Information disorder

Francesco Biondo / Gevisa La Rocca / Viviana Trapani (eds.)

Information disorder

Learning to recognize fake news



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Preface

by Ferdinando Trapani¹

The Smart Specialisation Strategy (RIS3), namely the national or regional innovation strategies for smart, sustainable and inclusive growth in the European Union, co-funded by the European Commission, with the general objective of concentrating European resources on emerging technology areas that can be developed in the region by focusing on building local knowledge rather than transferring external technological resources.

The Sicily Region, with the ERDF Operational Programme 2014–2020, Action 1.1.5 for "Support for the technological advancement of companies through the financing of pilot lines and early product validation and large-scale demonstration actions", has selected the Fake News project in the effort to support the technological development of tools to control information exchange on the Web to counter the phenomenon of disinformation.

The "Fake News" initiative was implemented by the University of Palermo as a partner in support of the lead partner It.Hub/Blasting News (Milan-Lugano) and was generally articulated in six different phases. The partners were involved in different ways: the university for expertise in the humanities (sociology of communication, law and information design) and the lead partner for advanced technology (ICT). This publication is part of the dissemination of the project and is in many ways its conclusion in terms of the outcome of the academic research carried out by Sicilian faculty with the contribution of other scholars who participated in the project and supported it in terms of transdisciplinary critical analysis.

The Fake News project was developed as a social project to suggest an idea of a plural, open, and dialectical society. One product of social action is public opinion, which directly and indirectly influences policy decisions, including those concerning the control and prospects of social innovation, thus exerting pressure on any kind of democratic regime. In non-democratic regimes, public opinion is strongly influenced by the ruling power. Disinformation hinders the free process of public opinion building by using various means to negatively influence public opinion with the effect of widening the chasm between decision-making power and active citizenry, who in turn needs to be properly

¹ Scientific responsible of the Fake News project, Department of Architecture, University of Palermo.

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informed in order to usefully contribute to achieving publicly shared goals in a transparent manner.

The volume is divided into four parts that in some ways reflect the cognitive path that the project followed: from technological (ICT) to social instances, reflections highlighting the impact of disinformation on law and the safeguarding of public information to considerations on the implications for visual communication, architecture and urban planning.

Based on these studies, we believe it is possible to open a new field of study in which social studies can find a way to engage with other crucial disciplines to build connections between society, justice and quality of communication in the transformation of the places and spaces of the physical and virtual city.

Benedetto Inzerillo

Environment, information, fake news

Abstract: Although more than twenty-five years have passed since the publication of a report that clearly shows the scientific evidence on global warming and the influence of human activity, today there are still thousands of fake news stories circulating on the web. Lobbies have always used the media to discredit science, and with the boom in social media this strategy has shifted online. Deniers single out items of scientific truth and use them instrumentally to render fake news credible. After years of a widespread lack of control, something is changing: since 2020, Facebook has created the "Climate Science Information Center", a platform that signals fake climate news and encourages people to consult official and reliable sources. What can we Designers do? One of the main causes of the climate crisis is the production of carbon dioxide: planting a thousand billion trees would seem to be the most efficient and ecological solution right now. Reforestation or urban forestation projects are giving us time to think about an ecological transition plan (Mancuso, 2019). Our primary goal must be urban models steeped in nature, reduction of waste production and pollution, reduction of energy consumption and projects that employ plants to purify the air.

Keywords: Sustainability, manipulation, communication, ecology, nature

The Anthropocene¹ pertains to humans - a patchwork of lungs, bacterial microbiomes, non-human ancestors and so on - and, at the same time, agents such as cows, factories and our thoughts, agents that cannot be reduced to their purely human utilization or to their exchange value. This irreducibility is the reason why these assemblages can suddenly discontinue their utilization and exchange value in a completely unexpected (unconscious) fashion: you cannot eat a Californian lemon in times of drought. To return to the question of our conceit and intentions: it was 'we' who did it, albeit unconsciously. Becoming a geophysical force on a planetary scale means that, regardless of what you think, regardless of whether you are aware of it or not, here you are, it is you. Those who react against the term are overlooking something in this distinction. You cannot be smug about your own heartbeat or your nervous system (Morton, 2021).

¹ The Anthropocene as explained by T. Morton, (Dark Ecology, 2021) is the current geological epoch, in which the Earth's environment, in all its physical, chemical and biological characteristics, is being strongly affected on both a local and global scale by the effects of human action, with particular reference to the increase in CO2 and CH4 concentrations in the atmosphere.

More than twenty-five years have passed since the IPCC² published "Climate Change 1995: the Science of Climate Change", the report that for the first time clearly demonstrated the scientific evidence on global warming and the influence of human activity. Yet even today there are still thousands of fake news stories circulating on the Internet that dispute the need for decisive action. Only a year ago the Royal Swedish Academy of Sciences organised the first summit of Nobel Prize winners; this was devoted to climate ("Our Planet, Our Future", 26–28 April 2021), and sounded an alarm: disinformation on social networks is endangering measures to save the planet.

From tobacco to global warming, interest groups have always used the media to discredit science (Levantesi, 2021). In the USA, with the support of the more conservative wing of the Republican Party, the "tobacco strategy" is being reintroduced, something that has been successfully attempted since the 1950s by the cigarette multinationals to delay the adoption of anti-smoking measures (Klein, 2021). It was only in 2009 that Congress finally authorised the Food and Drug Administration³ to regulate tobacco consumption. In the actual aftermath of the IPCC report, scientists, think tanks⁴ and multinationals launched disinformation campaigns that were taken up by authoritative newspapers such as the Wall Street Journal, New York Times and Newsweek, and above all by television channels such as Fox News. Between 2003 and 2010, these organisations received more than 900 million dollars per year in funding from the fossil fuel industry. In the last decade with the social media boom, the disinformation strategy has moved on to the web, where deniers claim that climate science is "illegitimate, politicised, unreliable and corrupt". One of the first "items of proof" emerged during Hurricane Sandy, in 2012, in the United States; deniers posted fake photos accusing climate scientists of alarmism, thus successfully polarising the debate on Twitter and promoting the idea that, behind the emergency, there was a government conspiracy to control the country. The phenomenon exploded in 2016 with the election of Donald Trump, who, over four years, passed 176 acts and laws to curb climate warming measures, including the US withdrawal from the

² The Intergovernmental Panel on Climate Change is the world's highest authority on climate issues.

³ The Food and Drug Administration (FDA) (Food and Drug Agency, abbreviated to FDA) is the US government agency responsible for regulating products that are placed on the market, from food to ethical drugs.

⁴ A think tank is a body, institute, company or group concerned with public policy analysis in the fields of social policy, political strategy, economics, science and technology, industrial or trade policy and also military advice.

Paris climate agreement, signed in 2015. Deniers use the well-known technique of manipulation, by isolating items of scientific truth and using them instrumentally to render fake news credible. One of their hobbyhorses is: "The sun is responsible for global warming and there is nothing we can do about it". There is some truth in this sentence: as the source of almost all of the earth's energy, the sun has a considerable impact on the climate. However, scientific research shows that not only has the sun undergone a slight cooling trend over the past forty years, but that temperatures have only increased in the troposphere, the warmest and closest part to the Earth's surface, whereas, in the outermost part, the stratosphere, they have decreased. If warming were really caused by the sun, we would have to witness an increase in temperature in both the troposphere and stratosphere, because the heat would be coming into the atmosphere from outer space. However, greenhouse gases, produced by Man, only trap heat at the lower end and therefore, global warming can be considered anthropogenic in nature. A study by the organisation InfluenceMap⁵, published in 2019, states that in the years since the Paris Agreement, "the five largest oil and gas companies (ExxonMobil, Royal Dutch Shell, Chevron, British Petroleum and Total) have invested more than \$1 billion in climate disinformation campaigns". Who are they financed by? The science blog "Desmog" has collected in a database the names of people, companies and think-tanks committed to hampering the shift away from fossil fuels. Among the most active is the Heartland Institute⁶ in Illinois, which is at the forefront in denying the scientific evidence regarding the anthropogenic origin of global warming, claiming that scientists agree on its being a natural phenomenon. One of the most recent articles published on the "Climaterealism" website firmly disputes the data regarding drought, stating that "NASA satellites have shown that, since 2003, there has been a 25 % decrease in global scorched earth". In contrast, the study "Climate change increases the risk of wildfires", published, in January 2020, in the ScienceBrief Review, reveals how climate change has increased both the frequency and severity of fires throughout the world in recent years. The Heartland Institute is a non-profit organisation, so it is not obliged to disclose its funding sources. However, since 1998 it has

⁵ Influence Map is an independent think tank that provides analysis and data to improve understanding of how business and finance influence the climate crisis.

⁶ The Heartland Institute was established in 1984 as a "foreign corporation" and recognised as a non-profit organisation. Its headquarters are located in Arlington Heights, Illinois. It is devoted to the development of conservative political values and is particularly opposed to ecology and anti-smoking policies; it also opposes global warming and supports fossil fuels.

received at least \$676,500 from ExxonMobil, through Donor Trust, a fund that can distribute resources while concealing the identity of donors, and \$55,000 from Koch Industries, while up until 2012 it had received \$395,000 from Philip Morris. Among the most famous denialist sites are JunkScience.com and Friendsofscience.org.; the former is run by Steve Milloy, lawyer, lobbyist and Fox News commentator. Among his most famous hoaxes is the one according to which the US ban on the pesticide DDT (Carson, 2016) caused millions of deaths in Africa. Friendsofscience.org was launched in 2002 by a non-profit company from Calgary, Canada, and spreads fake news such as "The earth is cooling down" and "The sun is causing climate change". According to the Globe&Mail newspaper, the main financiers of Friendsofscience.org are the Canadian oil and gas industries. In Europe, the Global Warming Policy Foundation stands out – a British lobby created in 2009 by Lord Nigel Lawson, Margaret Thatcher's former finance minister. It recently published an article on the alleged increase in the polar bear population: from 26,000 in 2016 to 30,000 in 2020. In reality, as a study published in Nature in July 2020 shows, there are fewer and fewer polar bears, and in eighty years all the bears on Earth might well have disappeared. In 2020, research by Brown University⁷ revealed how a quarter of the climate tweets in the days before and after Trump's decision to pull out of the Paris Agreement were posted by bots8, automated programmes capable of performing precise tasks or interacting with humans. The experts examined 6.5 million tweets sent between May and June 2017 and, using Indiana University's "Botometer" software, these were sorted out by researchers in line with thematic categories. The study found that on a normal day, 25 % of all tweets about the climate crisis came from bots. In recent years, again on Twitter, deniers have adopted a new strategy: presenting themselves as "realists" as opposed to "alarmists". The website New Republic revealed that, up to 2016, the use of the terms "realists" and "alarmists" was quite rare (around 200 tweets per year), whereas, between January 2016 and March 2020, it grew by 900 %. In June 2019, several Italian

⁷ Brown University is a private US university founded in 1764, located in the city of Providence in the state of Rhode Island and is one of the most prestigious and selective universities on the North American continent.

⁸ Bots (short for robots) in computer terminology is a programme that accesses the network through the same type of channels used by users (e.g. it accesses web pages, sends messages in a chat room, moves around in video games, and so on). Programmes of this type are widespread in connection with many different network services, with various purposes, but generally related to the automation of tasks that would be too burdensome or complex for users.

websites published the "Petition on Anthropogenic Global Warming", a document sent to the presidents of the Republic, the Council, the Chamber of Deputies and the Senate, in which they challenged "climate alarmism" and openly stated that there was neither urgency nor an irremediable crisis. The petition, signed by eighty-three people, including a number of scientists, sparked off a considerable response. The scientific blog climalteranti.it, which has been baiting climate deniers on the net for years, debunked the fake news in the document and showed how the signatories, with very few exceptions, had no expertise in climate science. The history of the 1997 petition, which was the model for the present one, was also reconstructed, showing, in particular, the links between the author of the 1997 text, the physicist Frederick Seitz, and the tobacco and fossil industries. Stefano Caserini, Professor of Climate Change Mitigation at the Milan Polytechnic and coordinator of climalteranti.it, says that, compared to ten years ago, the situation has clearly improved: "Today, more than 99 % of scientists recognise that global warming is anthropogenic. And, in fact, fake news no longer appears on scientific websites and in the most authoritative press, but it has gone viral on the web. The effect is devastating because doubt is instilled in a section of the population, precisely at a time when a radical change in collective behaviour is indispensable. The last resort for the deniers, devoid of alternative theories and defeated by the facts, is to claim that it is already too late to intervene". After years of a total lack of control something is changing, at least on the most popular social network, Facebook. Since 2020 it has created the "Climate Science Information Center", a platform that signals any fake climate news posted by users, who are invited to consult official and reliable sources such as the IPCC. Meanwhile, in 2020, due to planetary lockdown, global CO2 emissions decreased by 5.8 %, but forecasts for 2021 already show a 5 % increase. Despite having signed the Paris Agreement, China continues to increase its emissions, which rose by 0.8 %, even in the year of the pandemic. Beijing remains the main polluter with over 29 % of the CO2 produced worldwide (Nurra,2022). Both the US (despite Trump) and the EU have done better. They both reduced their CO2 emissions by 10 % last year and are now responsible for 16 % and 11 % of the world's emissions respectively and, fortunately, as soon as he became President, Joe Biden, brought the US back into the climate agreement. China plans to achieve climate neutrality in 2060, the US and EU in 2050 (Chomsky, Pollin, 2020).

Being ecological involves a massive change, but of a different order from the one pursued so far; if you have a vague idea that there is an "inside you" and an "outside you",

you are on the right track. Do not flounder in fear of the external threat, there is nothing external, we are part of nature, we are ecological⁹. (Morton, 2020)

In the words of Timothy Morton, we do not have to be ecological because we are already ecological: being ecological implies a strange sense of personal inclusion in what we are experiencing because we are the environment and the environment is us. In fact, we already co-exist with a great number of non-human entities: our own bodies, for example, are hosts to millions of them. The essential point is to admit that we have to reckon with the existence of entities other than ourselves. This point of view demands a questioning of the line of thinking that is anthropocentrism, by rethinking relations with machinic¹⁰, vegetal and inorganic diversities. The various approaches that have defined the crisis on the human scale in the current historical period, have in common a 'transition towards a more conscious concern with non-humans'.

Rejecting the anthropocentric approach, Morton summaries, "does not mean that we hate humanity and want to become extinct, it means understanding how we humans are integrated in the biosphere as beings among others". Everything is interconnected, there is no dualism between subject and object, there is no distinction between nature and culture, we are entangled in a network of relationships in which each entity sees itself, first and foremost, as a multiplicity. Up to 10,000 species disappear every year. Carbon dioxide emissions are increasing exponentially, but governments cannot agree to limit them (Fig.1). When you drive one kilometre on diesel, this takes seven minutes off the life of the rest of the population. Even if we developed renewable sources, with current consumption rates we would have to cover every inch of land with solar panels in order to have enough energy in 300 years' time. This is the Anthropocene (Padoa-Schioppa, 2021), an age dominated by Man.

The future of our planet is not yet settled, and there is no need to look for another one. There are many things we can do to change the course of events. By changing eating habits for example: cutting down on consumption of meat and dairy products (Berners-Lee, 2019); and, above all, on a global scale, redistributing food production among the countries of the world. We should study the extraordinary regenerative capacity of the sea in recreating the ecosystems we

⁹ As T. Morton (We, Ecological Beings, 2020) explains well, we do not have to be ecological because we are already ecological.

¹⁰ In current studies on post-structuralism, when the notion of machinic refers to its etymology, i.e. the Latin machina and the ancient Greek mechané, it is always understood in the meanings of means, instrument, artefact, device, structure.



Fig. 1: Pollution from fuel fumes, coal-fired power plants, incine waste and inefficient transport produces millions of victims every year

have destroyed. Thanks to the results of space research and by creating floating greenhouses and hydroponic farms, underground cultivation will lead to a sustainable use of resources.

What role can design play? Through concrete supporting action, design can contribute towards building a better future via an approach that may significantly affect an impact on the environment. The ideas of designers can stir our consciences and make us aware of how we might contribute to safeguarding the ecosystem. The future of design can and must attempt to translate this emerging environmental awareness into a renewed understanding of a philosophy and policy with trees, the living beings that, more than any other, can save us right now.

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