

Science in retrotopia

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Abstract

This article presents the position of science in the post-truth world. In a society subject to manipulation, knowledge is treated instrumentally as a useful gadget that must fit in with previously accepted theses. Manipulators appeal to a so-called retrotopia in order to fuel emotions and gain support for the authorities implementing absurd visions of reality. This places the creators of science in the role of objects, and consumers of science in a mindless, submissive situation. The position of science is also weakened by some scientists themselves, who challenge each other and are unable to cooperate with local communities. An antidote to post-truth is working on the dissemination of research results and cooperation in the transfer of these results to the interested groups. Implementational research projects involving various communities could become a new arena of understanding and, as a result, lead to building intelligent responsible communities which effectively resist post-truth.

Key words: simulacrum, science education, media, fake news, post-truth, fourth wave

1 Introduction

The beginning of the present century brought about widespread doubts in science (Pigliucci, 2018). The reasons for this movement towards anti-science can be found in many trends which complement each other. In the past, some of them (such as the anti-vaccine movement) functioned on the fringes of society as a kind of harmless quirk or a manifestation of the irrational fears of the simple man who did not understand science (Pietrzyk, 2018). Others (such as hate, unrestrained development at the expense of natural resources, or simulacra culture) are the result of the development of modern civilization and, at the same time, manifestations of a change in the mentality of entire societies, radicalization, changes in the approach to values and an escape into Bauman's retrotopia - an idealized past (Bauman, 2017).

Most of the negative trends of our modern civilization are to a greater or lesser extent related to this movement towards anti-science, which consists in questioning scientific truths, undermining research results, mixing concepts and destroying figures of authority (Stiegler, 2012).

Science is gradually being replaced by ideologies and political activities which, in the event of a conflict of values, focus on the realization of arbitrary political will at the expense of truth, good or beauty. And at the cost of others (Keyes, 2004). This conflict also affects science itself. Representatives of some disciplines challenge the ontological status and the sense of practicing other fields of science. This means that the symptoms of ignorance, primitivism of thinking, stereotypes, and turning to anti-science can even be found in that refuge of rationality which academia should be.

2 Simulacrum and post-truth

With the advancement of the Fourth Wave civilization (Maynard - Mehrtens, 1993), we immerse ourselves more and more in the parallel world of media reality, created by others, created intentionally, and who are also experienced in mediated communication (CMC). All these facts make reality a kind of social construct; an image where there is more creation than mirroring (Baudillard, 1994).

Especially the online environment formed by new media allows people to generate virtual experiences and reality. New media as a part of the online environment have completely different characteristics and, therefore, possibilities as well include the impact on human communication, thinking, behavior, actions, etc. (Tkacova et al., 2021). Ultimately, only a small fraction of what we see on our smartphones and computer screens can be called a reflection of reality. A significant part of the personal messages generated by users in virtual spaces are opinions, views, stereotypes, imaginings, and sometimes even lies and slander. Removing or modifying them is more than difficult. Instead of their revising or its ignorance, they are often only modified (Kondrla et al., 2020a). Users in virtual spaces seeing "differences" among the people, and they do not know how to perceive and evaluate them; i.e., whether to understand differences and welcome them as guests or to condemn them forever as intruders. "This human insecurity is entered by the media, which boldly, directly and loudly show new worlds, values, mentalities, traditions and religions, and as they are established in society as the creators of opinion and public opinion, they "force" cultural diversity and its full scope and intensity not only to see, but also to have an opinion on it" (Tkacova et al., 2021: 166).

The blurring and mixing of the message created with the mirroring of reality causes confusion in the inexperienced recipient and leads to a misreading of the message. Therefore, in order to be a good recipient, it is necessary to have appropriate media experience and care in contact with the new media which constitute the technological matrix for a parallel virtual reality (Turkle, 1997).

A collection of these individual stories, reflecting personal views, creates a series of subjective micro-worlds which may be misleading because ultimately they are only a collection of narratives (Geertz, 2017). Together, they form one of the many possible layers of the simulacrum.

Another layer is made up of manipulated media messages, falsifying reality and designed to persuade us to participate in some idea, political support or purchase. The term 'post-truth' is an attempt to justify such activities. The very application of it should be treated as consenting to a lie, because there are no half-truths and there are no half-lies - since the times of Aristotle we have been using the binary approach.

However, it is a different matter to recreate personal impressions, which, although they are sometimes creating an image, nevertheless refer to something that is subjectively authentic and something else that is deliberately misleading and a form of manipulation. Personal impressions refer us to knowledge about specific people and their cognitive perspectives, that means to the truth, although it is sometimes subjective. Manipulated images are not covered in reality, they constitute a self-referential illusion, without any additional points of reference, leading directly to the so-called post-truths, or lies.

Appropriate preparation is necessary in order to be well-versed in the web of deceit, lies, distortions, subjective impressions and free creation of an individual's image. Otherwise, as in the case of fuzzy identity, we are unable to distinguish truth from lies, nor (as a logical consequence of general confusion) design our actions with some meaning. As a result, we can easily fall political prey to all kinds of extremism and populism. A deceived and denigrated voter, deluded by empty promises, ultimately makes absurd choices which are contrary to common sense and scientific knowledge (Wojciszke - Rotkiewicz, 2018).

Becoming lost in the media reality can therefore be treated as the result of two phenomena. On the one hand we are dealing with a media reality which is a kind of simulacrum and a suggestion of how the media messenger wants the recipients to read the message. More penetrating analyses can reveal hidden messages, suggestiveness and interpretive frameworks imposed on viewers, listeners and readers. On the other hand, these manipulated messages have the greatest impact on untrained recipients,

who guarantee the success of the manipulative media activities. Manipulated influence must be met by some form of ignorance or other.

Unfortunately, in reality the ignorant and confused constitute the majority. Numerous studies show that in many even highly developed and economically strong societies, the average, citizen does not understand much of what is contained in such a basic media message as a news service (Czapinski - Panek, 2015). Another experts proved that stereotypes, imaginings or slander, as a part of manipulated messages, passes from the past to the present, and are reflect especially in the environment of new media, where there are characterized by recalling "differences" and "peculiarities" (Kondrla et al., 2020b). This means that seasoned social influence specialists can easily influence the attitudes, opinions and actual behaviour of recipients, even without the use of subliminal stimuli.

3 Proto-knowledge and the knowledge of bots

Our informal education from everyday life is as effective as the environments in which we function are sagacious and pro-educational. A community with a high level of cultural capital will easily cope with media simulacrum and the falsification of reality. However, high cultural capital is characteristic of elites, which by definition are exclusive (Bourdieu, 2010). And although the percentage of people with higher education is generally growing in Western societies, the complexity of the world around us (at least the media world) as well as the level of knowledge available to us - for which we need sufficient time to absorb - is also growing.

The average person can easily get lost in this deluge of information which is organized into knowledge. Our world has also become complicated due to the confusion between symbolic orderliness, cognitive perspectives and statuses (Jedlikowska, 2016).

The proto-knowledge of the average person is largely built on social interactions, and these interactions are becoming more and more mediated in our modern civilization (Such - Szczesniak, 2006). The blurring of genres and virtual worlds, hyper-textuality, overlapping and penetrating virtual palimpsests and information bubbles are more misleading than educational. A superabundance of information and competing cognitive perspectives leads to cognitive exhaustion and fatigue. In turn, limited abilities in assimilating and processing information means that we are rarely able to reach alternative interpretations, successive layers of palimpsests or even the one correct reading.

The proto-knowledge of the average person, immersed in the chaos of media spectacles, is therefore a construct reflecting a virtual illusion rather than remaining in some deeper relation to reality. In part, these false convictions are built on emotions and over-interpretations, and also conscious and totally deliberate manipulations, such as Donald Trump's deceptive tweets or the blatant disinformation spread during the Brexit campaign (Murray, 2020).

Whilst earlier proto-knowledge, derived from common knowledge and based on experience, provided a solid foundation for constructing scientific knowledge, present proto-knowledge, built on media spectacles, leads to falsification and does not create any system of knowledge. Bots, computer crackers and skilful manipulators create visions of the world which are closer to the Baudrillardian simulacrum than to the experience of reality.

In a broader sense, we cannot even speak of a joint effort, where people strive to create a socio-cultural and media system that can continuously multiply the public welfare of the population and contribute to the quality of life and general satisfaction of all (Kondrla et al., 2020a). This, in turn, leads us to the conclusion that the media world is a creation and not a reflection, and thus we obtain an atmosphere of pretence,

fabrication and inadequacy. Prediction and planning become as difficult as building castles in the sand.

The only way to regain a sense of connection with reality is to turn to what is known and is tangibly, physically, and organoleptically possible in confronting and verifying. Immersion in a virtual world of simulacra and impressions organized by others does not help in the experience. This is especially true when some of these impressions are created by seasoned manipulators, professional social influencers working on commission, or even by soulless automata or bots, in order to obtain specific benefits. Thus, more and more falsehoods and lies appear in our virtual information space. Honest and trusting people (some would say "naive"), without adequate preparation for taking media texts on board, are particularly exposed to its influence.

The proto-knowledge of virtual communities and knowledge created by bots build a pseudo-knowledge that does not help in making the right personal, professional and political choices.

Also active in the virtual space there are representatives of science who refute the reality falsified by others, but for various reasons they are not as powerful as the reality counterfeiters.

First and foremost it is a problem of scale. Scientists disseminating the results of their research and correcting false reality are in the minority. Actually, compared to mass bot attacks it is a relatively small group, which in addition usually deals with quite specific "segments" of reality. In observing the activity of academics in the virtual space, it could be concluded that they are more interested in recreational surfing (for the pleasure of learning) than in disseminating the results of their own research. Most of the scientists I observe either do not go beyond specialist websites, such as ResearchGate, or have relatively low media skills and learn only netiquette and the propriety of media influence.

Media discussions are also often emotional in nature, and the authority, experience and class of scientific specialists become blurred in squabbles full of absurd arguments set against facts and true knowledge. For a dilettante accustomed to questioning anything, the authority of scientific knowledge is irrelevant (Sunstein, 2008). An increasing level of education should constitute an antidote to pseudoscientific nonsense and dilettantism, but graduation is not currently a guarantee of understanding and applying scientific methods. This is especially true after the Bologna Process, when European studies were divided into bachelor (often professional or semi-professional) and master (more scientifically oriented). Thus, some students (at bachelor level) do not even have the opportunity to learn the basics of scientific method. A large number of university graduates know only an arbitrarily established set of selected theories, which additionally are reduced to the needs of first-cycle studies.

And when superficial preparation (or lack of it) in assessing the value of scientific content (even in the form of popular science) meets habitual lying in the form of messages which appeal to the emotions, then common sense, which has always been the foundation of proto-scientific knowledge, is no longer enough.

4 Hermetic and Parallel Sciences

The reasons for the poor influence of science representatives on the media reality lie also in science itself, or rather in the low effectiveness of representatives of the world of science in processing and popularizing knowledge. Scientists themselves very often contribute to increasing the level of ignorance by undermining each other's research results or playing dangerous games for power and domination by destroying one another and undermining authority figures.

Insofar as academic discourse and scientific criticism are extremely relevant in the development of the knowledge system, then challenging theories and findings which are generally accepted, new research and creativity based on a well-thought-out

methodological strategy, as well as on publications in recognized scientific journals, all lead to cognitive chaos and confusion among ordinary people.

We are not inclined to question an authority until another authority appears, undermining the knowledge and competence of the former (Cialdini, 2021). The Internet, thanks to the ease of publishing and increased possibility of communication, combined with limited possibilities of selection and elimination of false claims, becomes a veritable battlefield between truth and fabrication. Authorities and pseudo-authorities pitted against each other on a seemingly level playing field.

The average, non-oriented consumer of knowledge may be misled, either because of their naive approach to the world or simply because of a lack of media skills. However, it is impossible in any way to justify specialists who falsify reality for any reason whatsoever.

Unfortunately, irresponsible 'workers with knowledge' themselves often fuel anti-science pseudo-theories and concepts, undermining not only facts and truths, but also the scientific status of entire disciplines. This applies in cases where representatives of pure science or the natural sciences speak contemptuously about their colleagues representing the humanities, or when members of any discipline are dismissive of other disciplines, considering them unscientific, unnecessary, or a clear example of a waste of public money.

Such discussions don't make much sense. Each discipline has its own methodology with its own procedures, topics and areas of interest (Davidovitch, 2020). The contempt shown to representatives of other disciplines only proves dilettantism, because it is actually the adepts who have been practicing in a specific scientific reality for years, who are able to make sensible statements about the strengths and weaknesses of their field. Others, who are often authorities in their own fields, remain as the same type of layman in the discipline under criticism as ordinary consumers of knowledge are. Using one's authority in one discipline to undermine the status and learnedness of another discipline is in this situation highly immoral and destructive to science in general, not only the branch of science which is under criticism.

Dilettantes (even those with academic titles) are not able to reliably assess the value of knowledge in a discipline about which they have no idea (Switalska, 2010). It sounds like a truism, but the God complex and conviction of one's own infallibility lead to such a totally unimaginable arrogance, which to an ordinary person would seem impossible.

A completely different category are cases of the so-called parallel sciences, which develop in isolation from global scientific life, closed, to some extent, in local environments.

Sciences which are confined to local problems and archaic (or unreliable) methodology, lose the ability to recognize reality, explain it and change it. Local scientific pseudo-authorities, whom no one outside their own country has heard of, who do not know the current scientific literature and who hold power by usurpation, are unable either to establish an honest dialogue with the world outside their narrow environment, or to adequately assess the research results given to them for evaluation. Such scholars do not have to express their pro-retrotopian sympathies, as they themselves live permanently in the past. The science they create is, as a rule, merely repeatedly re-processing old ideas, or copying that which others have created. Such processors of science love complicated terminology, vague arguments, and sometimes go as far as plagiarism and self-plagiarism.

5 The culture war as retrotopian symbolic violence

At some time in the past, the world of science became a hostage in ideological wars driven by politicians who are hungry for power and influence (Applebaum, 2020). In previous centuries, authoritarian powers needed scholars with their knowledge to

effectively manage and control reality. In the 21st century, we are clearly dealing with a situation where an intelligent and educated voter becomes a threat to the authorities, as he is able to undermine the stability of a usurping authoritarian power, especially when such a voter uses critical thinking and opposes lawlessness or corruption. For this reason, the authoritarian regimes and soft dictatorships which come to power in the process of democratic elections try to appeal to the resentment, retrotopia, fears and sense of dignity of those people in whom constant changes of emotion can prevail over reason. Those who will not let their emotions motivate their behaviour can resist such activities. Unfortunately, emotions are generally stronger than common sense, especially when they are driven by the entire political media machine.

In order to find a way out and rise above the politics of emotions, it is worth considering the expectations and interests of manipulators and the far-reaching consequences of the cultural war into which they are trying to draw us.

Undoubtedly, anti-scientific, retrotopian and emotional messages have as an object an ideological offensive, which by definition appeals more to emotions than to rational argument. In such an attack, science and rationality have the right to exist only as arguments supporting a predetermined axiomatic thesis. Otherwise, the authorities are able to disavow any assertion, even by putting forward the most absurd arguments. The manipulation mechanism used in such mass communication is entirely similar to the well-known truths previously described by social psychology. Here the point is not to convince the unconvinced, but to reinforce the conviction of those who believe in the state of affairs presented to them.

Blind faith, which is the opposite of doubt and critical thinking, leads entire societies directly into deepening divisions and escalating hatred. Ultimately, divisions are created that make it impossible to reach agreement and cooperation. In societies driven by the politics of emotions, relational capital is destroyed.

6 Conclusions

We are losing our reliance on reality. Political and media contexts complement each other in the falsification of reality. The valuation of science and knowledge depends on the judgement of the ordinary user (Harari, 2019). However, in ideological wars they become cannon fodder.

We have to realize that we have no tools for exploring, explaining and understanding the world, other than science and scientific knowledge. Against a backdrop of changing emotions, it will be difficult to convince people to calm down, think and rely on science, but we have no other way out. Without science, we will be left with emotions, blind faith and chaos, misrepresentations, divisions and depreciation.

The key to solving the problems caused by the modern world is solid, continuous and enduring education in science (Mostofa et al., 2020). Currently, in these times of anti-science resentment and retrotopia, we particularly need those who perform their duties properly, testify to the truth and do not succumb to manipulation. The ordinary workers with knowledge, who test their inventions and apply science to the needs of everyday life are the true heroes of our times. It is worth helping them by creating an area of cooperation between the world of science and the practical world, referring to specific project activities, disseminating research results and building communities through effective cooperation with representatives of various communities.

Bibliographic references

- APPLEBAUM, A. 2020, *Twilight of Democracy: The Seductive Lure of Authoritarianism*. Doubleday. ISBN 978-0385545808.
- BAUDRILLARD, J. 1994. *Simulacra and Simulation*. University of Michigan Press. ISBN 978-0472065219.
- BAUMAN, Z. 2017. *Retrotopia*. Polity Press Ltd: Cambridge. ISBN 978-1509515325.

- BOURDIEU, P. 2010. *Distinction: A Social Critique of the Judgement of Taste*. Routledge: London. ISBN 978-0415567886.
- CIALDINI, R. B. 2021. *Influence, New and Expanded: The Psychology of Persuasion*. Harper Business. ISBN 978-0062937650.
- CZAPINSKI, J. – PANEK, T. 2015. *Social Diagnosis 2015*. In: *Contemporary Economics*, vol. 9., n. 4. ISSN 2084-0845.
- DAVIDOVITCH, N. 2020. Are the Humanities No Longer Relevant in the 21st Century? The case of Israel – Supply and demand for the humanities in Israel's academic institutions: Between academic policy and "market forces". In: *Journal of Education Culture and Society*, vol. 11, n. 2, pp. 17-38. ISSN 2081-1640.
- GEERTZ, C. 2017. *The Interpretation of Cultures*. Basic Books. ISBN 978-0465093557.
- HARARI, Y. N. 2019. *21 Lessons for the 21st Century*. Vintage. ISBN 978-1784708283.
- JEDLIKOWSKA, D. 2016. In searching for science understanding. Applying the sociology of a science based approach. In: *Journal of Education Culture and Society*, vol. 7, n. 2, pp. 11–19. ISSN 2081-1640.
- KEYES, R. 2004. *The Post-Truth Era: Dishonesty and Deception in Contemporary Life*. St. Martin's Press. ISBN 978-0312306489.
- KONDRLA, P. – TVRDON, M. – TKACOVA, H. 2020a. Current challenges for social work: stereotyping as an obstacle to the integration of marginalized groups into society. In: *ICERI2020, 13th International Conference of Education, Research and Innovation*, pp. 3837-3843.
- KONDRLA, P. – TKACOVA, H. – TVRDON, M. 2020b. Social work and its impact on alleviating the social exclusion of religious minorities. In: *ICERI2020, 13th International Conference of Education, Research and Innovation*, pp. 3844-3851.
- MAYNARD, H.B. – MEHRTENS, S.E. 1993. *The Fourth Wave: Business in the 21st Century*. Berrett-Koehler. ISBN 978-1881052159.
- MOSTOFA, S.M. – OTHMAN, R. – MUKHERJEE, D. – HASAN, K. K. 2020. A Comprehensive Framework of Design Thinking Approach in Knowledge Management: A Review in Academic Context. In: *Journal of Education Culture and Society*, vol. 11, n. 2, pp. 281-294. ISSN 2081-1640.
- Murray, D. 2020. *The Madness of Crowds: Gender, Race and Identity*. Bloomsbury Continuum. ISBN 978-1472979575.
- PIETRZYK, A. 2018. Kulturowe spojrzenie na programy powszechnych szczepien ochronnych wczoraj i dzis, *Cultural Perspectives on Vaccination in the past and present*. In: *Ogrody Nauk i Sztuk*, vol. 9, n. 9, pp. 113-132. ISSN 2084-1426.
- PIGLIUCCI, M. 2018. *Nonsense on Stilts*. In: University of Chicago Press. ISBN 978-0226495996.
- STIEGLER, B. 2012. *Etats de choc: Bêtise et savoir au XX^e siècle*. Fayard/Mille et une nuits. ISBN 978-2755506457.
- SWITALSKA, A. 2010. On the abuses by the thesis supervisor in the light of the academic ethos. In: *Journal of Education Culture and Society*, vol. 1, n. 1, pp. 5-18. ISSN 2081-1640.
- SUCH, J. – SZCZESNIAK, M. 2005. *Filozofia nauki [Philosophy of science]*. Poznan: PWN. ISBN 8323216371.
- SUNSTEIN, C.S. 2008. *Infotopia: How Many Minds Produce Knowledge*. Oxford: Oxford University Press. ISBN 978-0195340679.
- TKACOVA, H. – AL-ABSIOVA, E. – AL-ABSI, M. – PAVLIKOVA, M. 2021. „Media invasion“ against Islam in the context of the Slovak Republic. In: *Media Literacy and Academic Research*, vol. 4, n. 1, pp. 166–179. ISSN 2585-9188.
- TKACOVA, H. – PAVLIKOVA, M. – TVRDON, M. – JENISOVA, Z. 2021. *The Use of Media in the Field of Individual Responsibility for Sustainable Development*

in Schools: A Proposal for an Approach to Learning about Sustainable Development.
In: Sustainability, vol. 13, n. 8, pp. 4138. ISSN 2071-1050.
TURKLE, S. 1997. Life on the Screen. Simon & Schuster. ISBN 978-0684833484.
WOJCISZKE, B. – ROTKIEWICZ, M. 2018, Homo nie całkiem sapiens, Homo not
entirely sapiens. Sopot: Smak Słowa. ISBN 978-83-65731-66-1.

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