) notes, the "holy grail" of communication is behavior change. The goal is to program an entire generation (Harris [*SD*]). Therefore, it is necessary to raise awareness to educate and call for change. There can be no automatic acquiescence to this direction of transformation.

Ethos

Ex-creators appeal to the ethical and moral values of the audience, assuming that people want to know how they are modeling and programming their behavior, feelings, and broader social world. The construction of credibility and authority

by those representing this group is based primarily on calls for restoring the lost order. The speakers appear as guardians of the rules and old borders, emphasizing the latter's crossing particularly strongly. Christopher Wylie (*GH*), recalling Steve Bannon's vision, notes that the assumption of those who want to break the rules is to blur the boundaries because if you want to change society, you have to break it down, take it apart, and then create it according to your idea all over again. The prevailing tone is one of caution against irreversible consequences that we should want to avoid. Some speakers are aware of the mistakes, as evidenced by Sean Parker's statement (*SD*) that despite knowing that human weakness is being exploited, people in the industry keep doing it. This is why ex-creators call for a backlash, a mass pressure against the current order in which the rich dominate the marketplace, including the marketplace of ideas, and, ultimately, an abandonment of the system for their own good and the good of society.

5. THE RHETORIC OF IMAGINARY NARRATIVES BY EXPERTS AND ACTIVISTS

The outside experts and activists include journalists, lawyers, academic researchers, and even former investors in technological start-ups. These are people critical of technological progress and concerned with the mechanisms and consequences of technological development in their everyday work. The main categories presented in their narratives were: logos – deepening biases; pathos – caution against new social, power, and market project coming from the application of newest technologies; and ethos – questioning deepening inequality, polarization, conflict, and chaos by algorithmization.

Logos

One of the dominant categories in the critics' narrative is bias, i.e., data bias, algorithmic bias, and the accompanying polarization and subsequent stimulated conflict. Kara Swisher (*PS*) says that the essence of how platforms work is to communicate that social compromise is impossible. In this way, rifts are deepened, information bubbles of individuals are reinforced, and agreement is increasingly challenging to achieve. According to the speakers, this also results from an underestimation of the scale of disinformation. Decisions are hidden under the guise of being quantifiable and calculable. However, as Cathy O'Neil (*CB*) says, "math is a cover story," yet algorithms and big data deepen

inequality, polarization, conflict, and chaos. The presented statements are based on a complex analysis of the situation already present in social media platform governance, the Cambridge Analytica case, China's social credit system application, etc., and its consequences. The experts' narrative is based on an analytical approach to the situation, which concludes that we are facing increasing social control over people while at the same time the individual condition is weakening (in the form of increasing tendencies towards isolation, depression, and passivity). Profound technological transformations of massive consequences are taking place, but the discussion of the shape of the future is blocked or manipulated by the creators of this project.

Pathos

Stephani Balmem (*ChTO*) concludes that the Chinese government wants to set up the world as its society, and we need to know what this social project looks like, and what we accept and do not. This new project is based on artificial intelligence, fueling data, and total social control. What the critics and experts want us to realize is an awakening. Max Tegmark (*iH*) speaks of AI as the last invention we need because it will replace us in further inventing by using the metaphor of a train that is speeding along, and people are the driver who has fallen asleep. We need to wake up. What we hear from experts is to caution and motivate the audience to reflect on their individual, social and political condition. We can hear about the threat to democracy and social and moral order. At the same time, we learn that it is too late for some changes, e.g., privacy is gone, as Michał Kosiński (*iH*) concludes. Viewers may be shocked by a narrative that points to a dynamic degradation that no one is reacting to. However, at the same time, there is a lack of concrete advice, suggestions, and recommendations for ordinary people.

Ethos

Cynthia M. Wong (*SD*) notes that we have less and less control over who we are and what we believe in regarding new social power and market project. She is echoed by Shoshana Zuboff (*SD*), who believes that a yet unknown new market is the one in which our future is being swapped. This world is based on manipulation, information bubbles, and effective disinformation. The line between falsehood and truth is blurred (Cynthia M. Wong [*SD*]). It is mainly researchers who speak with an ethical tone and concern for the future of the rest of the world. Brad Smith (*iH*) thus points out that it is not about what computers can do but what they should do. The goal is to reflect on the vision

of the world we are about to experience. The discussion appears very theoretical and is addressed to a few influential individuals leading politics or economies.

CONCLUSIONS

Analyzing the constructed imaginary narratives according to the research questions, how technology developers, managers, and creators envision and narrate the future of technological transformation, we can say that more dystopian than utopian imaginaries dominated the analyzed corpus of statements. Even if the creators, convinced of the superiority of their goal, take the floor, their argumentation is not favorable. It builds an image of an incalculable future that becomes impossible to change. Ex-creators and experts directly build future imaginaries of an ominous, threatening character and force the reaction. They call for changes in thinking and acting. Although there is no direct advice for now and the future, they encourage reflecting and building awareness.

It is worth noting that although the speakers' statements are about the future, it is happening now. The processes that took place recently and the current phenomena to come are shaping the future. We can say, therefore, that the future is already here. Although some of the presented content seems like science fiction, it is not; it is an actual global project that will potentially affect every technology user at some point.

Of course, the imaginaries presented by the creators are neither social nor universal. They are elicistic – imaginaries of those who want to project the future and herald the fulfillment of the project. Their voice is extremely critical. We should note that "what start off as theories held by a few people may come to infiltrate the social imaginary, first of elites, perhaps, and then of the whole society" (Taylor, 2003, p. 106). Imaginaries play an essential role in the emergence of interpretations and applications that contribute to the social construction of new media (Fickers, 2012). As Ithiel de Sola Pool and colleagues (1977) stated, inventors are the ones who can fulfill their predictions because they have the power to do so but also control the business implementing the inventions. Whoever controls the technology, the market and the business control the fulfillment of the prophecies.

The discussion goes on side by side, so to speak, which illustrates the dissimilarity of the narratives of the other two groups. It is a voice of opposition, which, as it were, reverberates from the business position of technological giants, for whom what matters are not the existing norms and values but the vision of

a technologized future of an irreversible character. Predictions are narrative constructs whose semblance of credibility depends on, e.g., the author's reputation and the context in which they appear (Nye, 2004). Creators build their credibility on knowledge and the resulting power, displayed in an unapologetically categorical manner. The counter-narrative of former creators and critics is based on awareness-raising and cautionary narrative. At the same time, it is filled with experience-based illustrations of the transformation and its unpleasant human consequences.

It is worth mentioning the limitations of the research conducted. They include, first and foremost, the limited corpus of documentaries studied (i.e., a selective representation of speakers) and the very choice of methodology, i.e. rhetorical analysis as the main analytical lens. Expanding the corpus, as well as the broader spectrum of speakers studied, or selecting a different methodology, both qualitative and quantitative, could bring new themes, perspectives and final results on visions.

Summing up, we can say that the imaginaries of creators are based either on positive modality – sincerity and prophecy – or on speculative mode – irony and subversion (Raven and Elahi, 2015). In the first case, it is built by those who are convinced of the shape of the future, though not caring about the side effects of the transformation; in the second case, by those more cautious and hesitant, who think there is still time for reflection. Ex-creators, on the other hand, represent normative modality – idealism (Raven and Elahi, 2015). They build a vision of the future in which, thanks to the reaction, people can already be saved from the tragedy of unrestrained technological development. External experts and critics represent another type. Proximate modality is based on realism (Raven and Elahi, 2015). They build different visions of the future, but those are very firmly grounded in facts, figures, findings, investigations, and their own experience. All these imaginaries outlined before are, of course, different and indicate a polarization also on the meta-level, the level of reflection on change. All imaginaries are constructed from narratives using different rhetoric in logos, pathos, and ethos. However, they have in common a compelling need to reflect on the future brewing now, which appears imperative in the face of fundamental changes that may alter not only the course of humanity but their true nature.

BIBLIOGRAPHY

Aristotle (1991), *On Rhetoric: A Theory of Civic Discourse*, trans. G. Kennedy, New York: Oxford University Press.

Barbrook R. and Cameron A. (1996), *The Californian Ideology*, Science as Culture 6, no. 1, p. 44-72, https://doi.org/10.1080/09505439609526455.

Bareis J. and Katzenbach C. (2022), *Talking AI Into Being: The Narratives and Imaginaries of National AI Strategies and Their Performative Politics*, Science, Technology, & Human Values 47, no. 5, p. 855-881. https://doi.org/10.1177/01622439211030007.

Binder W. (2019), *Social Imaginaries and the Limits of Differential Meaning*, Österreichische Zeitschrift für Soziologie 44, no. 2, pp. 17-35. https://doi.org/10.1007/s11614-019-00371-2.

Christof K. (2017), *The Citizen Professional, Mediatization, and the Creation of a Public Domain*, Culture Unbound 9, no. 3, pp. 279-306. http://doi.org/10.3384/cu.2000.1525.1793279.

Fickers A. (2012), *Visibly Audible: The Radio Dial as Mediating Interface*, [in:] T. Pinch and K. Bijsterveld (eds.), *The Oxford Handbook of Sound Studies*, Oxford: Oxford University Press, pp. 411-439, https://doi.org/10.1093/oxfordhb/9780195388947.013.1001.

Flichy P. (2007), *The Internet Imaginaire.* Cambridge, MA: MIT Press.

Hong Sun-ha (2021), *Technofutures in Stasis: Smart Machines, Ubiquitous Computing, and the Future That Keeps Coming Back*, International Journal of Communication 15, pp. 1940-1960, https://ijoc.org/index.php/ijoc/article/view/15697.

Jasanoff S. and Kim S.-H. (2009), *Containing the Atom: Sociotechnical Imaginaries and Nuclear Power in the United States and South Korea*, Minerva 47, pp. 119-146, https://doi.org/10.1007/s11024-009-9124-4.

Jewitt C., Price S., Mackley K.L., Yiannoutsou, N., and Atkinson D. (2020), *Interdisciplinary Insights for Digital Touch Communication*, Cham: Springer, https://doi.org/10.1007/978-3-030-24564-1.

Jorge A., Amaral I., and de Matos Alves A. (2022), "*Time Well Spent": The Ideology of Temporal Disconnection as a Means for Digital Well-Being*, International Journal of Communication 16, pp. 1551-1572, https://ijoc.org/index.php/ijoc/article/view/18148.

Kazansky B. and Milan S. (2021), *"Bodies Not Templates": Contesting Dominant Algorithmic Imaginaries*, New Media & Society 23, no. 2, pp. 363-381, https://doi.org/10.1177/1461444820929316.

Lupton D. (2020), *Thinking With Care About Personal Data Profiling: A More-Than-Human Approach*, International Journal of Communication 14, pp. 3165-3183, https://ijoc.org/index.php/ijoc/article/view/13540.

Natale S. and Balbi G. (2014), *Media and the Imaginary in History. The Role of the Fantastic in Different Stages of Media Change*, Media History 20, no. 2, pp. 203-218, https://doi.org/10.1080/13688804.2014.898904.

Nye, D. (2004), *Technological Prediction: A Promethean Problem*, [in:] M. Sturken, D. Thomas and S. Ball-Rokeach (eds.), *Technological Visions: The Hopes and Fears that Shape New Technologies*, Philadelphia: Temple University Press, pp. 159-176.

Raven P. G. and Elahi S. (2015), *The New Narrative: Applying Narratology to the Shaping of Futures Outputs*, Futures 74, pp. 49-61, https://doi.org/10.1016/j.futures.2015.09.003.

de Sola Pool I., Decker C., Dizard S., Israel K., Rubin P., and Weinstein B. (1977), *Foresight and Hindsight: The Case of the Telephone*, [in:] I. de Sola Pool (ed.), *The Social Impact of the Telephone*, Cambridge, MA–London: MIT Press, pp. 127-157.

Sutko D., Lingel J., Adams A., and Rottinghaus A. R. (2016), *The Medium Is the Message of the Future: Tyranny of Media in Organizing Our Imaginary*, International Journal of Communication 10, pp. 5710-5720, https://ijoc.org/index.php/ijoc/article/view/6168.

Taylor C. (2003), *Modern Social Imaginaries*, Durham, NC: Duke University Press.

Tindale C. W. (2004), *Rhetorical Argumentation: Principles of Theory and Practice*, Thousand Oaks: SAGE Publications.

Wyatt S. (2021), *Metaphors in Critical Internet and Digital Media Studies*, New Media & Society 23, no. 2, pp. 406-416, https://doi.org/10.1177/1461444820929324.

APPENDIX

Table 1. Three groups of analyzed documentary speakers by name

Actual creators	Ex-creators	Outside experts and activists
Alex Nix, Cambridge Analytica; Lisa Liu, DeepBlue Technology; Jurgen Schmidhuber, Nnaisense; Ilya Sutshever, Open AI; Jonathan Badeen, Tinder; Whitney Wolfe Herd, Bumble; Mandy Ginsberg, Match Group	Brittany Kaiser, Cambridge Analytica former executive; Christopher Wylie, Cambridge Analytica whistleblower; Roger McName, early Facebook investor; Tristan Harris, Google former design ethicist; Tim Kendall, Facebook former executive, Pinterest former President; Liz O'Sullivan, Maven project whistleblower; Jack Poulson, former Google senior scientist, whistleblower; Chamath Palihapitiya, Facebook former VP of Growth; Sean Parker, Facebook former President; Guillaume Charlot, YouTube former engineer; Jeff Seibert, Twitter former executive; Sandy Parakilas, Facebook former operation, Uber former product manager; Aza Raskin, Firefox & Mozilla Labs inventor of "infinite scroll"; Justin Rosenstein, Facebook former engineer ("I like" button creator), Google former engineer	Jaron Lanier, founding father of VR; Shoshana Zuboff, Harvard Business School; David Caroll, Parsons School of Design; Ravi Naik, data rights solicitor; Carole Cadwalladr, *The Guardian*; Zeynep Tufeka, Columbia University; Elonore Pauwels, UN University; Michal Kosinski, Stanford University; Lee Fang, *The Intercept*, journalist; Max Tegmark, Institute of the Future Life; Philip Alston, lawyer; Silvija Seres, mathematician; Tobias Ress, philosopher; Elizabeth Williamson, *New York Times*; Cathy O'Neil, data scientist; Cynthia M. Wong, Human Rights Watch

RETORYKA IMAGINARIÓW:
JAK TWÓRCY, BYLI TWÓRCY I KRYTYCY
NAJNOWSZYCH TECHNOLOGII MEDIALNYCH
WYOBRAŻAJĄ SOBIE PRZYSZŁOŚĆ TECHNOLOGICZNYCH TRANSFORMACJI.
ANALIZA WYPOWIEDZI W KRYTYCZNYCH FILMACH DOKUMENTALNYCH
Z LAT 2015-2021

S t r e s z c z e n i e

Niniejszy artykuł prezentuje wyniki analiz imaginariów technologicznej przyszłości z zastoso-
waniem połączenia trójkąta retorycznego Arystotelesa z matrycą modalności map retorycznych Ra-
vena i Elahiego.

Celem badań była identyfikacja narracji, które kształtują logos, etos i patos trzech grup nadawców
komunikujących na ten temat w filmach dokumentalnych: twórców, byłych twórców i krytyków
technologii. W badaniu wykorzystano analizę treści wypowiedzi przedstawicieli wszystkich trzech
grup w ośmiu krytycznych filmach dokumentalnych z lat 2015-2021 dotyczących przyszłości tech-
nologii. Wyodrębniliśmy kluczowe kategorie dla logosu, patosu i etosu każdej grupy mówców.
Większość z nich jest dystopijna. Uważamy, że przyszłe badania powinny uwzględnić ciągłą obser-
wację i krytyczną analizę działań elit technologicznych, celem śledzenia rozwoju i ewentualnego
spełnienia wizji.

Słowa kluczowe: technologie medialne; imaginaria technologiczne; imaginaria socjotechniczne;
     retoryka przyszłości; retoryka cyfrowa