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RHETORIC OF DISCARDED PARADIGM. FLAT-EARTHERS AS AN INTERPRETIVE COMMUNITY

The Flat Earth movement, however much older than a notion of participatory culture, can serve as a good example of a community of this kind. It created its own rich treasury of various rhetorical strategies, tricks, tropes, and other sorts of discursive tools. Representing a discarded paradigm of flat Earth concept, during almost 200 years of its history has been engaging its ideological enemies, Globe Believers, so predominant in number, into various and vivid debates, sometimes very long and complex. Flat-earththers undoubtedly create an interpretive community in Stanley Fish's sense, or rather the whole universe of hundreds dispersed and decentralized communities. One of them is "ZIEMIA -- PŁASKA" ("EARTH -- FLAT")¹, Polish speaking Facebook group, gathering more than seven thousand members² and being probably the biggest group of this kind in Polish speaking Internet.

A researcher trying to approach the topic of Flat Earth risks to get into various troubles. At best the topic may seem not enough "academic" from the point of view of "the Real Science". At worst the researcher can be suspected to be a secret, "disguised as academic" adherent of the conspiracy theory he is putting forward. Therefore, these doubts should be dispelled in the first order. Flat Earth theory belongs to a broader class of conspiracy theories, whose popularity, contrarily to expectations of intellectuals, seems to grow along with progress of sciences and technology, in particular technologies of knowledge. By the latter I mean all the technical apparatus dedicated to store, process, and share knowledge, such as printing press, telegraph, computer and internet, among many others. Just as according to Jean-Jacques Rousseau advancement of sciences and arts only corrupted natural human vir-

¹ Subsequently I will use acronym ZP.

² As for May of 2018.

tues, so the progress of communication media opened gates to flood of false and deceitful information — “fake news”. Because of such or other reasons, growing or at least stable popularity of conspiracy theories³ makes them an important point in a contemporary social imaginary. Specialists on the topic talk even about a culture of conspiracy (Barkun 2003; Goldberg 2001). There is no doubt that all or at least some of them contribute to the public debate and create its own peculiar form of argumentation, such as ZP group.

An analytical insight into rhetorical and discursive strategies elaborated by Flat-Earthers shouldn't be perceived as a way of supporting of this theory, since, for many reasons, this theory doesn't belong to the official, academical, state-financed world of science. Nevertheless, this paper does not intend to reject it or to formulate any criticism against it, since I possess no competences in astronomy, nor any other natural science. Thus, this paper stays indifferent from the point of view astronomy and tries only to grasp some discursive presumptions as well as typical rhetorical formulas and figures of thought administered in a discussion with ideological enemies. Flat-earthers world view deserves respect as any other, or even more, since members of the community must live in their everyday life in a real conspiracy. They can be count as a small group of fully free people, consequent rebels, fighting courageously against the whole world that move on to another paradigm. Jean-Paul Sartre complained that truth such as conceived by Descartes limited our freedom. According to Descartes, if something can be perceived “clearly and distinctly”, it cannot be but true — then and only only then. If something is stated as a scientific truth, nobody is able to reject it, no person of the greatest authority. One is forced to believe in it, or risks accusation of irrationality. No revolt can help. This is what distinguishes science from philosophy, religion, art, or magic. Scientific truth in Descartes' sense is overwhelming and we cannot do anything but to accept it, even without its full understanding.

“Since the order of truths exists outside of me, that which will define me as an autonomy is not creative invention but refusal. It is by refusing to the point of being unable to refuse any more that we are free.” (Sartre, 1962: 189)

So the Flat-Earthers do refuse. They stick to the discarded image of Ptolemaic universe, with the Earth in its center (Lewis 1964). A universe being an artifact rather than a natural fact, created by a personal agent, according a theory of intelligent design. This image has been discarded along with Copernican and Newtonian scientific revolution and the shift in the whole paradigm of science (Kuhn 1996). The supporters of Flat-Earth theory constitute then a relic of historical science. They reject Copernicus and Newton and prefer

³ English Wikipedia enumerates dozens of them, conf. “List of conspiracy theories”, https://en.wikipedia.org/wiki/List_of_conspiracy_theories [retrieved 01.05.2018]

to keep with traditional, Aristotelian physics and appropriate world image. Globe is rejected, as they often utter, from an aesthetic point of view. An idea of a monstrous ball hurrying through cold, empty, dark cosmic space seem bizarre and repugnant, whereas a symmetrical and static image of a Flat Earth located solidly in the center of the universe, accompanied by Sun and Moon staying close to Her, may cause gentle feelings and let us get some relax from decentralized and formless chaos the contemporary world became.

In the Cartesian world Flat-earthers are supposed to create semi-closed communities, that resemble to some extent an ideal type of participatory culture. Henry Jenkins used this term to describe fans of TV shows, series (Star Trek), movies (Star Wars), and popular literature (Harry Potter) pretending to conduct their own creative activities. Jenkins enumerates several features of participatory culture (Jenkins 2006). Participation starts when barriers of access gets low enough to make it sufficiently easy to start the cultural participatory practices. In the case of Flat-Earths Internet communities these barriers have been removed, when the medium of the Internet got broad popularity, allowing to gather necessary “critical mass” of members of a given community. The relations among members of the group play a key role, since next distinctive feature of participatory culture is a support from other members of the group to create and share products of someone’s creativity. As much as some know-how of the topic is necessary, so a kind of apprenticeship and mentorship model is involved here, where old stagers give a hand to newbies. Another two points Jenkins underlines are: belief in the significance of one’s own activities and feeling social connection with other members of the group. Both of these dimensions can be confirmed in the case of ZP Facebook group. Supporters of the Flat Earth theory are eager to spread their ideas, because they believe that the common knowledge of covered facts on the real form of our planet could help to make the Earth a better place to live. Also members of the group are ready to express signs of mutual appreciation, as well as consider occasionally an idea of meeting “in real life”.

There are many different kinds of participatory cultures, such as artistic (fan-fiction groups), political (bottom-top political movements), educational, scientific, economic and others (Jenkins, 2006b; Schäfer 2011). Flat-earthers as a participatory culture could be characterized as an epistemological kind, at least prima facie, since the motivation standing behind belonging to the community and the main common activity of its members is to discuss opinions on the external world — its physics, astronomy, its structure, often in the context of politics, religion, and customs. They cultivate an alternative, amateur bottom-top science, following the tradition of Bedford Level Experiment carried by Samuel Rowbotham, one of the pioneers of contemporary Flat Earth movements. Their research activity is conducted “against” official, insti-

tutional science. The latter is accused of lying, of subordination and servility to world governments and political power in general. As for opposite relation, the official science almost doesn't remark existence of Flat Earth theory and its proponents. The representatives of natural science are very unwilling to enter into discussion with Flat Earth believers and those who do are often condemned by colleagues as a case of Alfred Russel Wallace demonstrates. A dispute with an "advanced" Flat-earther is not easy, since the community, with a quite substantial tradition already, elaborated developed and sophisticated rhetoric. Some its elements will be described below.

Most of the people would probably find surprising or even shocking the very existence of individuals rejecting the thesis that the Earth is not a globe, thesis such, apparently, uncontroversial, undeniable, verified and corroborated countless times. Horizon, Sun, Moon, and the stars, all seems to prove the globular form of our planet, whereas Flat-earthers in all these natural phenomena perceive detailed confirmation of their theory. Even the very word "PLANET" seems to support the idea of flatness⁴. One can say that Flat-earth believers create an interpretive community in a sense Stanley Fish gave to this term:

Interpretive communities are made up of those who share interpretive strategies not for reading (in the conventional sense) but for writing texts, for constituting their properties and assigning their intentions. In other words, these strategies exist prior to the act of reading and therefore determine the shape of what is read rather than, as is usually assumed, the other way around.(...) The assumption in each community will be that the other is not correctly perceiving the "true text", but the truth will be that each perceives the text (or texts) its interpretive strategies demand and call into being⁵.

According to Fish, radical neo-pragmatist, not only meaning, but the very text is "called into being" during the process of reading and interpretation. Different interpretations can be incomparable and even incompatible, unable to enter into discussion, such as Flat-earth theory and contemporary science. To become a member of an interpretative community, it's not enough to accept some new truths. One needs the whole training how to conduct an experiment, a reasoning, a presentation, or a discussion.

⁴ Also consequently observed orthography of a peculiar, double dash (--) in the name of the group ("ZIEMIA -- PŁASKA") seems not to be accident, maybe on short dash would be to similar to a ball?

⁵ Stanley Fish, *Interpreting the „Variorum“* [in:] Stanley Fish, *Is There A Text in This Class*, Harvard University Press: Cambridge, Mass. 1980, p. 171.

A Short History of the Flat Earth

Few words of historical introduction will prove useful to better understanding contemporary Flat-earth theories. The topic would need deeper insight into the history of astronomy, but for our purposes it will do to set three milestones in its history (even though chosen partly arbitrarily): Ptolemaic system of geocentrism, Copernican heliocentrism, and Newton's law of universal gravitation. It is worth to stress that the globular model of the Earth was present from the beginning of the Mediterranean tradition of astronomy starting with Greek philosophers. Both Plato and Aristotle believed that the Earth is a sphere. Christine Garwood in her book on Flat-Earth deals with a popular conviction that in the epoch of Christopher Columbus people believed that the Earth is flat, which is not the case (Garwood, 2007: 2-3). Earth as a flat surface is known rather from Mesopotamian and Egyptian tradition — such would be the spirit of popular Flammarion engraving.

Modern history of the flat Earth theory starts in the XIX century, more than a hundred years after the death of Izaak Newton. Along with Nicolaus Copernicus he was the biggest "schwarze Charakter" and the greatest enemy of Flat-earthers, because of his theory of universal gravitation. In the 30. of XIX century Samuel Birley Rowbotham vel "Parallax" conducted Bedford Level Experiment to prove that the Earth is flat. The experiment was subsequently repeated many times, both by his followers such as John Hampden, or his later opponents, as Alfred Russel Wallace. The results, however, were different and strongly related to the views of a person performing the experiment.

Nevertheless, Parallax's publications and lectures attracted broad interest. He declared to reform astronomy as a science and built it on completely new foundations. He described his theory in details in a work published in 1865 under a somehow long title: „Zetetic Astronomy. Earth not a Globe! An Experimental Inquiry into the True Figure of the Earth: Proving it a Plane, without Axial or Orbital Motion; and the only Material World in the Universe! By Parallax". The book was and still is selling out fairly good⁶. In a clear, coherent, and convincing manner he expounds all the main thesis of his theory, as enumerated in the title. The course starts with a methodological introduction explaining mysterious term "zetetic".

"The term "zetetic" is derived from the Greek verb zeteo; which means to search or examine — to proceed only by inquiry. None can doubt that by making special experiments and collecting manifest and undeniable facts, arranging them in logical order, and observing what is naturally and fairly deducible, the result will be far more consistent and satisfactory than by framing a theory or system and assuming the

⁶ The edition from 2017 is available at Amazon right now.

existence of causes for which there is no direct evidence, and which can only be admitted “for the sake of argument”” (Rowbotham 1865: 2)

Rowbotham was a skilled orator and debater, able to win in a discussion even professional astronomers, geographers, and mariners.

“Parallax makes the boldest false statements and as the number of those who can contradict him from actual experiment is small his assertions are believed by thousands” (Thomas Wilkinson Wallis, after: Garwood 2007: 134)

When his lectures and books started to lost attention, Rowbotham opened medical practice in a twelve room house in Haverstock Hill in London and was selling elixirs and pills of his production, under the name of “Dr. Samuel Birley” (Garwood 2007: 133).

His actions however hadn’t been left without consequences. Inspired by Parallax, Lady Elizabeth Blunt founded Universal Zetetic Society in 1893. The Society gather people practicing literal interpretation of the Bible, thus believing in six day long creation, flat and young Earth, as well as close Sun and Moon (Garwood 2007: 156-157).

The next chapter of the history of Flat Earth theory refers to its origins. The founder, Rowbotham, in his youth early in his career was engaged in the organization of a commune, following ideas of Robert Owen. Utopian threads lie deeply in the core of flat Earth theory, as in many other conspiracy theories. John Alexander Dowie was a Scottish evangelist and healer, effective enough to gain large group of followers and worshipers. The fortune acquired thanks to healing let him built a utopian Zion City on 6500 acres of farmland in Illinois, on a western shore of Lake Michigan (Garwood 2007: 191).

“By law ‘all diabolical evils of the world’ were banned, and this included alcohol, pigs, tobacco, oysters, lobsters, playing cards, medicines, vaccination, drugstores, hospitals, doctors, theaters, sorcerers, dance halls, opera houses, circuses, houses of ill repute, labor unions and masonic lodges.” (Garwood 2007: 193)

Starting from 1901 pilgrims from the whole world began to arrive to the “Promised Land” of Zion City and it blossomed as a commercial and industry center. The Zion Fig Bar, inspired by Biblical fig, became best-selling snack in USA from the 1920s till the 1950s., bringing millions in incomes (Garwood 2007: 192). Dowie’s successor as a head of the Zion City, Wilbur Glenn Voliva, introduced Flat Earth theory, along with creationism, to the school curriculum in city parochial schools. Talented organizer, Voliva established in 1923 a radio station, first evangelical radio station in the history, one of the most powerful in the USA at the moment, broadcasting as far as to Australia and New Zea-

land, what brought more settlers to Zion City (Garwood 2007: 212).

In 1956 Samuel Shenton created the International Flat Earth Research Society, that declined in subsequent years. Nevertheless, Internet gave a new power to Flat Earth communities. Another Shenton, Daniel, not related however to Samuel (Costa 2010), relaunches the Society on the base of internet forum hosted on a website www.theflatearthsociety.org. The Facebook group “ZIEMIA – PŁASKA” exists only informally, members of the group doesn’t constitute any official body. It is a phenomenon representing full fledged bottom-up participation. Its existence fully depends on the existence of medium of Internet, and Facebook social network more particularly. The latter lowers threshold for participation (Henry Jenkins’ notion) enough, so as to allow people to gather and conduct a vivid discussion. In the following part of the paper I will examine some of typical forms of argumentation being in use in the ZP group’s conversations.

The Flat-earththers and their discourse

Before getting into question of argumentation strategies and discursive presumptions of ZP, one should articulate few words concerning methodology of the research undertook. There are several ways Internet, “electronic” text can be approached with a purpose of methodical examination. Perspective adopted in this research is aiming into semantic analysis of the text of culture in a vain of hermeneutics — looking for senses hidden in signs, and semiotics — expanding and enriching repertoire of sings and its genres. To some extent semiotics of the electronic, Internet text is in a similar situation as theory of orality, as far as the evanescence of the material basis is concerned. Both oral statement and Internet site dissolves into nothingness, unless sustained in their existence by external carrier. A voice can be recorded with a microphone, a WWW site can be saved to a mass storage device. Nevertheless electronic text is deprived of the “reliable locatability” (Levinson 2014: 83). Hardly any URL address referred to by Lev Manovich in his “Language of New Media” from 2001 is accessible online today. The same limitation concerns Facebook group content. Online services intending to archive the content of the world Internet, such as Archive.org, are of restricted usage for password-secured sites such as FB groups.

Actually, as far as modern internet sites are concerned, loaded with Java Script functions and profiting out of technology of cookies, in most of the cases it is not even possible to give a specific URL address. This is a case of most Internet social networks and Facebook among them. Therefore, the researcher is supposed to collect and store the research material by her or himself. Also, a reader has no choice, but to suspend disbelief and trust the

researcher. Of course a reader should be able to verify the sources, but will be confronted with a challenge to find it. Also very quickly this content will most probably disappear from the Internet at all. This fact only confirms the importance of this kind of investigations. For the sake of the research to present I gathered some of the most typical points of discussion between Flat-earthers and its opponents. My research sample had been collected during about one-year long, passive participation in the group ZP, thus limited to reading and storing posts.

“We are NOT interested in debates”

What are functions of a description of a Facebook group? On the one hand it's an informative function, since the description basically provides information about the group. But on the other hand it does also perform an incentive function, encouraging new members to join. A closer look at actual self-depiction of the ZP group will help to understand how these and some other function of this kind of message works.

The self-description of ZP group is about one page long in print (about 2000 chars), written in a few paragraphs. Rather homogeneous form discloses a rigorous structure of concise and comprehensive presentation. The text is informative and functional, what is probably due to long process of edition and redaction, in response to current needs and communication problems, controversial topics, unwanted behavior and repeating questions.

The description consists of three well separable parts, even though this structure hasn't been mark in any graphic way. The parts are:

1. General presentation
2. Method, content, and a target
3. Code of behavior

Each section consists of subdivisions. General presentation of the group is made up of three parts. This triadic schema of group in its structure medieval scholastic theology treatises, uncovering what the group is, what the group is not, and what is still uncertain.

“Our Group “Earth – Flat” is a site for flat-earthers and for those, who are sincerely interested in the topic and want to expand their knowledge on various aspects of our flat and stationary Earth, and share their insights, observations and questions”⁷

One should remark moral requirements for participants, such as sincerity of interest in the last quotation, or honesty expected from beginners (in one of the following paragraphs). Another important point mentioned in the

⁷ Description, „ZIEMIA – PŁASKA”, <https://www.facebook.com/groups/310827685793049/> [retrieved 01.05.2018], later referred to as D.

opening of the presentation, in the first sentence, is its educational function. It is designed for those who want to expand their knowledge, but not through critique and discussion. Too eager questioning is not welcomed here. There are some axioms not to get examined by critique and unquestionable. Lack of admitting the general assumption that “the Earth is flat” entails almost automatic removing from the group. One of the questions a new member is supposed to answer is “Which proof of the flatness of the Earth does convince you most?”. It does not even ask you about the form of the Earth — this is presumed as true already. Immediate and unconditioned confession of the “credo” is a necessary condition of participation in PZ group.

“We are at a stage where we are NOT interested in debates like flat earth and earth sphere. Flat Earth is not a hypothesis, let alone a system of beliefs, it is a verifiable and confirmable fact that people from around the world have known for thousands of years, but indoctrination and censorship of the last 500 years have caused that this once obvious knowledge is today marginalized, manipulated and ridiculed. The materials collected and experiments undertaken unequivocally confirm that the earth is stationary.” (D)

Yet the religious motivation of the Flat-earth outlook had been explicitly rejected. The foundation of the belief is empirical experience. Actually, Scottish philosophy of common sense has a lot to do with Flat-earth movement of XIX century. Garwood writes about “the Victorian ideal of self-help in gaining the knowledge of the world (Garwood 2007: 42). Partisans of the Flat-earth theory reject scholar, academic, second-hand erudition and prefer private, direct access to the truth. From this perspective Flat-earthers can be compared to mystics who dismiss the mediation of an institutional church in the contact with God and aim at immediate and private connection with Sacrum. Flat-earthers refuse to take part in the scientific division of labor⁸. This concept would entail letting experts to state all the facts from the realm of their competence. But in this case we are deprived full epistemological autonomy. “Start to think independently” (D) — is one of mottoes of PZ. They conduct amateur “experiments” by themselves, using mobile phone cameras, cheap telescopes or home-made meteorological balloons. As Thomas the Apostle they don’t believe, until they see with their own eyes. We cannot see curvature of the horizon or convexity of water, therefore the Earth is flat. Nobody ever saw the South Pole, therefore it doesn’t exist. Those who claim they saw, lie or are manipulated.

The third point of the introductory part of the self-description honestly discloses some gaps in the certain knowledge elaborated until now by the

⁸ Notion coined following Hilary Putnam’s hypothesis of the division of linguistic labour (conf. Putnam 1979).

Flat-earth movement. One of the knowledge is information on astronomical objects, such as the Sun, Moon, star and other. They are observable, but nobody has even been there and examined them. Thus, nothing sure can be said about them. Spectral analysis and its conclusions are just some speculative hypothesis, no better or worse than Vedas, say Flat-earthers. Rigor of direct, sense experience dominates methodology of acquiring knowledge about the external world, very much as in pragmatism of John Dewey. Flat-earthers are radical, strict, direct empiricists. They are also skeptics, even though selective. They don't pretend to know all, on the contrary, they are willing to admit the limits of their knowledge. They even seem to be proud of admitting such limits and very eager to confess it.

The method, content, and the target are detailed in the next part of the description.

“Anyone who uses scientific methods is worthy to be heard and to be respected” (D)

As prominent hallmark of the ZP group is “scientific method”. They call themselves “group of researchers”⁹. Does it mean the group declares hereby its support for science, earlier presented as deceitful and corrupted? Let us read this sentence again. “is worthy [another moral qualification, Polish “godny”] to be heard and to be respected” — it doesn't imply that the right will be granted to her or him automatically. On the one hand this rule defends the group against accusations of anti-scientism, on the other provides for admins of the group a very powerful tool of depriving any user a right “to be heard and to be respected”. Leaders of PZ group are in a strong need of effective strategies and tricks allowing them win a discussion, or at worse finish it in a critical moment. One may suppose they are not willing to use to often the final solution of banning a member of the group. Yet, bans happen on daily basis. One of the administrators of the group created even a special, funny picture to mark an act of banning an insubordinate member.

The “scientific method” the ZP group is dedicated to is based on prepositivist understanding of science. The fact Flat-earthers believe are “proved” on a base of collection of confirmations, whereas a hypothesis aspiring to the name of science should be not only confirmable, but also falsifiable, as Karl Raymond Popper claimed. It means that it should be possible to project and conduct an experiment whose result would prove falsity of the thesis. If such an experiment cannot be undertaken, the hypothesis stays out of the demarcation line between science and pseudo-science. In the case of Flat-earthers there are several possible experiments of this kind (eg. photos from the space), but any time one is given under public consideration, at once ar-

⁹ Description, op. cit.

guments ad hoc are formulated (the photos are fake), making it impossible to prove false Flat-earth theory in a rational way.

Welcome to YoutubeVersity! An Introduction to the Rhetoric of Flat Earth

Let's take a closer look into particular arguments and points of the flat Earth theory. I choose only few topic from huge archive. The ones to be presented below can be divided into two categories: perceptive and geographical. One must note that there are also many other, among them astronomical, astronautical, religious.

Flat Horizon, Convex Water, and a Carousel

Arguments based on direct perception seem the most typical for adherents of the theory of flat Earth. As radical empiricists they pretend to trust only testimony of their own senses. A common argument from senses is flat horizon, presented on countless photos, drawings, and internet memes. "You will learn more from a Flat Earth meme, than you ever will in school" one of the latter proclaims, showing a picture of a sea with a rectangular lattice drawn on it, illustrating ostentatiously the flatness of the horizon line. The knowledge on Flat Earth seems to possess a property of a sudden illumination — one meme is supposed to "repair damages" caused by years of school education. A common place of ZP group discussions is school "globular propaganda", starting already in kindergarten, where children are exposed on pictures of the globe of the Earth and cosmic space. What we think conditions our perceptions¹⁰. If we are convinced that the Earth is a globe, we don't see that the line of the horizon is straight, as the level of the water is always plane (what is another one axiom of the Flat Earth theory). The Sun, or a ship don't hide below the horizon — they just are becoming smaller and disappear. Numerous videos of Sunsets and ship disappearing on the horizon shoot by phones of members of the ZP group, as well as found on youtube document this phenomenon. Participatory knowledge practice of the Flat Earth community is founded on empirical evidences obtained by themselves. They rely only on their own epistemic activity. They are trying to "privatize" astronomy and conduct astronomical research in their own way, tailored to their own needs, appropriate to their own sensitivity.

Another typical justification of stationary, Flat Earth theory is lack of visible movement of the ground beneath our feet.

¹⁰ Another Flat-Earth meme comments a pair of a photos of flat horizon and a convex one with statements, appropriately, "What you see" and "What you believe".

“If the Earth and its atmosphere were constantly spinning Eastwards over 1000 mph, this should somewhere somehow be seen, heard, felt or measured by someone, yet no one in history has ever experienced this alleged Eastward motion; meanwhile, however, we can hear, feel and experimentally measure even the slightest Westward breeze.” (Dubay 2015)

The quote from Eric Dubay, one of the guru of contemporary Flat Earth movement, an author of “200 Proofs Earth is Not a Spinning Ball”, exemplifies typical way of thinking on physics and astronomy. The only fact possible to accept should be perceptible by my own senses. Otherwise, one should suspend judgment, as it is in the case of astronomical objects, or the borders of the Earth in Antarctica. Nobody was here, thus nothing is sure about that. We can feel the air movement when riding a carousel with a speed of 30 km/h, or a train with a speed of 100 km/h, but notice nothing, when the Earth is spinning with a velocity more than 1600 km/h? Simple, direct testimony of senses prevails over complicated reflection, involving more factors.

Another popular argument from direct perception and one of the foundations of Flat Earth physics is a conviction about impossibility of convex water surface. A statement of one of the group leaders and admins documents not only this thesis, but also general understanding of a “scientific method” mentioned in the description of the group.

“scientific methods are OBSERVABLE, MEASURABLE, VERIFIABLE and REPEATABLE. Theories that are not confirmed by observations, measurements and tests are pseudo-science. If someone claims that the water curves and sticks to the sphere, a truly scientific way to present it would be in a practical demonstration. If you are not able to demonstrate it then it is a pseudo science and empty theory not supported by practice.”¹¹

Everyday experience tells us that that water surface is plane. Also, when one tilts a glass of water, the water spills out. The globular theory seems to deny both of these “common sense truths”. One of popular memes concerning this question, circulating in various versions, is the globe of Earth with the water of oceans flowing “down” to the cosmic space. Nobody ever saw a ball with water sticking around it, utter members of the ZP, therefore it is impossible. Flat-earth science doesn’t allow any speculations. If something is to be true, it must be a truth standing in front of our eyes. No any theoretical model, impossible to present in a simple, home made experiment is allowed.

Such a sheer speculative construction would be the force of gravity, unanimously rejected by all the Flat-earthers. Izaak Newton is one of the greatest enemies of the movement.

¹¹ „ZIEMIA – PŁASKA”, <https://www.facebook.com/groups/310827685793049/> [retrieved 01.05.2018]

“Gravity is just magic and it’s black... hahaha... we already know one real force of attraction and it is a magnetic force. Magnetic force attracts lighter objects stronger than heavier objects, and fictitious gravity is exactly contrarily. (...)

On our earth there is a law of support, that is, everything must be supported by something and if it loses support or suspension, it will fall towards medium of greater density” (PZ)

The only “invisible” force allowed is the one that can be “visibly” proved with few pieces of magnet and iron. Gravity is far complicated and abstract theory that the theory based on density substances: a stone is thicker than water, therefore it sinks, a plastic is thinner than water, therefore it floats. Another way to undermine the gravity force, grounded on sensual evidence, is to show that there are things that “deny” gravity, such as birds, or (modern version) planes. How it is possible that gravity holds the whole ocean, whereas a little bird is able to defeat it easily? For the Flat Earth community each jump is an evidence against Newton’s universal law of gravitation. On the Youtube one can find many videos with sinking and floating objects, as well as with jumping, laughing people, contributing in popularization of the Flat Earth theory. YoutubeVersity is already equipped with Youtuboratory.

Another one argument that would belong here has a different structure than above mentioned. When someone from opponents of the Flat Earth theory uses a notion of a straight line (for instance, a straight line is the shortest way between two points), an instant reply would be that there are no straight lines on a globe. If the plane flies along strictly straight line they would quickly leave the atmosphere of the Earth and escape into cosmic space. In this case a globe believer is caught into her own trap. She is denying implication of her own theory of Globular Earth and relying mostly on the testimony of her own eyes, exactly as Flat-Earthers themselves. We are all Flat-Earthers! This strategy finds its extreme expression in the title of a post of one Flat-Earth blogger: “Flat Earth — it is possible to deny it?”¹²

From Johannesburg to Sao Paolo trough London

Another argumentation line concerns the questions of geography. As for this aspect arguments have often form of refutation of typical “common sense” evidences proving that the Earth is round. One of the first things from our education in geography and history in primary school are travels of Chris-

¹² „Płaska Ziemia” – czy da się temu zaprzeczyć?, 1.06.016, [in:] Obserwator Czasów Końca Obserwacje, wieści i informacje ze świata w świetle prorocत्व Biblijnych w czasach końca na drodze do Zbawienia, <https://obserwatorczasowkonca.wordpress.com/2016/06/01/plaska-ziemia-czy-da-sie-temu-zaprzeczyc/>

topher Columbus and of Ferdinand Magellan. The latter is of a special interest for Flat Earth communities, since it is often said that Magellan proved that the Earth was round or that he was the first to travel around the globe, even though neither is a case. As I already mentioned, it was a common knowledge among educated people in Middle Ages that Earth is a globe. Also, Magellan died in the battle of Mactan in the Philippines. Yet, Flat-earthers utter, the expedition of Magellan supposed to circumnavigated the Earth globe could equally good circumnavigate the whole Flat Earth land. It is usually visualized by Flat Earth maps that are based on the azimuthal projection, such as the one on the flag and the emblem of United Nations. The map intended to undermine euro-centrism of Mercator projection is able to support geocentrism.

The azimuthal projection exclude the whole continent of Antarctica. Apart from Magellan travel this question is of big interest for PZ. If the Earth is flat and looks like on the azimuthal projection, logic goes that Antarctica is not an island, but a wall around the whole Flat Earth, locking it in her icy embrace. From the point of view of pragmatism Antarctic can be a monstrous wall of ice, as good as an island covered with monstrous cover of ice. In neither form it affects in any meaningful way practices of our everyday life. Not more than a controversy between *homoousios* and *homoiousios* in the First Council of Nicaea, or the reality of trans-substantiation during the holy mess. What is behind the wall? Nobody has ever been there, hence we have no certain knowledge. Parallax and the pioneers of the Flat Earth gave examples of travelers who got lost trying to cross South Pole. Contemporary version is related to politics and US domination, that lets them to guard the whole line of the great Antarctic wall with Pentagon forces, shooting anyone trying to access.

The two above described arguments have already its tradition in the history of Flat Earth. Another one visibly originated later, inasmuch as it refers to aviation. There are several amateur and professional pilots belonging to Flat Earth community, some of them active members. Of course, their voice is of a special importance on account of their extended — in comparison to a “normal person” — sense capabilities, such as view from above without any mediation such as photography. Apart from that, several discussions are devoted to possibility to take a flight that could be a “final proof” of flatness of the Earth, connecting points that are close on globular model of the Earth and distanced on the flat model. One of the members of the PZ gives an example a flight from South Africa to Brazil, which pass through London,

“where the globe evidently appears nonsense — where one could fly only over the ocean and fly twice as long as below, all of Africa — from Johannesburg to Sao Paolo.” (PZ)

It doesn't actually matter if the example given is a real flight. Even if an eager participant of a discussion finds a flight apparently denying proposed

thesis, it is always possible to use some ad hoc arguments, such as that this flight exists only in theory, for in practice is always canceled.

Conclusions

In this paper I was able to show only few points of the rich and developed Flat Earth theory, nowadays incarnated and flourishing on electronic medium of the Internet. The rhetoric of Flat Earth seems to constitute a complete and closed system of beliefs supported by the long list of arguments, confirming Flat Earth and undermining Copernican-Newtonian physics and astronomy. The Flat Earth paradigms remains nowadays an isolated island with an independent interpretive community, rejecting contemporary science and eager to use contemporary technology. They are not fully isolated, though. They remain in contact and partly overlap with such communities as anti-vaccines movement, creationists, and others belonging to the broader group of conspiracy theories and pseudo-science (Pigliucci, Boudry 2013). Still, they maintain their identity, rigorously selecting what to believe, what to not, grounding their beliefs on a network of arguments, defended bravely against ideological enemies. Representatives of Flat Earth community are very keen disputants, operating numerous arguments and rhetorical tricks, in a critical moment not hesitating to use the final one — banning someone from the group, what is everyday practice. Yet, the PZ group is constantly of growing number of members.

Flat Earth community, especially the one founded on a carrier of internet social network, can be a good example of “filter bubble”, a specific feature of “new Internet” (Web 2.0):

“The new generation of Internet filters looks at the things you seem to like — the actual things you’ve done, or the things people like you like — and tries to extrapolate. They are prediction engines, constantly creating and refining a theory of who you are and what you’ll do and want next. Together, these engines create a unique universe of information for each of us — what I’ve come to call a filter bubble — which fundamentally alters the way we encounter ideas and information” (Pariser 2011: 10)

Old, good, Leon Festinger’s cognitive dissonance theory works well in a new, internet environment. When passing time only in the local (virtual) environment of her own community of friends and co-workers, one is already busy with learning new things from the local, close area, and has no time, nor will, to break up “comfort zone” of local knowledge and try to stick out of her everyday horizon of expectations. Actually, it doesn’t matter, if this is flat or convex horizon.

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