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ADVERTISING IN THE AGE OF
ARTIFICIAL INTELLIGENCE AND AUTOMATION

from a postcolonial perspective

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Advertising in the Age of Artificial intelligence and Automation, from a postcolonial perspective is an experimental artistic research intertwining the artistic practice with interdisciplinary studies. The research topic is, at the same time, the rationale and motivation for creative practices. The outcome of artistic practice not only expresses numerous theoretical conclusions but also articulates artistic solutions in response to the problems identified in the process of research on this topic.

This artistic research focuses on the emerging issues of contemporary advertising strategies and their deep social impact. Approaching the problem from a postcolonial perspective, the study connects past events to convey a deeper understanding of the various current social phenomena and to formulate strategies on how to cope with their foreseeable consequences in the future. The development of advanced artificial intelligence (AI) and deep learning methodologies has established the opportunity for the rise of cyber-colonialism on a global scale, leading to a significant expansion of global digital empires and the formation of regional corporate digital powers. To observe neocolonialism in the digital age, the study pays special attention to the socio-economic conditions of the Global South and Southeast Asia regions that have been the explicit targets of colonialism from the past to the present.

Following the development of the media industry in the Age of AI and automation, contemporary advertising actively renews the classical sophisticated methods and introduces various novel techniques for approaching, controlling and manipulating the customer. Meanwhile, it establishes new economic systems of production and distribution. Advertising design has gradually moved to a new stage resulting in the shrinking of professional personnel, the expansion of digital design support tools, and thus, moving towards visual-artistic creative production performed by machines. AI systems have become widely influential automated "aesthetic judges" and they have created a "constructed aesthetics" for contemporary culture.

AI, Big Data and The Internet of Things (IoT) have implemented numerous highly efficient techniques to probe the customer's unconscious mind via user information. Personal data have become the priceless propellant to nurture the digital economic system and a basic raw material for operating personalized marketing and targeted advertising. In addition, to control and manipulate the masses even more efficiently, the concept of individualism has been multiplied as a psychological strategy in ~~the~~ contemporary societies. Personalization and customization are in fact "mass deceptions" of the capitalist logic that aims at isolating individuals through the idea of self-love, while offering the illusion of freedom. In fact, there is no choice, no negotiation, and the majority of the social issues are being managed

automatically; therefore, contemporary society operates similar to a market economy in which identity business conquers the cyber world.

Overall, the primary intent of this study is to reveal the hidden tactics of surveillance capitalism and cyber-colonialism, describing the social dilemma of living in a world nearly entirely dominated by digital technologies. By approaching the topic through the methodologies of Critical and Social Design, the present research attempts to analyze and depict the current situation and, through artistic proposals, it outlines potential solutions for a fairer future.

Keywords:
advertising, AI, postcolonialism, cyber colonialism, Critical Design, Social Design

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CONTENTS

TERMS

AI - in computer science, artificial intelligence (AI), sometimes called machine intelligence, is intelligence demonstrated by machines, in contrast to the natural intelligence displayed by humans and animals. Colloquially, the term "artificial intelligence" is used to describe machines that mimic "cognitive" functions that humans associate with other human minds, such as "learning" and "problem-solving".[1]

Automation - is the technology by which a process or procedure is performed with minimal human assistance.[2] Automation has been achieved by various means, but in the last decade, the terms Artificial Intelligence and Automation are often used interchangeably. They are associated with software or physical robots and automated machinery that allow people to improved work efficiency and also created intensive controlling in human being.

Advertising - is a marketing communication that employs an openly sponsored, personal or non-personal message to promote or sell a product, service or idea.[3] Advertising is communicated through various mass media, including traditional media such as newspapers, magazines, television, radio, outdoor advertising or direct mail; and new media such as search results, blogs, social media, websites or text messages. The actual presentation of the message in a medium is referred to as an advertisement, or "ad" or advert for short.

Digital native - The term digital native describes a person who has grown up in the information age. Often referring to Millennials, Generation Z, and Generation Alpha, these individuals can consume digital information and stimuli quickly and comfortably through devices and platforms such as computers, mobile phones, and social media. Digital natives are distinguished from digital immigrants, people who grew up in a world dominated by print and television because they were born before the advent of the Internet[4].

Big Data - Big data usually includes data sets with sizes beyond the ability of commonly used software tools to capture, curate, manage, and process data within a tolerable elapsed time[5]. Big

[1] Russell, S., & Norvig, P. (2010). *Intelligence artificielle: Avec plus de 500 exercices*. Pearson Education France.
[2] Groover, M. P. (2007). *Fundamentals of modern manufacturing: materials processes, and systems*. John Wiley & Sons.
[3] Stanton, W. J. (1984). *Test bank to accompany Fundamentals of marketing*. McGraw-Hill.
[4] Bennett, S.; Maton, K.; Kervin, L. (2008), *The 'digital natives' debate: A critical review of the evidence*, British Journal of Educational Technology, 39 (5): 775–786
[5] Snijders, C.; Matzat, U.; Reips, U.-D. (2012). *"'Big Data': Big gaps of knowledge in the field of Internet"*. International Journal of Internet Science.

data philosophy encompasses unstructured, semi-structured and structured data; however, the main focus is on unstructured data. Big data "size" is a constantly moving target; as of 2012 ranging from a few dozen terabytes to many zettabytes of data.

Advanced capitalism - In political philosophy, particularly Frankfurt School critical theory, advanced capitalism is the situation that pertains in a society in which the capitalist model has been integrated and developed deeply and extensively and for a prolonged period. The expression advanced capitalism distinguishes such societies from the historical previous forms of capitalism, mercantilism and industrial capitalism, and partially overlaps with the concepts of a developed country; of the post-industrial age; of finance capitalism; of post-Fordism; of the spectacular society; of media culture; and of "developed", "modern", and "complex" capitalism.[6]

The Internet of things (IoT) describes physical objects (or groups of such objects) with sensors, processing ability, software, and other technologies that connect and exchange data with other devices and systems over the Internet or other communications networks.[7]

Cloud storage is a model of computer data storage in which the digital data is stored in logical pools, said to be on "the cloud". The physical storage spans multiple servers (sometimes in multiple locations), and the physical environment is typically owned and managed by a hosting company. These cloud storage providers are responsible for keeping the data available and accessible, and the physical environment secured, protected, and running. People and organizations buy or lease storage capacity from the providers to store user, organization, or application data.[8]

Programmatic advertising is an advertising sale and delivery model that involves automating the sale and delivery of digital advertising on websites and platforms via software rather than direct human decision-making.[9] Advertisements are selected and targeted to audiences via ad servers which often use cookies, which are unique identifiers of specific computers, to decide which ads to serve to a particular consumer. Cookies can track whether a user left a page without buying anything, so the advertiser can later retarget the user with ads from the site the user visited.

Global South - is a term often used to identify regions within Latin America, Asia, Africa, and Oceania. It is one of a family of terms, including "Third World" and "Periphery", that denote regions outside Europe and North America, most (though not all) of these countries are low-

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[6] https://en.wikipedia.org/wiki/Advanced_capitalism

[7] Gillis, Alexander (2021). "What is internet of things (IoT)?". *IOT Agenda*.

[8] https://en.wikipedia.org/wiki/Cloud_storage

[9] Thomas, Julian (2018). "Programming, filtering, adblocking: advertising and media automation". *Media International Australia*. **166** (1): 34–43

income and often politically or culturally marginalized on one side of the divide, the other side being the countries of the Global North (often equated with developed countries)[10]

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[10] Andrea Hollington, Oliver Tappe, Tijo Salverda, Tobias Schwarz (2015) *"Introduction: Concepts of the Global South"*. gssc.uni-koeln.de.

a. The foci

Advertising is an artistic medium that has undergone recurring transformations through the course of history. Each new advertising form reflects sharply the social changes in general and in the political economy in particular. Clearly, since the early 20th century, ***advertising has become the pure representation of social power*** (Adorno, & Horkheimer, 2007)[1]. The emergence of mass production in the industrial era created an unprecedented economic situation. The industrial economy has changed the entire social structure, creating a complex consumerist society, in which consumer goods represent symbolic value instead of their own physical value; mass media pursuits the mission of constructing social-cultural standards instead of simply spreading information. Advertising not only manipulates consumer spending activities, but it also contributes to shaping personal perception, directing political decisions, navigating individual sensations or emotions. Expressly, advertising has become a powerful tool to dominate society.

Recently, we are witnessing the overall dominance of the cyber world; online-advertising has become an undeniable social phenomenon. For the most part, we consider online advertising as a normal and harmless form of marketing. However, behind these familiar advertisements, there are several abnormal and conspiratorial industries. Within online marketing strategies, there are thousands of hidden tactics and shady acts that we do not know or care about. Plenty of social ethical and human rights issues are being ignored for the sake of benefits and profits of advertising sponsors. It can be said that the contemporary advertising industry has tremendous consequences beyond economic issues.

In each moment, users of the Internet are being exploited as living resources for economic and political purposes around the world. Moreover, with the help of advanced digital technologies, the dominant governments, corporations, and organizations control, manipulate, and exploit users at different levels. In particular, the remarkable development of artificial intelligence, with machine deep learning technologies, in the first decade of the 21st century has increased the threats of digital risks on personal integrity. Generally, the future could hardly be darker. Large numbers of companies, global corporations and countries have been constantly investing in and exploiting the ultimate superiority of information technologies to pursue the aims of their dominating conspiracies. In addition to giant mechanisms that can improve themselves automatically through their own experiences, plenty of leading educational programs have been training the real human the conspiratorial

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[1] Adorno, T., & Horkheimer, M. (2007). The culture industry: Enlightenment as mass deception. *Stardom and celebrity: A reader*, p.34.

ability to create more and more explicit algorithms that, ultimately, can fully dominate the user's psychology and behavior. Therefore, not only can the automatic system send the right targeted advertising messages to the users, but also it can completely dominate the entire society by controlling their thoughts, predicting their actions and ultimately manipulating their perception of reality. In the main, *the vast expansion of cyber-colonialism has become an essential global concern in this day and age*.

Nevertheless, the cyber-influencers do not act on the global scale and aren't limited to commercial sectors only. "Netizens[2]" exist in a controlling network of different scales and multiple sectors. In almost all countries, cities or even small towns, the digital-based automatic controlling systems are being applied widely. Companies, corporations, non-commercial organizations and political parties are fully exploiting the advantages of algorithms to circulate advertising messages. Taking a wider look, in the process of optimizing the effectiveness of online advertising, there are dire competitions between global and local forces, between commercial and non-commercial entities. All this aims to occupy power ranks over information controlling rights.

Frankly, we cannot completely deny the benefits that technology brings to contemporary societies; meanwhile, we need to see clearly the limitations technology creates in order to have the appropriate perceptions and actions (TaTlić, & Nikolić, 2015)[3]. Artificial intelligence has replaced people in many fields, including the arts. Especially in media design in general and advertising design in particular, a number of algorithms have been created to replace human design work by modeling creativity. This replacement enhances productivity and generates more profit for the advertising industry. However, modeling creative work is actually in contradiction to the nature of creation. The result of creative mechanization can not go beyond the reproduction or repetition of already existing artwork.

Taking a closer look, generous autonomous systems normally operate based on different models which are programmed through algorithms. The creative modules work by connecting sets of existing information. Thus, several sets of digital models of artistic styles, colour tones, characters or scenarios generated by information systems will soon become popular. In the near future, we will certainly receive video advertisements produced by automatic mechanisms. *Algorithms will not only selectively deliver, but they will even construct personally targeted video advertising based on personal data. People will only receive the right, precisely targeted advertisements, specially designed for them, and suiting best their present and their future psychographic model.* Moreover, the personalization of information

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[2] Netizens are the citizens of a globally connected Internet
MacKinnon, R. (2012). *The netizen.* Development, 55(2), 201-204.
[3] TaTlić, Š., & Nikolić, G. (2015). *The gray zones of creativity & capital*. Theory on demand, (17). instituteofnetworkcultures.

that the Internet users are targeted with will become dominant in all types of communication in the future. Without new policies and actions against this process, the person's entire worldview will be constrained to a narrow, poor and monopolar space that will inevitably lead to extremeness and contradictions in the world. Peaceful opportunities seem to be just an illusion.

In this day and age, we tend to have contrasting feelings of faith and fear related to artificial intelligence technologies. The majority of modern advertisements are personalized through machine learning algorithms that create both feelings of satisfaction and anxiety within users. However, those feelings are gradually normalized or forgotten; the conflicting emotions related to AI are sinking in the unconscious storage of individual memory. Normalization has facilitated the unconscious acceptance of the dominance of the new technology. This process has created an invisible wire that ties the user to the world of outstanding technology. In present times, people in general seem to be too dependent on technology and the cyber world. Even though they are able see the negativity of it, they are unable escape from the social community bonds that contain almost all of the matter of the digital realm. **That is a social dilemma!** Several scholars have proposed various solutions to solve this problem. For example: exiting from the technology environment, deleting social media accounts (Janzen, 2019)[4]; creating legal corridors to protect personal information (Frank Pasquale, 2015)[5], outlining an operation of communist AI (Malone, 2018)[6]. Each proposal has its advantages and disadvantages. It seems that we have not yet the most effective solution by far. The question of how people will survive in the super-automation world yet needs to be answered (König, & Rasch, 2014)[7]. We must to generate social attention in all the different fields and create new proposals and ideas to solve this continuously worsening social problem.

The consumer/user has been pushed to participate actively in the process of producing and circulating automated advertising, the product of advanced capitalism. This phenomenon has created several new advertising contexts that have never been seen before. The interweaving and mixing of functional roles among different sectors in the online advertising industry have formed diverse social interactions and profound social impacts. That is, the active social practice of online communities has significantly impacted the decisions to restructure contemporary advertising. Positively, it is also an opportunity for critical thinking, protest actions and situational changes that might contribute to adjusting the operation of current

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[4] Janzen, M. (2019). Ten Arguments for Deleting Your Social Media Accounts Right Now. *Perspectives on Science and Christian Faith*, *71*(2), 133-135.

[5] Pasquale, F. (2015). *The black box society: The secret algorithms that control money and information*. Harvard University Press.

[6] Malone, T. W. (2018). *Superminds: How Hyperconnectivity is Changing the Way We Solve Problems*. Simon and Schuster.

[7] König, R., & Rasch, M. (2014). *Society of the Query Reader: Reflections on Web Search*, Institute of Network Cultures, Amsterdam.

advertising communication. Therefore, in order to map advertising in the age of artificial intelligence, this research does not only stage at reflection and thinking about the related issues, but also combines with actions (Lovink, 2004)[8] which, in this research specifically, are artistic actions through artworks and social projects related to the topic.

b.   Critical and Social Design's approach

Playing an important role in the operation of the modern economic mechanism, advertising is known as a powerful tool to form modern socio-cultural structures, shaping people's perceptions and dominate the way of living in this day and age. Therefore, advertising has become the central discourse of many disciplines and fields. In this book, advertising will be examined from the approach of critical and social design, based on critical theory in the context of the first two decades of the 21st century.

Arguably, scrutinizing advertising in the contemporary context is a vivid way to record social history. While exposing the present economic and political realities, such as the relationship between production and trade, the information flow of organizations and governments and competition between corporations, advertising clearly reflects the social tastes, cultural trends, lifestyles, artistic orientations, and historical ways of communication. Through the investigation of advertising's strategies, production and distribution, as well as its interactions on individuals and communities, we might be able to construct a detailed picture of contemporary society. At the same time, the intensive critical analysis of advertising helps us discover the hidden and dark colors of this social picture, propose critical arguments on the social reality and offer possible solutions in the hope of a better future.

Essentially, advertising is a product of the design process, the artwork of the media designer. In the last century, the majority of research on design in general and in advertising design in particular mostly focused on 'the optimization of business processes and information streams'[9]. Designers as well as design-researchers seemingly only concentrated on building systems of design standards or methods in order to create persuasive images, surreal scenarios and unforgettable products. Specifically, creating stimulus agents of consumption desire is considered the only important duty of the advertising designer. This fact has generally formulated the default commercial task for advertising design. In the direction of this economic function, designers have become the labor force working for merchants, elements of the capitalism machine, or tools of exploitation. In reality, however, all forms of communication are essentially just the means or tools, which do not fundamentally imply any ethical value. The tool might become inhumane when used for the purpose of manipulation or exploitation. On the contrary, if these tools are used to build up a progressive society, they

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[8] Lovink, G. (2004). *My First Recession: Critical Internet Cultures in Transition*, Institute of Network Cultures, Amsterdam.
[9] The Institute of Network Cultures (2020). About. Retrieved from https://networkcultures.org/about/

might have a meaningful role. This is entirely possible with advertising: in case it is designed in the perspective to serve socio-cultural values, it definitely might reach far better social functions than it carries in the present.

By exploring the contemporary advertising phenomena in order to find more positive functions for advertising, the content of this book is largely discussed in the context of *critical theory*, a school of thought established primarily by the theorists of the Frankfurt School in the 1930's (Bohman, 2019)[10], and since developed widely and continuously worldwide. With a critical look at the current state of advertising, this research paper proposes and emphasizes the alternative functions of advertising for an improved society. The process of transforming the roles of advertising in contemporary society might contribute significantly "to liberate human beings from the circumstances that enslave them" (Horkheimer, 1982)[11]. Designers may have a chance to escape their mercenary position, while people could likely be kept at a safe distance from the threats of cyber-capitalism. The normative values of contemporary consumer society are taken into interrogation and impeachment.

Approaching design issues through *critical theory* has become a potential design research methodology. One of the most remarkable manifestations of this is *critical design*. In this book, readers will experience in a case study how critical design has been applied in advertising. Taking critical theory as a foundation, critical design mostly focuses on observing, evaluating, and activating cultural, political, and social functions of design products, instead of emphasizing the aesthetics of form, exploiting the product's commercial purpose or physical utility. The process of exposing ethical, cultural, social realities, and challenging assumptions about the commercial role of advertising can be regarded as the bodywork of *critical design practice*. That is to say, critical design is one of the main applied in this paper.

The term *critical design* was firstly coined by Anthony Dunne in *Hertzian Tales: An Investigation into the Critical Potential of Electronic Product as a Post-Optimal Object* in 1997 (Dunne, 1997)[12]. Initiated by individuals working in the field of product design, the majority of theories related to critical design have, by now, focused mainly on approaching problems of product design or industrial design's objects. The application of critical design to the field of media design is a new research and experimentation direction that has attracted design scholars' attention recently. In order to share critical perspectives, inspiring public debates while diverging from common critical activities, oral and written language *critical design practice* could use various media (such as object, image, sound or video) in *media design*. Concentrating on critical views on universalized social, cultural, and technological beliefs,

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[10] Bohman, James (2019), *Critical Theory*, in Zalta, Edward N. (ed.), The Stanford Encyclopedia of Philosophy (Winter 2019 ed.), Metaphysics Research Lab, Stanford University, retrieved 27 November 2020 from https://plato.stanford.edu/archives/win2019/entries/critical-theory/

[11] Horkheimer, M. (1982) *Critical Theory*, Seabury Press, New York.

[12] Dunne, Anthony. (1997) *Hertzian Tales: An Investigation into the Critical Potential of Electronic Product as a Post-Optimal Object* PhD Diss. London: Royal College of Art.

critical media design generates functional messages. These socio-cultural contents through their diverse emerging forms might potentially build up powerful critical views on contemporary social problems. Applying critical design on the media field is a relatively unique approach for media design research. The process is not only about making use of the intensive theoretical discourse but also about generating a refreshed artistic practice environment for artist-designers as well.

However, the current critical design practice still carries several limitations. Obviously, the problem-solving activity is not clear in *critical design practice*. This is asserted by the proponents of the term, Dunne & Raby. They even acknowledge that critical design is problem-finding rather than problem-solving (Dunne & Raby, 2013)[13]. The "critical designers" rather often identify problems, both existing and yet to come, and ask questions instead of providing answers. Although critical design projects occasionally offer some utilitarian solutions, these are all speculative, and the situations in which they are meant to be implemented, are mainly fictional (Jakobsone, 2017)[14]. In addition, several critical design projects over-indulge in criticism and exposing only the negative status quo. Taking the *Republic of Salivation* project of Michael Burton and Michiko Nitta, for instance, from the series *Design and Violence* exhibited at MoMA in 2013 (Thackara, 2013)[15]: The project portrays a society plagued by overpopulation and food scarcity which is reliant on heavily modified, government-provided, nutrient blocks. This practice tends to lead the viewers to negative sentiments and social pessimism. Therefore, inside the dystopian scenarios of a ruined society, there is always a need for change; useful social solutions must be presented. In order to give meaning to the present and a vision for the future, a constructive criticism should be taken into the consideration, in which the criticism must both point out strengths and weaknesses, address existing problems and offer suggestions as well. Ideally, criticism should go hand-in-hand together with finding solutions; only then the critical practice might have a chance to complete its own social mission.

In the last few decades, aside from the design practices which aim to the future scenarios such as *design fiction* or *speculative design*, we are witnessing the significant growth of *social design* that focuses on problem-solving for the present realities. Differing from conceptual art or critical design, the effects of social design projects are usually much more obvious within ordinary communities. Instead of acting indirectly by raising the public awareness through the artworks, social design projects use design methodology and skills to find specific solutions, promoting social change directly. Realistic, verifiable results are the remarkable feature of

[13] Dunne, A., & Raby, F. (2013). *Speculative everything: design, fiction, and social dreaming*. Cambridge; London: The MIT Press. p.vii

[14] Jakobsone, L. (2017). Critical design as approach to next thinking. *The Design Journal*, *20*(sup1), S4253-S4262.

[15] Thackara, John (2013) *Republic of Salivation* (Michael Burton and Michiko Nitta) at website: moma.org, retrieved 27 November 2020 from
https://www.moma.org/interactives/exhibitions/2013/designandviolence/republic-of-salivation-michael-burton-and-michiko-nitta/

social design projects. Through **social design practices**, the designers have the chance to use their professional competence to respond to the common needs of the community. That is the reason why social design projects tend to prioritize the user groups and marginalized people.

One of the first and important scholars contributing to the concept of **social design** was Victor Papanek. In his early writings from the 1960's, Papanek focused on inducing change within the design field by strongly opposing the *misdesign*. For him, design should account for the needs of all people and should regard its own environmental consequences as well (Papanek, 1984)[16]. He is also a pioneer in social design practice with numerous projects strongly related to socially and ecologically responsible design around the world. Besides Papanek, Victor Margolin can be considered the second most influential scholar through his contribution to the completion of the social design methodology. In his book *The Politics of the Artificial: Essays on Design and Design Studies* published in 2002, Margolin assert that "The primary purpose of design for the market is creating products for sale. Conversely, the foremost intent of social design is the satisfaction of human needs." (Margolin, & Margolin, 2002)[17]. It is certainly true that, starting from the 20th century, design has changed, shaping society in different aspects and fields (Kries, Klein, Clarke & Zehntner, 2018)[18]. Design can create benefits or drawbacks to the community depending on its own ethical perspective. In other words, in order to solve existing problems and create a sustainable life for the future, the issue of social responsibility should be given serious consideration in any field of design.

Inspired by the ideology of social design, throughout the research process for this book several projects have been created with the intention of social problem-solving. Through different media design works, few social solutions have been proposed in order to contribute to tackling netizens' problems related to advertising. Simultaneously, this study encourages the development of positive social advertising and the creation of advertisements that could solve the existing problems of the ads themselves. Using the power of advertising media to promote the changes in users' perceptions and behavior could become a potential tactical solution in confronting the power of digital capitalism in the age of artificial intelligence.

All in all, in a limited capacity, within a certain scope of the study, this research paper will explore the different aspects of advertising in the socio-cultural context of the contemporary network society, and propose several possible solutions on certain actual issues. The entire research is the combination of critical thinking and problem-solving practices; it also aims to form an example of constructive critical discourse in design research. It can be affirmed that

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[16] Papanek, Victor (1984) *Design for the Real World*. Academy Chicago Publishers. Completely Revised Second Edition

[17] Margolin, Victor; Margolin, Sylvia (2002). *"A "Social Model" of Design: Issues of Practice and Research"*. Design Issues. 18 (4): 24–30.

[18] Kries, M., Klein, A., Clarke, A. J., & Zehntner, M. (Eds.). (2018). *Victor Papanek: the politics of design*. Vitra design museum.

approaching advertising in the age of AI from the approach of critical and social design has opened up multiple valuable opportunities for this study in observing the reality, examining the hidden conspiracies, exploring the contemporary social dilemmas, and contributing to social change.

c. Postcolonial perspective

"Each generation must discover its mission, fulfill it or betray it, in relative opacity."
- Frantz Fanon, *The Wretched of the Earth*[19] -

The doubts about the past, anxieties about the present, uncertainties about the future have invaded the minds of our generation, of those who were born following the long colonial era and continuous wars. In the deep awareness of the opacity of the future, the desire for liberation from oppression and exploitation has been the only hope that gave us the motivation to move forward. The question of who has the right to an equitable life is always a major issue for peoples formerly subjected to colonial oppression. As Fanon formulates it in *The Wretched of the Earth* "Colonialism forces the colonized to constantly ask the question: "Who am I in reality?". The ambiguity about self-being has been lurking continuously in the conscience of non-Western people.

It is certainly similar to my personal experiences: I was born and raised in Vietnam - a country that was a vassal kingdom of China for more than 1000 years, a colony of France for 100 years, and a military target of the United States for more than 20 years. Vietnam is still considered a developing country, belonging to *the third world*, based on the discriminative view of those who call their world *the first* or *the West*. The socio-cultural impacts generated by historical events have brought innumerable psychological traumas to many generations of Vietnamese people, including my own, that were born following the Vietnam War (1955-1975). We did not directly witness the catastrophe of the wars, but the painful collective memories still exist in many corners of the society, reflected through the vivid stories of our grandparents and parents, through many works of art or thousands of pages of history books. In addition, having lax legal systems and flawed law enforcement, we are daily faced with the chaos of a society that is being suppressed, controlled, and exploited by different forces. Those historical circumstances and the current social phenomena have directly influenced our vision of the future. In the permanent position of the underprivileged, those who have been and are being oppressed, we are worried about a future of prolonged slavery with the development of new forms of colonialism in the age of artificial intelligence and automation.

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[19] Fanon, F. (2007). *The wretched of the earth*. Grove/Atlantic, Inc..

It can be stated that colonial history has always been associated with outstanding technological advances (Headrick, 1979)[20]. Advanced technology not only creates the superiority of military power through the advanced weapon system, but also forms social and cultural superiority. A prime example is the rapid progress of Western technology in the 19th century which was a major determinant of the imperialist drive on a global scale (Headrick, 2012)[21]. The technological achievements of the first and second industrial revolutions played a remarkably important role in shaping the topmost political and economic position of the Western imperial system. These novelties were the means for European empires-colonialists to consider themselves more civilized than non-European peoples. I propose that this is the rationale used as they embarked on the enlightening mission directed toward peoples who are considered "inferior and backward, irrational and wild" (Said's, 1978)[22]. Technological advantages have remained by far a key factor in creating the distinction between the first and third worlds. It can be said that although the dependent relationship has changed in its forms, the nature of inequality is still sustained. The socio-cultural and political economy assumptions of colonialist logic remain active practices in the contemporary society (Couldry, & Mejias, 2020)[23]. Global technology corporations became the *new mother countries* of our era. Neocolonialism is widespread, with new social features related to communication technology and the data industry. Surveillance capitalism (Zuboff, 2019)[24] has spawned new technology empires. Cyber-colonialism (Loo, & Beng, 1998)[25] or data-colonialism (Couldry, & Mejias, 2020)[26] has become an actual threat for the former colonized countries.

Similar to the suffering described by the idiom *One neck, two rounds*[27] describing the former colonial experiences of many people, the present manipulation, domination, and oppression by the global technological empires/corporations, combined with local power acting within a lax legal environment, have deprived the developing countries' people of their right to self-determination. Through advanced algorithms, personal data analysis, and personalized advertising strategies, advanced capitalism has created a sick and dependent living environment around the world. Through the advertising language such as modernization, life-digitizing with high-tech products and services, present capitalism is carrying out the same

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[20] Headrick, D. R. (1979). The tools of imperialism: technology and the expansion of European colonial empires in the nineteenth century. *The Journal of Modern History*, *51*(2), 231-263.

[21] Headrick, D. R. (2012). *Power over peoples: Technology, environments, and Western imperialism, 1400 to the present*. Princeton University Press.

[22] Said's, E. (1978), *Orientalism*, Pantheon Books New York

[23] Couldry, N., & Mejias, U. A. (2020). *The Costs of Connection: How Data Are Colonizing Human Life and Appropriating It for Capitalism*.

[24] Zuboff, S. (2019). *The age of surveillance capitalism: The fight for a human future at the new frontier of power: Barack Obama's books of 2019*. Profile books.

[25] Loo, E., & Beng, Y. S. (1998). Cyber-colonialism in Asia: more imagined than real?. Media Asia, 25(3), 130-137.

[26] Couldry, N., & Mejias, U. A. (2020). *The Costs of Connection: How Data Are Colonizing Human Life and Appropriating It for Capitalism*.

[27] "One neck, two rounds" means being dominated by two oppressed layers at the same time. "One neck, two rounds" is a Vietnamese idiom widely used in Vietnam in order to describe the suffering of Vietnamese people during the feudal-colonial period from 1867 to 1945.

civilizing mission towards the inferior and backward peoples, similar to what the former colonial empires did.

The majority of high-tech machinery and equipment are being offered and promoted in developing countries for these *civilizing purposes*. The convenience of new technology has created an invisible dependence for millions of users. Technological civilization is experienced by the third world users as miracles, a magic that the first world brought to them. They consider the technological conveniences of electronic devices as a gift from God without or with only minor doubts. Relying on the complexity and unintelligible characters of new technologies, the techno-corporations have formed a new social high class: the *tech-elite* - the "group of (usually young, white and male) developers … who exist in … an abstract mathematical environment, untouched by society, neutral of class, gender or race, capable of 'routing around' the problems caused by the dirty old world outside" (Lovink, 2009)[28]. They proclaimed themselves socially and culturally superior claiming more rights than other groups. The user groups, especially those in developing countries are expected to accept that they belong to the *technologically unintelligible group*, and they also gradually normalize their inferiority. As a matter of fact, accepting this is harmful to the mental health of the *non-tech elites* who are subjugated into current colonies.

There is evidence that the normalization and acceptance of inferior or degenerate status are being extended without limits in many developing countries. The technological or digital divide between countries and regions is still maintained widely. Dependence, exploitation and contemptuousness are the common problems within the *new tech-colonized peoples* of the *non-Western world*. Therefore, in order to analyze advertising in the age of artificial intelligence, with a focus on former colonial regions and Vietnam, the post-colonial perspective becomes an effective tool to uncover the remnants of the past, the current situation, and the future of both the political economy and the socio-cultural development in this region.

d. Artistic research direction

This book has been written as a personal record of my research in the framework of Doctoral of Liberal Arts (DLA) program at Hungarian University of Fine Arts, Budapest. The entire study and related practice are to be considered experimental attempts within artistic research in order to overcome some of the limitations of current art academic discourse, forwarding meanwhile an example of a possible artistic strategy.

The first twenty years of the 21st century have witnessed important changes in many fields, including art. New social phenomena were born, new theoretical attitudes were announced,

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[28] Lovink, G. (2009). *Dynamics of critical internet culture* (1994-2001) (Vol. 1). instituteofnetworkcultures. p.8

and there has been a substantial transformation in artistic practice; Examples include: the explosive development of computer science, artificial intelligence and machine learning, the connection between contemporary art and post-conceptual aesthetics, the transforming of interventionist art, artistic activism and socially engaged art. However, the academic models of artistic research seem to remain conservatively unchanged (Seago, & Dunne, 1999)[29]. The "paradigm paralysis" of artistic research has revealed numerous limitations in examining, analyzing, interpreting and expressing new realities. The attachment of artistic research to other sciences has framed artistic research within rigid concepts and methods, while inhibiting the creativity of artist-researchers. Moreover, the division between art practice and artistic research has reduced the opportunities for their sublimation. Therefore, the break of the arts' ideological anchorage should be considered and artistic research encouraging creativity should be initiated.

In order to discuss the above issue in depth, I published a study as an article - Should we do it differently? (Nguyen, 2020)[30] in October 2020 on Volume 4 - Issue 1 - 2020 of MaHKUscript: Journal of Fine Art Research (see the full article in Appendix). The article formulates group of statements related to the process of transforming research works into artworks, turning the research process into a creative art process, and introducing a particular research-based artistic practice methodology. At the same time, the article also takes the research project "Advertising in the age of AI and automation" as a proposed example of theoretical and practical artistic method. Regarding the publication form of this article, it was presented as an artwork in the form of a mini-game. Through the structure and interactive elements of this game, players receive the message which is the claim of the article itself. Both the form and content of this writing assert that in the event that the research is liberated from formal academic limitations, conducting artistic research would be the same experience as playing a game. The result would always be the unknown that needs to be disclosed. The process of discovery might help players expand their knowledge and develop their skills, and they may also find many hints shortening the path to the findings.

Generally, my article *Should We Do It Differently?* mentioned above and the research model of this study are inspired by the ideas of Professor James Elkins. In the article *The Three Configurations of Practice-Based PhDs*, Elkins emphasizes the *third research model* in higher art education program (Elkins, 2005)[31], in which "the scholarly portion of the thesis is inextricably fused with the creative portion, so that the artwork is scholarly and the scholarship is creative" (Elkins, 2005; Frayling, 1994)[32]. The characteristic of this model was described as *The dissertation is the artwork, and vice versa*. That is the reason why the

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[29] Seago, A., & Dunne, A. (1999). *New methodologies in art and design research: The object as discourse*. Design issues, 15(2), 11-17.
[30] Nguyen, TTT. 2020. *Should We Do It Differently?* MaHKUscript: Journal of Fine Art Research, 4(1): 6, pp. 1–2. DOI: https://doi.org/10.5334/mjfar.70
[31] Elkins, J. (2005). The three configurations of practice-based PhDs. *Printed Project, 4*, 7-19.
[32] Frayling, C. (1994). *Research in art and design* (Royal College of Art Research Papers, vol 1, no 1, 1993/4).

majority of outcomes from this research are shaped as the works of art. Research and creation processes are intertwined and mutually supportive. The thesis has been written according to the book's structure, for a wider audience than only for academic peers, and will be presented to the public in the format of performance art. In addition, the master works, the set of artworks created with a research background that focuses on the central topic, are included in a comprehensive exhibition, and it is considered a form of non-textual publication of the dissertation.

Overall, from a personal point of view, the Doctoral of Liberal Arts is a compelling artistic research program, which has opened up a variety of research directions and creative opportunities in research for learners. With an open program structure, researchers have the opportunities to choose their own research and practice directions that are appropriate to their knowledge base and skill development needs. With an effective management mechanism and the provision of improved research conditions and practice facilities, the Doctoral of Liberal program should become an engaging artistic research program for students around the world.

POST 01
CYBER - COLONIALISM

1.1 Historical overview

History has become an integral part of the of the mind of contemporary human beings. Once in a distant future, people may no longer mention the role of history, but until now history remains a precious clue to understanding the present and imagining imminent possibilities of the future. In other words, the images of the present and future of modern people's minds are influenced partly by their experiences and by events in their past.

> "We study history not to know the future but to widen our horizons, to understand that our present situation is neither natural nor inevitable and that we consequently have many more possibilities before us than we imagine."
> - Yuval Noah Harari, *Sapiens: A Brief History of Humankind*[1] -

Like many children of the former colonial countries of the *Global South*[2], the collective memories of oppression, the pain of war, the disadvantage of living conditions, and the perceived inferior social position, these have become my lingering obsessions. Moreover, among the psychological characteristics of the generation of *millennials*[3]**,** continuously in my mind, there is, at once, a feeling of optimism and pessimism regarding the rapid changes in contemporary society which have resulted from technology development and the dominance of cyberspace. For these reasons, I have given special attention to understand the colonization process and posing a multitude of questions about the existence of colonialism in contemporary society and the danger of its ongoing development in the era of information technology, automation, and global connectivity.

While it was conceived in ancient times, the concept of colonialism is most strongly associated with the European colonial period starting with the 15th century, when nearly one dozen European states established colonizing empires. Colonialism is commonly understood as a practice or policy of control by one person or power over other people or areas,[4] often by establishing colonies (Rodney, 2018)[5] and generally with the aim of economic, political and cultural dominance. The long history of colonialism is divided into four periods: Pre-modern, Modern, 19th Century, and After World War II.

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[1] Harari, Y. N. (2014). *Sapiens: A brief history of humankind*. Random House.
[2] Countries of the **Global South** have been described as newly industrialized or in the process of industrializing, and are frequently current or former subjects of colonialism
https://en.wikipedia.org/wiki/Global_North_and_Global_South
[3] **Millennial** is the first global generation and the first generation that grew up in the Internet age
[4] Stanford Encyclopedia of Philosophy
https://plato.stanford.edu/entries/colonialism/
[5] Rodney, W. (2018). *How Europe underdeveloped Africa.* Verso Books.

According to Collins English Dictionary, colonialism is "the practice by which a powerful country directly controls less powerful countries and uses their resources to increase its power and wealth." Therefore, what makes one country more powerful than another? Under what conditions does one group gain the privilege of controlling another? With what potential can colonialism spread?

Technology and its specific role in the colonization process

Based on much evidence and innumerable historical facts, technology has long played an important role in the development of colonialism. Possessing advanced technology is seen as the key to holding the dominant power. Technology is also considered as a measure tool for the level of civilized society and and it has often been the justification given by imperialists for colonization and the homogenization of civilization.

Ancient times, *the invention of the writing system has been considered the first step in the historical technology of storing and transmitting information*. Possessing a written language is a way for a small group of authoritarian people to govern society, history, and collective memory, by what has been purposefully documented. Writing soon became a means of controlling communication and social knowledge. The concept of written words becomes the representative of social intelligence, and the fear of illiterate people is that they will be denied access to that mysterious system of signs. The Mesopotamian cuneiforms, Egyptian hieroglyphs, and Chinese characters are typical examples of the civilized symbols of the three great empires: the three great ancient civilizations in human history.

Ancient writing system: Mesopotamian cuneiforms, Egyptian hieroglyphs, and Chinese characters.
From 3500 BC. ©Wikimedia Commons

In addition, the fear of ordinary people in the face of powerful forces was associated with magical movements - by ***the primitive automation machines discovered in many places over the world***.

> "As early as Homer, more than 2,500 years ago, Greek mythology explored the idea of automatons and self-moving devices. By the third century B.C., engineers in Hellenistic Alexandria, Egypt, were building real mechanical robots and machines. And such science fictions and historical technologies were not unique to Greco-Roman culture. Chinese chronicles also tell of emperors fooled by realistic androids and describe artificial servants crafted in the second century by the female inventor Huang Yueying. Techno-marvels, such as flying war chariots and animated beings, also appear in Hindu epics. One of the most intriguing stories from India tells how robots once guarded Buddha's relics. As fanciful as it might sound to modern ears, this tale has a strong basis in links between Ancient Greece and ancient India." (Mayor, 2018)[6].

A sculpture depicting the distribution of the Buddha's relics. ©Los Angeles County Museum of Art.

Some of the very first automated machines, for which technical drawing evidence has been recorded, are the engines of Heron of Alexandria in between the first and third century CE. Heron of Alexandria or Hero of Alexandria (c. 10 AD – c. 70 AD) was a Greek mathematician and engineer who was active in his native city of Alexandria, Roman Egypt (Boas, 1949)[7]. He is often considered the greatest experimenter in antiquity. Heron's numerous surviving writings suggest that automatic machines were designed to be operated by mechanical or pneumatic means. These included devices for temples to instill faith by deceiving believers with "magical acts of the gods," theatrical spectacles, and machines like a statue that poured wine.

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[6] Mayor, A. (2018). Gods and robots. In *Gods and Robots*. Princeton University Press.
[7] Boas, Marie (1949) *"Hero's Pneumatica: A Study of Its Transmission and Influence",* Isis, Vol. 40, No. 1 p. 38
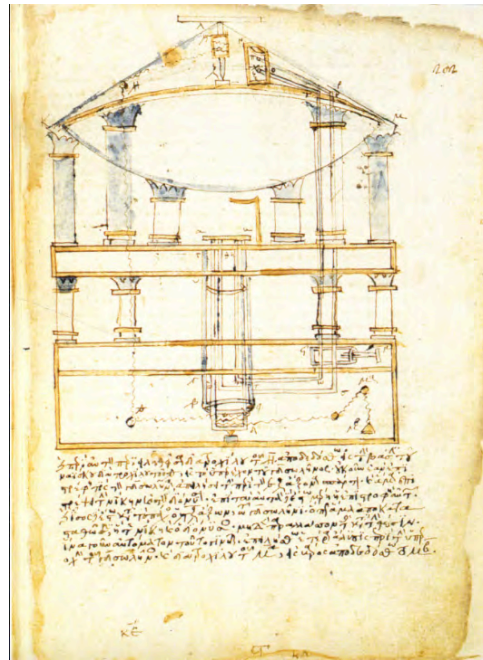
Heron of Alexandria. Diagram of an automaton, a Bacchus figure that dispenses wine and milk in a small temple. The figure has connected by invisible pipes with hidden tanks containing wine and milk. Venice, Biblioteca Marciana, Gr. 516, fol. 202r[8]. This 13th -century codex is the earliest surviving text of Heron's Pneumatica. © historyofinformation.com

There is evidence from the Middle Ages, between the 5th and 15th AC, of the construction of "robot saints" which could move independently and gesture using complex systems of cogs, hinges, and leather straps, powered by "steam, water, or the latent energy held in a winding mechanism like a clock" (Swift, 2015)[9]. The majority of these "robot saints" were made of wood. The still-extant *Iberian robot Virgin de Los Reyes* features a painted wooden head, with arms that are covered in white kid skin to give it the appearance of human skin, and hair made from gold thread. The mother's costume is splendidly decorated. It seems that this is a special symbol of spiritual miracles that were presented in the religious life of medieval believers for many centuries.

Since the appearance of primitive automation machines, there has been and remains a compact and complex relationship between illusion and reality and between magical belief and technological reality in the process of manipulation of human perception.

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[8] Automata Invented by Heron of Alexandria, *historyofinformation.com*
https://www.historyofinformation.com/detail.php?id=10

[9] Swift, C. (2015). robot saints. *Preternature: Critical and Historical Studies on the Preternatural*, *4*(1), 52-77.

Virgin de Los Reyes – a medieval robot – photo by Ubayrbd. © Wikipedia Commons

The power of weapons technology is another example which should not be ignored. Advanced weapons have always been considered a prerequisite in territorial invasions and human control, from ancient times to the present day. The earliest civilizations in southern Mesopotamia, modern-day Iraq, were the Sumerians and Akkadians. The Sumerian warrior was equipped with spears, maces, swords, clubs, and slings. Sargon of Akkad (2333–2279 BCE) was a great military leader; he used both infantry and *donkey-drawn chariots* in his powerful army (Taylor, 2008)[10].

The battle between the Sumerians (left) and the Semites were led by Sargon, armed with bows and arrows. 20th -century reconstitution. ©Wikimedia Commons [11]

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[10] Taylor, Andrew (2008). *The Rise and Fall of the Great Empires*. London: Quercus. ISBN 978-1-84724-513-7.
[11]

https://en.wikipedia.org/wiki/Sargon_of_Akkad#/media/File:Battle_between_the_Sumerians_and_Semites.jpg

The Pharaohs used *horse-drawn war chariots* and various weapons such as improved *javelins, spears, curve bows* and *arrowheads, catapults*, and *big war galleys* of seventy to eighty tons. These helped them conquer the vast northeast of Africa, ushering in a powerful Egyptian empire that ruled the Mediterranean world for nearly 30 Centuries. – (from Egyptian unification around 3100 B.C. to its conquest by Alexander the Great in 332 B.C.).

The Pharaoh Tutankhamun destroyed his enemies. ©Wikimedia Commons [12]

The time after the Egyptian Golden Age was the expansion of the Roman Empire. Differently, the Romans used *simple and unusual weapons of warfare* such as *the gladius swords, spears, plum, shields, and unusual catapults*. The creativity in weaponary contributed to the expantion of the Roman Empire's domination on large territories around the Mediterranean Sea in Europe, North Africa, and Western Asia over the first three centuries after the common era.

Alexander's battle - mosaic around 100 BC Roman. ©Wikimedia Commons[13]

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[12] https://commons.wikimedia.org/wiki/File:The_Pharaoh_Tutankhamun_destroying_his_enemies.jpg
[13] https://en.wikipedia.org/wiki/Alexander_Mosaic

The other important inventions such as ***paper, printing, gunpowder, and the compass contributed to the successful of Chinese dynasties on controlling the vast Eastern land***. According to English philosopher Francis Bacon, writing in Novum Organum: "Printing, gunpowder and the compass: These three have changed the whole face and state of things throughout the world; the first in literature, the second in warfare, the third in navigation; whence have followed innumerable changes, in so much that no empire, no sect, no star seems to have exerted greater power and influence in human affairs than these mechanical discoveries."[14]

The invention of paper and printing technology contributed significantly to the new information distribution technologies helping the Chinese emperors maintain comprehensive rule, and perfecting the administration of a centralized government. Since the 8th century BCE, hemp paper had been used in China for wrapping and padding. The earliest surviving woodblock printed fragments are from China. They are of silk printed with flowers in three colors from the Han Dynasty (before 220 A.D.). The earliest examples of woodblock printing on paper also appeared in the mid-seventh century in China.

The Diamond Sutra of the Chinese Tang Dynasty, the oldest dated printed book in the world, was found at Dunhuang, in 868 CE. ©Wikimedia Commons [15]

Gunpowder was discovered by the Chinese in the 9th century AD, during the Tang dynasty (Lorge, 2008)[16] They were the first people to systematically use it as weapons on a wide scale. From about 1000 AD, gunpowder has been used in the form of firecrackers and, during the earliest days, was used to improve existing weapons by attaching it to spears to create a shocking burst on engagement and with arrows to increase their speed mid-air or be shot in large salvos without the need of bows. In the 12th century, the Chinese used crude hand

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[14] Novum Organum, Liber I, CXXIX – Adapted from the 1863 translation
https://la.wikisource.org/wiki/Novum_Organum/Liber_Primus
[15] https://en.wikipedia.org/wiki/Papermaking#/media/File:Jingangjing.png
[16] Lorge, Peter A. (2008), *The Asian Military Revolution: from Gunpowder to the Bomb*, Cambridge University Press

grenades (Taylor, 2008)[17] and began to use the earliest form of rockets and cannons in addition to the aforementioned firecracker weapons. There is no doubt that gunpowder weapons were a powerful tool of Chinese emperors during their invasions, helping them own most of East Asia for centuries.
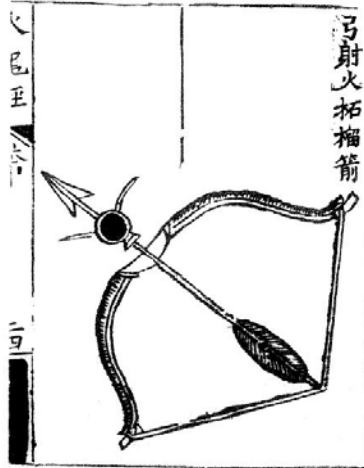
A fire arrow using a bag of gunpowder as an incendiary. As depicted in the Huolongjing (c. 1390).
©Wikimedia Commons [18]

Ming artillerymen from a mural in Yanqing District, Beijing. ©Wikimedia Commons [19]

In the 3rd century AD, the world's first compass made of lodestone, the naturally magnetized ore of iron, has also invented during the Han dynasty in China (Lowrie, 2007)[20]. However, not until the 13th century was the dry compass invented in Europe; and it opened a new era for navigation technology, especially helping Europeans to go further. It began to unify the

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[17] Taylor, Andrew (2008). *The Rise and Fall of the Great Empires*. London: Quercus.
[18] https://en.wikipedia.org/wiki/History_of_gunpowder#/media/File:Manual_Fire_Arrow.jpg
[19] https://en.wikipedia.org/wiki/History_of_gunpowder#/media/File:Ming_artillerymen.jpg
[20] Lowrie, William (2007). *Fundamentals of Geophysics*. London: Cambridge University Press. p. 281.

general method of the different pre-existing systems of geolocations. Human movement in general and expeditions to new lands became easier. The new compass also created the initial condition for the first world maps to be formed and is the foundation for an entirely new perception of space for humanity. At the same time, it was the basic advantage for European empires to claim possession of different territories and turn many newly found lands into colonies.
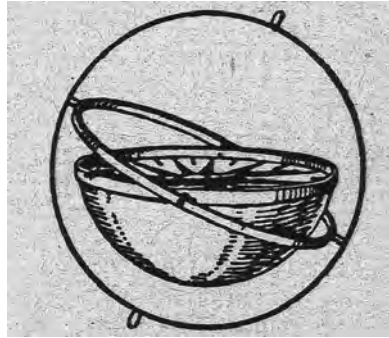
Early modern dry compass suspended by a gimbal (1570) ©Wikimedia Commons [21]

A 13th-century depiction of the world as a circle divided into three continents, Asia, Europe, and Africa.
©British Library

One of the earliest maps to show the New World, the Cantino planisphere (1502) ©Wikimedia Commons [22]

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[21] https://en.wikipedia.org/wiki/History_of_the_compass#/media/File:Kardanischer-Kompass.jpg
[22] https://en.wikipedia.org/wiki/File:Cantino_planisphere_(1502).jpg

In addition to the advances in navigation technology, the rapid development of **seagoing ships** in the 13th century ushered in the *Modern time of colonialism - the Age of Exploration*. For example, ships developed by the Portuguese: the caravels (in the 13th century) and the carracks (in the 15th century)[23]. Portuguese Prince Henry the Navigator (1394–1460) is considered the originator of modern colonialism through explorations and maritime trade with other continents through the systematic exploration of Western Africa, the islands of the Atlantic Ocean, and the search for new routes. Spain (initially the Crown of Castile), soon after Portugal, encountered the Americas (1492 onwards) through sea travel and built trading posts or conquered expansive areas of land.

In succession, the 1st and 2nd industrial revolutions marked an important milestone in colonial history. Especially, the emergence of the **steam engine** and the unprecedented development of **mass production capabilities** opened up **the golden age of colonialism** in the 19th century to the European empires.

The interior of Marshall's Temple Works in Leeds, West Yorkshire, 1843. ©Wikimedia Commons [24]

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[23] https://en.wikipedia.org/wiki/Medieval_ships
[24] https://en.wikipedia.org/wiki/Industrial_Revolution#/media/File:Marshall's_flax-mill,_Holbeck,_Leeds_-_interior_-_c.1800.jpg
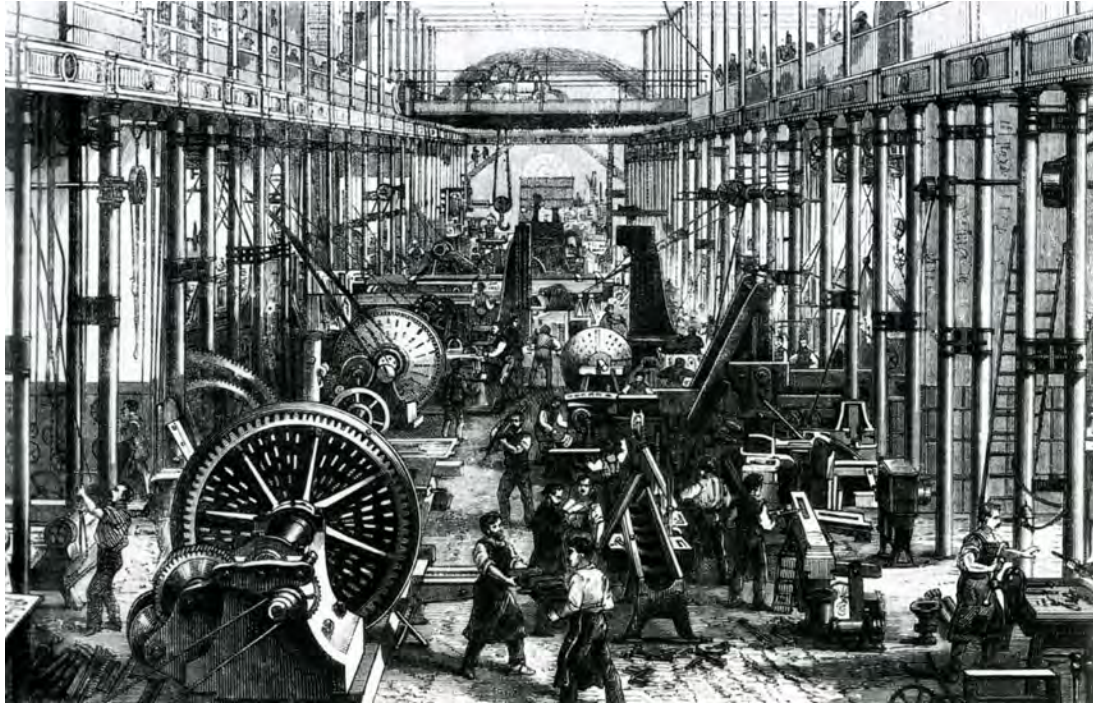
Sächsische Maschinenfabrik in Chemnitz, Germany, 1868. ©Wikimedia Commons [25]

Most of the land on all continents became European colonies, and the enslavement of indigenous populations became a phenomenon that spread throughout the globe.
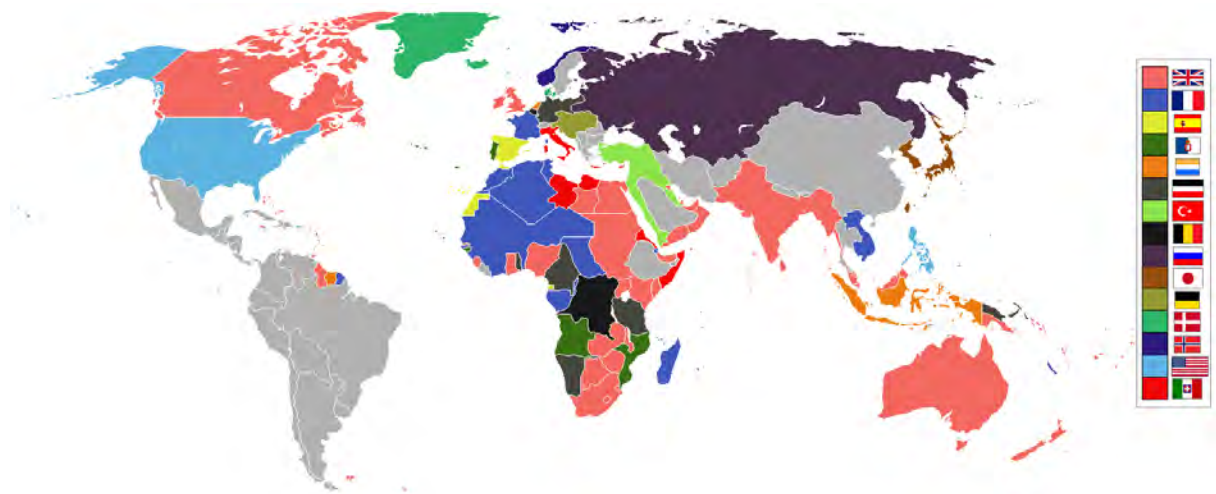
Map of colonial and land-based empires throughout the world in 1914 CE. ©Wikimedia Commons [26]

The world's colonial population at the outbreak of the First World War (1914), one of the highest points for colonialism, totaled about 560 million people. These peoples lived as possessions of various colonial powers: 70% as British, 10% as French, 9% as Dutch possessions, 4% as Japanese, 2% as German, 2% as American, 3% as Portuguese, 1% as Belgian and 0.5% as Italian.

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[25] https://en.wikipedia.org/wiki/Industrial_Revolution#/media/File:Hartmann_Maschinenhalle_1868_(01).jpg
[26] https://commons.wikimedia.org/wiki/File:World_1914_empires_colonies_territory.PNG

The world's first **steam-powered seagoing ships** helped British and French become the most powerful invaders of the 19th century; these vessels helped them take over the world leadership positions of the Portuguese and Spanish. The great improvement in gunboat construction in British ports made Britain the motherland of 70% of the global colony. On the foundation of the iron and steel processing industry, British ships that were previously entirely made of wood were replaced by iron materials. The material change in shipbuilding technology allowed the new ships to withstand extreme weather on the sea and enduring battles with natives.
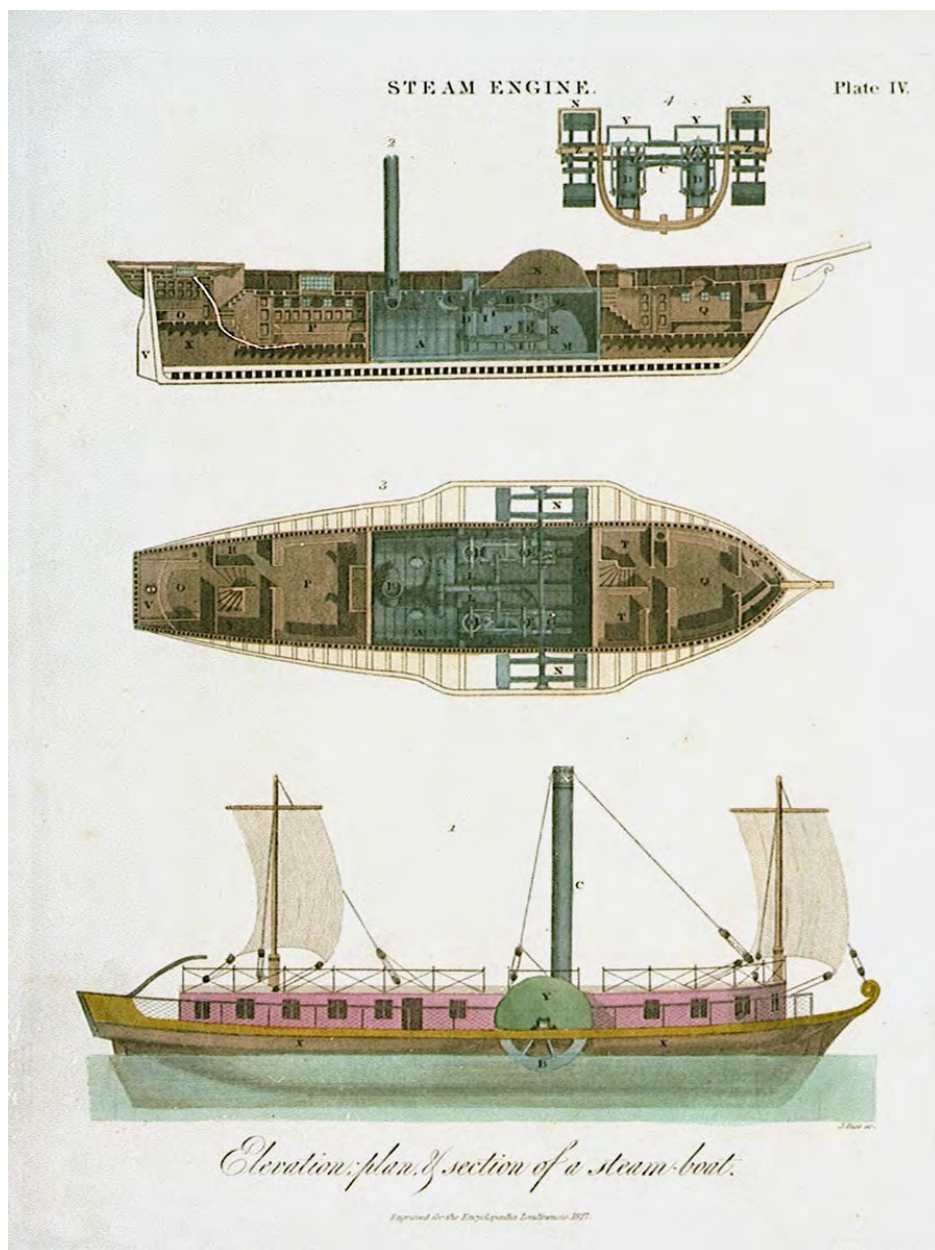
Engraving of the elevation plan and section of a steam-boat, 1827. ©Wikimedia Commons [27]

[27] https://commons.wikimedia.org/wiki/File:Steam_Engine,_Elevation_plan_and_section_of_a_steam-boat._Engraved_for_the_Encyclopedia_Londinensis_RMG_PU6673.jpg
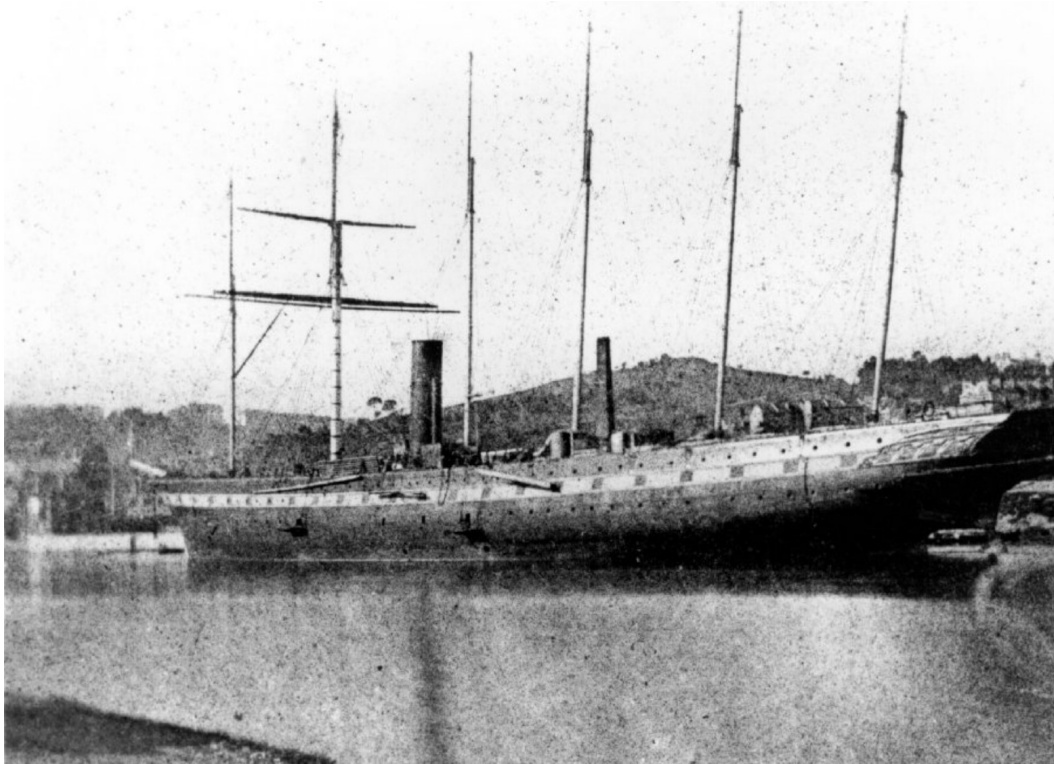
Great Britain in the Cumberland Basin, April 1844. ©Wikimedia Commons[28]

Industrial factories flourished at the end of the 19th century in many western European countries. The weapons and **machine gun industries** dramatically widened the power gap between Europeans and non-Western peoples and led directly to the burgeoning of imperials in the early 20th century. With high production capacity, dangerous levels of damage, and high accuracy, machine guns were the colonists' powerful symbol and the fear of the natives. Daniel R. Headrick once wrote: "By the 1890s, the gun revolution was complete. Most European infantrymen could now fire fifteen rounds of ammunition in as many seconds, lying down undetected, in any weather, with an effective range of up to half a mile. Machine gunners had even more power. Though the generals were not to realize it for many decades, the age of raw courage and cold steel had ended, and the era of arms races and industrial slaughter had begun." (Headrick, 1979)[29] [30]

In addition, advances in **medicine and pharmaceuticals** also created unique advantages for European people. In the 18th century, under the influence of the Age of Enlightenment, the modern hospital began to appear, serving medical needs and being staffed with trained physicians and surgeons. Modern medical methods were systematically applied to cure

[28] https://en.wikipedia.org/wiki/File:SS_Great_Britain_by_Talbot.jpg

[29] Headrick, D. R. (1979). *The tools of imperialism: technology and the expansion of European colonial empires in the nineteenth century*. The Journal of Modern History, 51(2), 231-263.

[30]https://en.wikipedia.org/wiki/Machine_gun#:~:text=The%20first%20successful%20machine%2Dgun,by%20the%20United%20States%20Navy.

patients.[31] These hospitals were the civilized symbol of imperial countries, the foundation for military hospitals, and the advantage of preserving forces for the colonial repressions.

Especially in pharmaceutical technology, the successful extraction of Quinine in the 19th century was the key to opening Africa's colonial time delayed by deadly malaria for more than four centuries (Curtin, 1961)[32]. For a long time, the barrier of disease, most notably malaria, made Europeans hesitant to invade Africa. Many called Africa "the white man's grave," (Ning, 2020) [33] and it was known as a death trap for soldiers. From 1819-1836, more than 48.3% of British troops sent to Sierra Leone died (Curtin, 1990)[34]. A morbid rhyme sung by British sailors about the Bight, or Bay, of Benin exemplifies the European fear of Africa: "Beware, oh beware, of the Bight of Benin, Where few come out although many go in." (Tilby, 1912)[35]. However, quinine had the potential to change the entire situation.

Crane's Quinine and Tar Compound, 19th Century Medicine Bottle with Box.
©National Museum of American History[36]

Electrical science is another technological achievement that developed rapidly in the early 19th century and became an integral part of modern life in the 20th century. The early 19th century had seen rapid progress in electrical science, and the late 19th century would see the

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[31] https://en.wikipedia.org/wiki/History_of_hospitals

[32] Curtin, P. D. (1961). "The White Man's Grave:" Image and Reality, 1780-1850. *Journal of British studies*, *1*(1), 94-110.

[33] Ning, Lom (2020) "*Quinine and the cinchona plant: gain or bane for Africa?,*" Hektoen International: A Journal of Medical Humanities, accessed January 27, 2020, https://hekint.org/2019/05/22/quinine-and-the-cinchona-plant-gain-or-bane-for-africa/

[34] Curtin, P. D. (1990) *The End of the 'White Man's Grave'? Nineteenth-Century Mortality in West Africa,*" The Journal of Interdisciplinary History 21

[35] Tilby, A. W. (1912). *Britain in the Tropics, 1527-1910* (Vol. 4). Houghton Mifflin.

[36] https://americanhistory.si.edu/collections/search/object/nmah_716278

greatest progress in electrical engineering. The electrical applications have long contributed significantly to strengthening the military force of the US and European countries. Searchlights were one military tool popularly used by imperialist countries when electrical engineering flourished in the late 19th and early 20th centuries. The first use of searchlights using carbon arc technology occurred during the Siege of Paris during the Franco-Prussian War. The British Royal Navy used searchlights in 1882 to dazzle and prevent Egyptian forces from manning artillery batteries at Alexandria. Later that same year, the French and British forces landed troops under searchlights. By 1907 the value searchlights had become widely used among European Empires.

Russian troops use a searchlight against a Japanese night attack during the Russo-Japanese War, 1904
American searchlight crew and equipment in France during WWI. ©Wikimedia Commons [37]

Driven by the 1st and 2nd industrial revolutions, Western society witnessed the unprecedented emergence and development of photography. Shortly after, the first camera image had been captured by Nicéphore Niépce in 1826, and photographs of war events were born in 1855. Since then, photography has become an indispensable new technological tool associated with the Western civilization concept. Western photography orientated other parts of the world in how to record history and lives. To this day, photography contributes to the creation of social standards or norms that are represented and recorded through photos. From the beginning to the present day, photography has been become a universal means of evaluating the level of civilization of individuals and the identity of a country or region.

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[37] Searchlight, *wikiwand.com* https://www.wikiwand.com/en/Searchlight

"Looking towards Balaclava, Turkish camp in the distance to the right".
Crimean War Photographs By Roger Fenton, March-June 1855. ©allworldwars.com [38]

4. - Bataille de Sedan. - Un épisode du combat de La Moncelle, 1er Septembre 1870

This 1870 image is considered the first actual photograph taken of a battle. It shows a line of Prussian troops advancing. The photographer stood with the French defenders when he captured this image.
©militaryhistorynow.com [39]

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[38] Crimean War Photographs by Roger Fenton, March-June 1855, *allworldwars.com*
https://www.allworldwars.com/Crimean-War-Photographs-by-Roger-Fenton-1855.html
[39] How Early Photographers Captured History's First Images of War, *militaryhistorynow.com*
https://militaryhistorynow.com/2012/06/12/how-early-photographers-captured-historys-first-images-of-war/

A man in Iyede, Delta State, Nigeria, 1909. ©theguardian.com [40]

Postcard Saigon Cochinchine Vietnam, Camp des Mares, le Repas des Tirailleurs punish de prison.
©akpool.co.uk [41]

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[40] Confronting the colonial archive – in pictures, *theguardian.com*
https://www.theguardian.com/artanddesign/gallery/2019/nov/19/the-anthropologists-africa-in-pictures-faces-voices
[41] Postcard Saigon Cochinchine Vietnam, Camp des Mares, le Repas des Tirailleurs punis de prison, *akpool.co.uk*
https://www.akpool.co.uk/postcards/27907351-postcard-saigon-cochinchine-vietnam-camp-des-mares-le-repas-des-tirailleurs-punis-de-prison

After World War II (1939–1945), decolonization progressed rapidly, and a series of colonial states declared their independence. However, the colonial relationship had not really come to a halt; it had transitioned to a new stage, a postcolonial or neocolonial period. Especially in the late 20th and early 21st centuries, based on the development of computer science, cloud storage, Big Data, IoT, and AI, this dominance of one power over another has become more profound, more dangerous and considerably broader in scope. Once again, the owners of advanced technologies take over the power position and set the rules for all of political, economic, and cultural relations.

Similar to thousands of years ago, the majority of advanced technologies have been applied to the military industrial complex and the neo-colonizer has again employed the power of weapons to demonstrate prestige and to threaten smaller, less developed countries. Supersonic aircraft, stealth submarines, generations of weapons, and AI-controlled robots have been developed and put to use widely in the technologically developed countries.

Boston Dynamic's robots. ©newatlas.com[42]
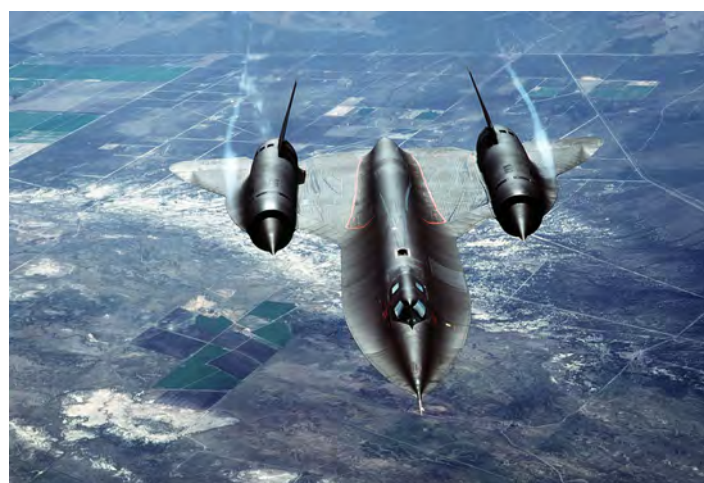
SR-71 Blackbird supersonic aircraft. ©popularmechanics.com[43]

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[42] https://newatlas.com/boston-dynamics-new-atlas/42007/
[43] https://www.popularmechanics.com/military/aviation/a35092143/sr-71-blackbird-pilot-interview-flying-fastest-plane-ever/
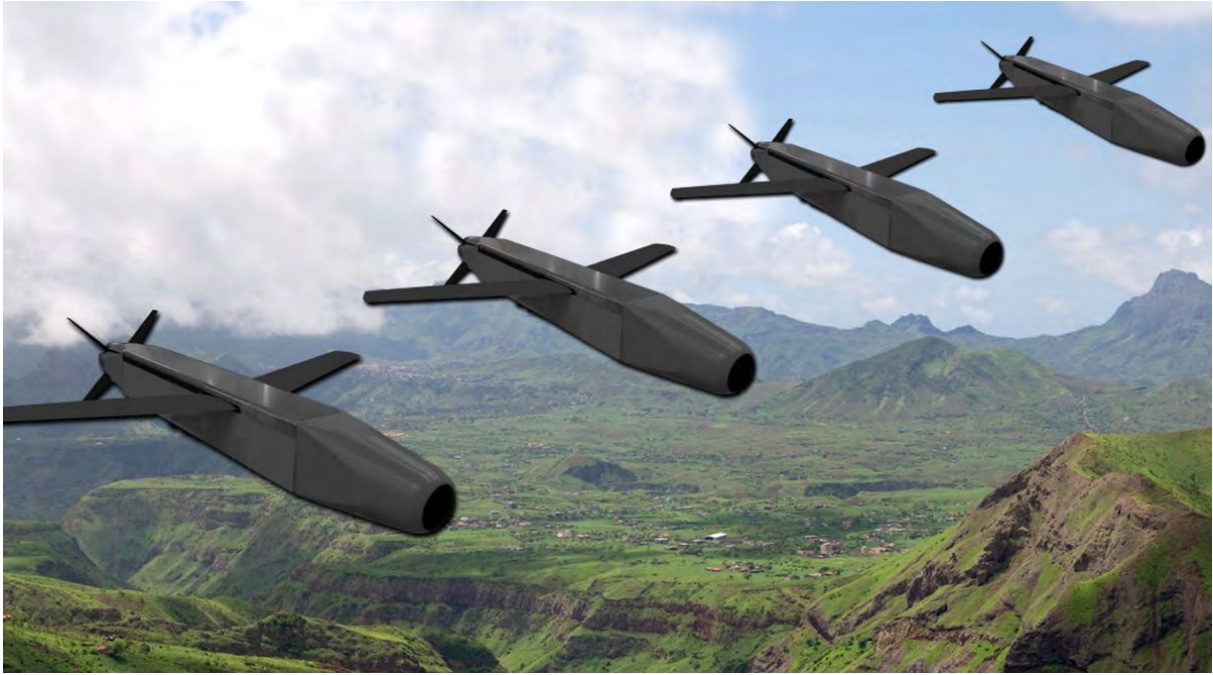
Israel's Rafael integrates artificial intelligence into Spice bombs
Illustration of Japan's new Epsilon AI rocket. ©c4isrnet.com[44]

Holding advanced weapons technology and dominating cyberspace are considered among the most important goals of developed countries. Cyberspace has become another living space inseparable from real life in the 21st century. Connectivity through cyberspace is an indispensable activity in many countries, corporations, organizations, and for the majority of global citizens. Never before have we witnessed such a close connection between digital devices and the human body as today. Consequently, intervention in digital space is a core issue for dominating the life of modern people, making the race over technology more important than ever. In reality, new technology empires are attempting to assert control over human life through digital means, establishing a form of ***cyber colonialism*** around the world.

1.2 Cyber colonization

"Technology is a useful servant but a dangerous master."
Christian Lous Lange, Norwegian historian, The Nobel Peace Prize 1921.

Since the onset of the digital revolution and the initial development of the computer sciences in the 1960s and 1970s, there have been concerns regarding the revival of colonialism. The terms ***electronic colonialism*** or ***digital colonialism***, sometimes abbreviated to ***eColonialism***, were conceived by Herbert Schiller as documented in his 1976 text Communication and Cultural Domination (McPhail, 2002)[45]. The idea of cyberspace took on increasing interest in

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[44] https://www.c4isrnet.com/artificial-intelligence/2019/06/17/israels-rafael-integrates-artificial-intelligence-into-spice-bombs/
[45] McPhail, Thomas L. (2002) *Global Communication: Theories, Stakeholders, and Trends*. Paperback. Allyn and Bacon: Boston. Paperback.

the 1990s with the growing popularity of the Internet, networking and digital communication (Strate, 1999)[46]. Not much later, in the article "Cyber-colonialism in Asia: more imagined than real?" by Loo & Beng in 1998[47], the concept of **cyber-colonialism** was mentioned. Despite its "technological optimism" regarding global connectivity in the internet space, Loo & Beng's paper has contributed significantly to the academic discussion of the issue since the early days of the era of global connectivity.

The cyber-colonialism discussed by Loo & Beng in their paper is an exaggerated idea of media imperialism by the newly independent states (Loo, & Beng, 1998)[48]. However, in the current circumstance, with the unprecedented speed and complexity of cyberspace, this understanding no longer seems appropriate. Cyberspace should be understood as a comprehensive digitally-interconnected space, including the public network and private networks (the interconnection between machines in single systems). Hegemony in cyberspace is not only reflected in media but also in different aspects of human life including politics, economy, technology and society. The empires that dominate cyberspace are not only media empires but also many other empires constantly forming along with the development of new technologies, such as cloud empire, search empires and social network empires. Therefore, in this study, *Cyber-colonialism is seen as a practice of control, manipulation and exploitation by technological owners over people, often by establishing technological hyper-dependent relationship and with the aim of all human being dominance.*

Cyber-colonization seems to be triggered when people start to connect to digital devices. People today are connected intimately through machine systems, whether direct or indirect users. Human existence, in different ways, is all connected to digital devices and/or digital connected systems. Currently, the surveillance camera system is widely used by individuals, companies, organizations and government agencies. In the street, on the shops, in front of each house, the ubiquitous security camera is the foremost example of the relationship between modern people and the equipment around them. The dense satellite system surrounding the earth is another surveillance, connectivity, and dominance tool, with a broader impact; It affects not only individuals but also organizations, countries, regions, and even entire continents. Additionally, public surveillance cameras and personal electronic devices have the potential to capture endless habits and details of public life.

Overall, the level of **technological surveillance** has paralleled the level of digital connectivity of humans in cyberspace. The greater the connection to electronic devices, the higher the user's dependence on vehicles. The longer the software is used, the higher the level of user

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[46] Strate, Lance (1999). *"The varieties of cyberspace: Problems in definition and delimitation"*. Western Journal of Communication. 63 (3): 382–83. doi:10.1080/10570319909374648.
[47] Loo, E., & Beng, Y. S. (1998). Cyber-colonialism in Asia: more imagined than real?. *Media Asia*, *25*(3), 130-137. p.1
[48] Loo, E., & Beng, Y. S. (1998). Cyber-colonialism in Asia: more imagined than real?. *Media Asia*, *25*(3), 130-137. p.1

exploitation and control by service providers. Out of individual control, users' level of digital connectivity is increasing at an unprecedented rate globally. The extension of the human body to machines is no longer a prediction as seen in Donna Haraway's early remarks in *A Cyborg Manifesto* (Haraway, 2013)[49], but has become a reality of contemporary mankind. In Haraway's opinion, the cyborg's integration of technology into its body creates a new form of embodiment that challenges the dichotomy between mind and body. By merging with machines, the cyborg becomes a new kind of being that is both physical and virtual. This extension of the human body to machines also allows for new forms of agency and control. The cyborg's ability to manipulate technology and navigate virtual environments gives it a new kind of power that can be both liberating and dangerous. The simplest example is that smartphones have become an integral part of the majority of people in this day and age.

Behind the self-imposed consumer needs, users have been dominated by ***demand-producing machines*** founded by technology owners. In order to increase the ability to monitor, exploit and control society, and dominate markets and create profits and power, technological empires constantly promote demand and desire for consumption, using different tactical strategies, among which we must count the ***all-in-one package*** products and services—the attractive ***digital ecosystems***." The majority of giant technological owners today have created a cross-link between services and products in the same system, forming a matrix of associated features and utilities. Along with many advanced elements such as speed, ease, convenience, and efficiency, these digital packages always represent remarkable exclusivity and bondage. Developing these attractive and exclusive digital ecosystems is the ambition of many nations, organizations, companies, and corporations around the world.

Many governments are constantly digitizing their citizens' information. The digital identity system was introduced to link all public administrative procedures, through which to control all civil activities. China's Social Credit System is one example. In China, the vast majority of urban residents can do all their social activities via electronic devices, most commonly through smartphones. Academic studies, medical visits, payments and credit operations, and public administrative procedures can all be done online. Many administrative tasks would be impossible or extremely difficult to implement without an electronic account. In general, in many large cities, the social activities of Chinese people are recorded and updated to the electronic information system through various forms. That information can be both very general and detailed. For example, the state is able to collect information about whether citizens dump their garbage and refuse in the appropriate areas or whether people have parked their vehicles in assigned places. Seemingly endless categories of personal information, such as family biography, education level, occupation, medical information, properties, finances and history of social activities have been recorded, linked, and evaluated

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[49] Haraway, D. (2013). *A cyborg manifesto: Science, technology, and socialist-feminism in the late twentieth century*. In The transgender studies reader (pp. 103-118). Routledge.

by computer systems. Citizens are classified and blacklisted or whitelisted based on data analyzed by the mechanized system.[50]

By participating in the Google ecosystem, logging into a Google account, users can use a wide range of products and services such as *Google Mail, Google Drive, Google Chat, Google Classroom, Google Meet, Google Fit, Google Translate, Google Calendar, Google Map, Google Play, Google Search, Google Ads and YouTube*. All these services are interlinked in one system. For example, if a Gmail user intends to send an email with an attachment that is larger than 25MG (megabytes), the user must link to their *Google Drive* account. Furthermore, if they need to access a shared group file on *Google Drive*, the user must create a Google account if they do not already have one Users who need to make notations on *Google Maps* must have a Google account. These chaining constraints developed by Google have allowed them to engage over one billion customers in the use of their products through 2022[51]. Moreover, the engagement of these customers has allowed Google to capture and store a vast amount of diverse, detailed and valuable information for the company's use.

The technology company Apple Inc provides a system of personal electronic devices such as *iPhone, iWatch, iPad, iMac, iTVbox, iPod, Air Pod, Home Pod, and Apple Watch*, which all include free operating systems such as mac *OS, iOS, iPad OS, watch OS and TV OS*. Additionally, Apple Inc has created many online services such as the *iTunes Store, iOS App Store, Mac App Store, Apple Arcade, Apple Music, Apple TV +, iMessage, and iCloud*. Offline services include *Apple Store, Genius Bar, Apple Care*; while financial services include *Apple Pay, Apple Pay Cash, and Apple Car*. In addition, millions of specialized software programs written specifically for Apple operating systems are provided by App Store systems. The customers' level of commitment to the company has been maximized because of Apple's fully packaged provision of products and services. For example, *Apple Watch* users cannot install the operating system of the watch device without using their iPhone, nor can they download music to the system without accessing iTunes. This strategy has helped Apple become the leader in sales of personal electronics products globally over the past decade, with a net revenue of 378.7 billion U.S. Dollars in 2022[52].

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[50] https://en.wikipedia.org/wiki/Social_Credit_System
[51] Google Search Statistics and Facts 2023, *firstsiteguide.com*
https://firstsiteguide.com/google-search-stats/
[52] Global revenue of Apple from 2004 to 2022, *statista.com*
https://www.statista.com/statistics/265125/total-net-sales-of-apple-since-2004/
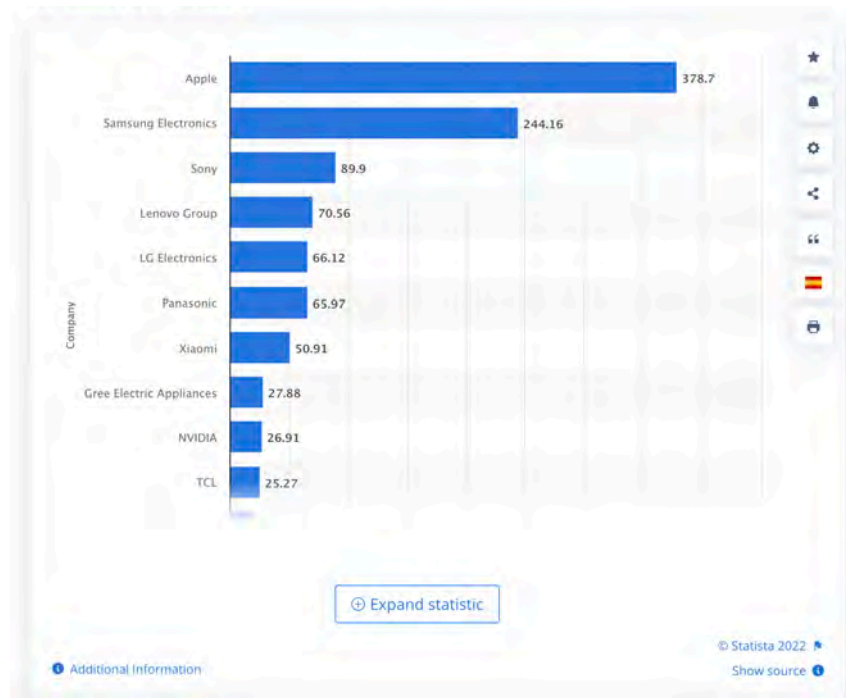
Sales of leading consumer electronic (CE) companies worldwide in 2022. ©statista.com[53]

Similar to the Google and Apple ecosystem, other products and service providers such as Amazon, Facebook, Baidu and WeChat have created new technology ecosystems with complex, mesmerizing functional matrices, which include traps which users may find difficult to escape.

Today, we are witnessing a repeat of patterns seen during former colonial periods Previously, empires heralded a prosperous and gratifying life to the indigenous people as their justification for colonization. Actually, they typified their colonization as a mission of **enlightenment**. Today, despite affirming unceasingly the motto of sharing the **highest benefit** to users (in theory, digital capital business is a process of benefit sharing), what is gained by users cannot be compared with the benefits achieved by corporations or organizations that own technology.

In The Wretched of the Earth, Frantz Fanon once stated:
>   "The native must realize that colonialism never gives anything away for nothing." [54]

So what do tech owners exploit from their tech colonies?

If natural resources and minerals are the targets of exploitation by imperialist countries from their colonial territories, then in cyberspace, **data is the most valuable resource.** Information connectivity is a prerequisite for the existence of cyberspace. In other words, information

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[53] https://www.statista.com/statistics/431431/sales-of-the-leading-ce-companies-worldwide/
[54] Fanon, F (1963). *The wretched of the earth*, Translated from the French by Richard Philcox, Grove Press New York

becomes the primary fuel for every online connection. Storing, processing, analyzing, and transmitting information in the form of data sets is a fundamental activity in the digital space. The larger the amount of data, the more advanced the analysis ability, the higher value of the information obtained after the analysis, and the more applicability of that information. The **data mining**[55] has become the spearhead industry of the technology empires.

Therefore, rather than cyber-colonialism, Nick Couldry and Ulises Mejias proposed another concept – **data colonialism**. According to these authors, data colonialism is understood as "the extension of a global extraction process. It started under colonialism and continued through industrial capitalism, culminating in the present new form instead of natural resources and labor that has appropriated human life through its conversion into data." (Couldry& Mejias, 2020)[56]. It can be said that owning data has become the foundation for governing today's technological colonies. In the year 2022, there were approximately 7.2 million data centers and server farms, the majority of which are, to this day, concentrated in developed countries, led by the US, Germany, the UK, China, and Canada.
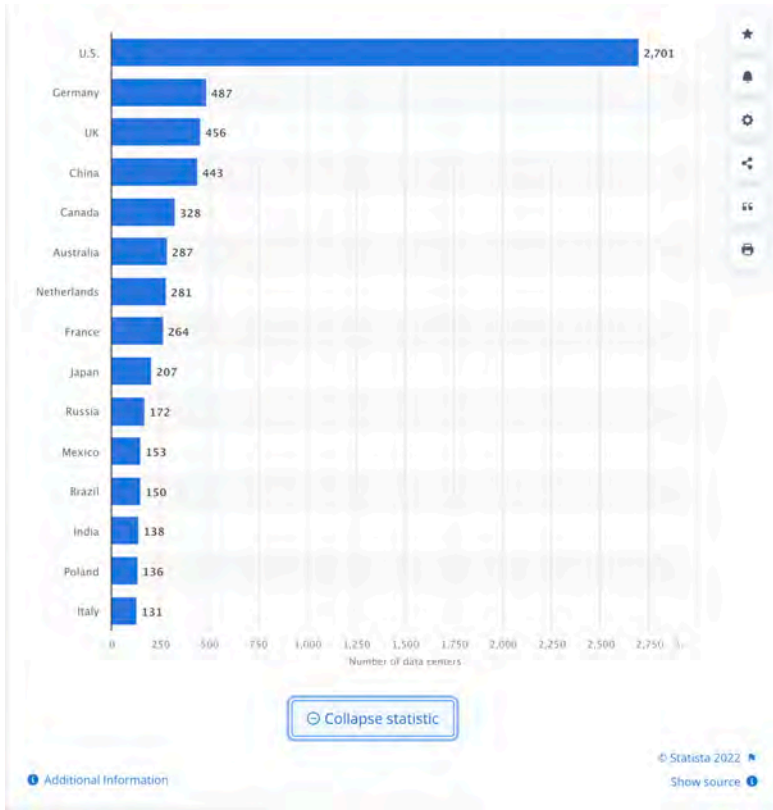
Number of data centers worldwide in 2022, by country. ©statista.com[57]

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[55] Data mining is the process of extracting and discovering patterns in large data sets involving methods at the intersection of machine learning, statistics, and database systems.
https://en.wikipedia.org/wiki/Data_mining

[56] Couldry, N., & Mejias, U. A. (2020). *The costs of connection: How data is colonizing human life and appropriating it for capitalism*. Stanford University Press. **p.xix**

[57] https://www.statista.com/statistics/1228433/data-centers-worldwide-by-country/

Moreover, since 2015, the number of hyperscale[58] data centers has more than doubled. The number of hyperscale data centers worldwide reached 700 by the end of 2021. The rapidly increasing number of hyperscale data centers worldwide in recent years[59] illustrated the high level of power concentration in cyberspace. Eve Tuck and K. Wayne Yang asserted, colonization "is not an approximation of other experiences of oppression" but a highly distinctive exercise of power (Couldry& Mejias, 2020)[60].

Beyond the concept of great power, in the last 20 years, we have seen the world of technology ***dominated by a small number of large global corporations***. This phenomenon of power concentration is evident in the characteristics of advanced-capitalistic societies, where industrial activity is concentrated in a few large firms (Habermas, 1975)[61]. The phenomenon of totalitarianism and domination of economic, political, cultural, and social activities of these large corporations, creates a ***new form of empire*** within capitalist society. Until now (2023), these technological empires were concentrated in the U.S and China. The Big Tech are often mentioned by mass media, such as Alphabet (Google), Amazon, Apple, and Meta (Facebook), Microsoft, Tesla, Twitter, Netflix, and they are representative of the information technology industry of the United States of America, while Tencent, Baidu, the Alibaba Group and Xiaomi are considered the Big Tech Four giants in China. Although they are considered U.S or Chinese technology companies, they have extensive global business in different respective areas of technology including artificial intelligence, e-commerce, online advertising, consumer electronics, cloud computing, computer software, media streaming, smart home, self-driving cars, and social networking. They are among the most valuable global public companies having a maximum market capitalization ranging from around $1 trillion to above $3 trillion (Levy, 2020)[62].

Based on their operational capacity, the scale of infrastructure, and real financial potential, these big global technology corporations are also the leaders in the professional development of the most advanced technologies, in particular, the advances in artificial intelligence and machine learning technology. The Big data systems combined with the new generation machine learning algorithms have brought deep analysis and self-making predictions or decisions. With new artificial intelligence systems, technology owners transform the present machine into a social judge which is able to identify users in terms of their social, political and ethnic groups. Machines can also work in place of skilled craftsmen, tour guides, and financial

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[58] Hyperscale in computer science refers to a computing architecture that allows for the provision of highly scalable, high-performance computing resources for large-scale data centers, cloud computing, and other IT environments.

[59] Number of hyperscale data centers worldwide from 2015 to 2021, *statista.com* https://www.statista.com/statistics/633826/worldwide-hyperscale-data-center-numbers/

[60] Couldry, N., & Mejias, U. A. (2020). *The costs of connection: How data is colonizing human life and appropriating it for capitalism*. Stanford University Press.

[61] Habermas, J. (1975). *Legitimation crisis* (Vol. 519). Beacon Press.

[62] Levy, Ari (2020). "*Tech's top seven companies added $3.4 trillion in value in 2020*". CNBC. Retrieved April 22, 2022

analysts. A new generation of virtual assistants is able to interact directly with humans to provide direction, answer questions and even chat emotively.

However, the fascinating achievements of machine learning technology and its unbelievable applications have created a new wave of concern around the ethics of of AI, recently giving rise to the concept of **AI colonialism**. In the article "Artificial intelligence is creating a new colonial world order" (Hao, 2022)[63] published at *MIT Technology Review* in April 2022, Karen Hao asserted: "It's not possible to talk about "AI for everyone" (Google's rhetoric), "responsible AI" (Facebook's rhetoric), or "broadly distributing" its benefits (Open AI's rhetoric) without honestly acknowledging and confronting the obstacles in the way." (Hao, 2022) [64]

The threat of using the power of digital technology and AI to control and manipulate others has become a global concern in recent years. This is especially apparent in the way people experience the digitizing of their lives, the profound dependence on technological devices, and the loss of decision-making and autonomy. The enslavement is transferred from direct to indirect form through digital media and devices.

Dependence

More than 1.5 million Africans were shipped across the Atlantic Ocean between the 15th and 19th Centuries. ©nilepost.co.ug[65]

More than 62.5 percent of the world's total population is Internet Users in 2022. ©deviceatlas.com[66]

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[63] Hao, K. (2022) *Artificial intelligence is creating a new colonial world order*, MIT Technology Review series
[64] Hao, K. (2022) *Artificial intelligence is creating a new colonial world order*, MIT Technology Review series
https://www.technologyreview.com/2022/04/19/1049592/artificial-intelligence-colonialism/?fbclid=IwAR2ymrGpEG6pUl8912RA-j_PNx3hBObxg0Zi4QyZ0XZS_ylSjAH6ZVdn-mU
[65] https://nilepost.co.ug/2022/09/30/opinion-impact-of-colonialism-and-neo-colonialism-on-african-economies/
[66] https://deviceatlas.com/blog/mobile-landscape-south-korea

Tracking

Locking and tracking colonial slaves. ©t-vine.com[67]

Personal tracking location. © gpsbob.com [68]

Recognition

Slave's stamp recognition. ©Wikimedia Commons[69]

Facial recognition. © Reuters [70]

[67] https://www.t-vine.com/slavery-has-been-abolished-for-over-200-years-or-has-it/
[68] https://gpsbob.com/gps-tracking-app-software/
[69] https://vi.wikipedia.org/wiki/T%E1%BA%ADp_tin:The_Negro_in_American_history_%28microform%29_-_men_and_women_eminent_in_the_evolution_of_the_American_of_African_descent_%281914%29_%28145 97416438%29.jpg
[70] https://www.ft.com/content/7d3e0d6a-87a0-11e9-a028-86cea8523dc2

Human zoo

Brussels World fair 1958
©Wikimedia Commons[71]

Children's rights in the cyberspace. ©
theasianparent.com [72]

Labour camps

The White Sea-Baltic Canal opened on 2 August 1933
©dmitrievaffair.com[73]

Daily, users are creating content and information
values without payment
©abcnews.go.com[74]

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[71] https://en.wikipedia.org/wiki/Human_zoo#/media/File:African_Girl,_1958_Expo.jpeg
[72] https://sg.theasianparent.com/parents-posting-naked-picture-children-online-sparks-debate
[73] https://dmitrievaffair.com/deaths-on-the-white-sea-canal/
[74] https://abcnews.go.com/Business/facebook-tests-hiding-likes-change-people-engage-posts/story?id=65901080

Human trafficking

Sale of Estates, Pictures and Slaves in the Rotunda, New Orleans; by William Henry Brooke, engraver; engraving with watercolor from The Slave States of America, vol. 1; London: Fisher and Son, 1842 ©wwno.org[75]

The Big Data Privacy Problem. ©innovate-edu.com[76]

Cape Town slaves to migrant gold miners ©ucd.ie[77]

Data Mining Techniques ©justtotaltech.com[78]

If weapons were the main tools of colonization in the past, the new empires *use digital and social media to control and manipulate people* today. The majority technology owners today

[75] https://www.wwno.org/podcast/tripod-new-orleans-at-300/2015-11-05/sighting-the-sites-of-the-new-orleans-slave-trade

[76] https://innovate-edu.com/2014/09/

[77] https://www.wwno.org/podcast/tripod-new-orleans-at-300/2015-11-05/sighting-the-sites-of-the-new-orleans-slave-trade

[78] https://www.ucd.ie/discovery/storiesofdiscovery/capetownslavestomigrantgoldminers-acolonialcontinuuminsouthafrica.html

are also media holders that can influence or shape users' perceptions, beliefs, preferences, and desires, thereby directing users' actions or decisions. There is no doubt that dominating perceptions is the most effective and dangerous way to possess human beings, influence their awareness and manipulate their action.
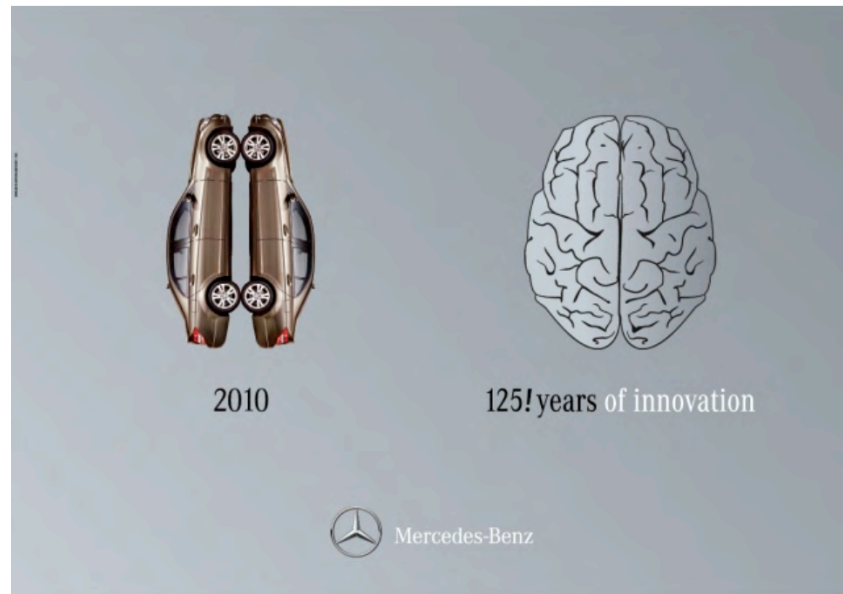
Mecedes-Benz advertisment 2010. ©adsoftheworld.com[79]

Advertising is considered an effective tool to influence perception, an indispensable tool in the colonization process in cyberspace. Currently, advertising remains the trump card, the main source of profit for many information technology empires. As advertising agencies, technology corporations are able to create information and control over the flow of that information. They use advanced algorithms to optimize what advertising should be generated or produced and what venues and which populations should be targeted with that advertising.

The lives of modern people are affected by information, especially advertising. With the support of new devices and high-tech, the advertising industry has reached a hyper-developed stage. Today's advertising is very diverse from audio, images, videos, texts and software. Delivery methods are multiple, from direct to indirect methods, by the influence of different digital tools such as email, search results or user experience. The profound effects of advertising on life have been proven throughout the 20th century and could become more dangerous in the 21st. Advertising is driving the whole spectrum of social activities. Advertising information instructs its users on various actions. These actions might include: electronic devices to use; places to travel; what to eat or drink; where to shop and what clothing to wear; where to reside; kinds of entertainment to choose; type of insurance to purchase; issues to discuss with friends; financial channels to be aware of; candidates to vote for in the next election; or even the person they should love!

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[79] https://www.adsoftheworld.com/campaigns/right-brain-left-brain

Apple advertisment

Turkish Airlines advertisment

Coca-Cola advertisment

Gucci advertisment
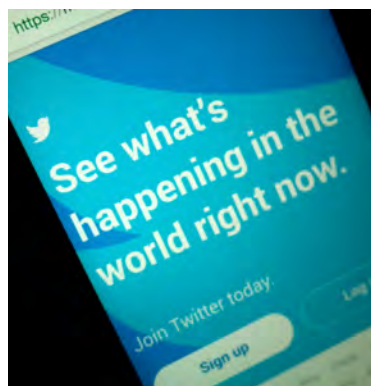
Twitter advertisment
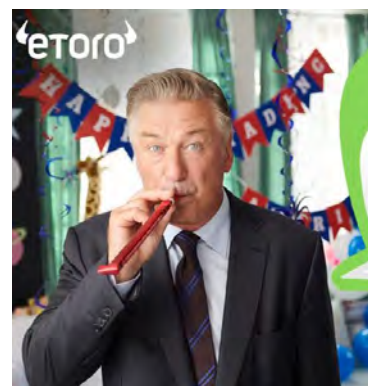
Etoro advertisment

Netflix advertisment

Amazon advertisment

YouTube advertisment

Technology owners appropriate not only the user's body but also their identity, emotions, spirit and self-determination. That means the phenomenon of human exploitation has become a worrying reality in the global sphere in general and in the former colonial region in particular.

Today's ***cyber-colonization*** process and the clever conspiracy of ***personalization of services*** have attempted to legitimize the appropriation of personal integrity and blinding or deceiving the users. "We'll serve you better if we know you better" has become the rhetoric of all online products and service providers. The majority of users still do not fully understand the tactics

of the process of "always listening, always understanding[80]" from companies. Behind electronic contracts (in the form of mandatory consent to dozens of pages of "Terms and conditions"), users consent to let service providers use their information legally when creating any electronic account. This process of accepting data collection is no different from inviting strangers into the home which gives them control over the owner's personal life from the living room to the dining room, to the bedroom, to the toilet. It has asserted that what today's tech corporations are collecting about users is more than the user can imagine; and that it is the foundation for technology owners to enslave users and colonize digital territories. Establishing superiority over others, tech owners are imposing unfair rules of the game on users globally.

In *Capital in the Twenty-First Century* (2013), Thomas Piketty of the Paris School of Economics asserted that "inequality is the inevitable consequence of economic growth in a capitalist economy and the resulting concentration of wealth can destabilize democratic societies and undermine the ideals of social justice upon which they are built". That is the problem our society is facing. In particular, this inequality is becoming even more pronounced in some developing countries in the Global South - the southern hemisphere countries, which includes parts of Asia, Africa, and Latin America.

Many countries in the Global South have young populations, with a significant proportion of people under the age of 25 (Khokhar, 2017)[81]. This demographic shows a rich human resource and an energetic labor force, but it can also create challenges in terms of providing education, healthcare, and other basic services. These regions are often classified as developing economies, where the majority of people are still working in low and unstable conditions (Farny, 2016)[82]. Among these countries, several have high levels of poverty, limited infrastructure, and significant income inequality.

The southern hemisphere countries are normally known as home to a wealth of natural resources, including oil, gas, minerals, and agricultural products. While these resources can be a source of economic growth, they can also lead to environmental degradation and social conflict. Many countries in the Global South have experienced political instability, including colonial periods, civil wars, coups, and other forms of unrest (Biney, 2021)[83]. This instability creates many difficulties in implementing legal systems, and hardship in creating social and economic stability.

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[80] The slogan of Prudential - a British multinational insurance company

[81] Khokhar, T. (2017) Chart: How Is the World's Youth Population Changing? *World Bank* https://blogs.worldbank.org/opendata/chart-how-worlds-youth-population-changing

[82] Farny, E. (2016) Dependency Theory: A Useful Tool for Analyzing Global Inequalities Today? *E-International Relations* https://www.e-ir.info/2016/11/23/dependency-theory-a-useful-tool-for-analyzing-global-inequalities-today/

[83] Biney, I. K. (2021). Revitalizing Blended and Self-Directed Learning Among Adult Learners Through the Distance Education Mode of Learning in Ghana. In *Re-Envisioning and Restructuring Blended Learning for Underprivileged Communities* (pp. 185-203). IGI Global.

Nevertheless, the Global South market has been rapidly growing in recent years due to several factors, including increased access to digital technology and the proliferation of mobile devices (Peixoto, & Sifry, 2017)[84]. With the increasing affordability of mobile devices, many people in the Global South are now able to access digital services such as social media, e-commerce, and mobile banking.

Generally, the characteristics of a large population are the cheap labor market, high consumer demand, low and uneven education level, weak social resistance, and ineffective legal barriers to new technologies. For this reason, **the developing countries in The Global South are potential exploitative markets for new technology empires**. Vietnam is one example of the type of market that is easily exploited.

Currently, Vietnam is one of the Vietnam is one example of the type of market that is easily exploited." IT labor suppliers in Southeast Asia, the main labor market tapped by developed countries in the region such as Japan (Muranaka, 2022)[85], Korea and Singapore. Vietnam's large and young population of consumers has also become a target of large technology corporations.

According to statistics provided by *www.hootsuite.com*, there were 72.10 million internet users in Vietnam in January 2022. Vietnam's internet penetration rate stood at 73.2 percent of the total population at the start of 2022.

[84] Peixoto, T., & Sifry, M. L. (2017). *Civic Tech in the Global South: Assessing Technology for the Public Good.* Washington, DC: World Bank and Personal Democracy Press.© World Bank.
[85] Muranaka, A. (2022). Beyond blue ocean? The roles of intermediaries in the cross-border labour market between Japan and Vietnam. *Global Networks*, *22*(3), 514-529.
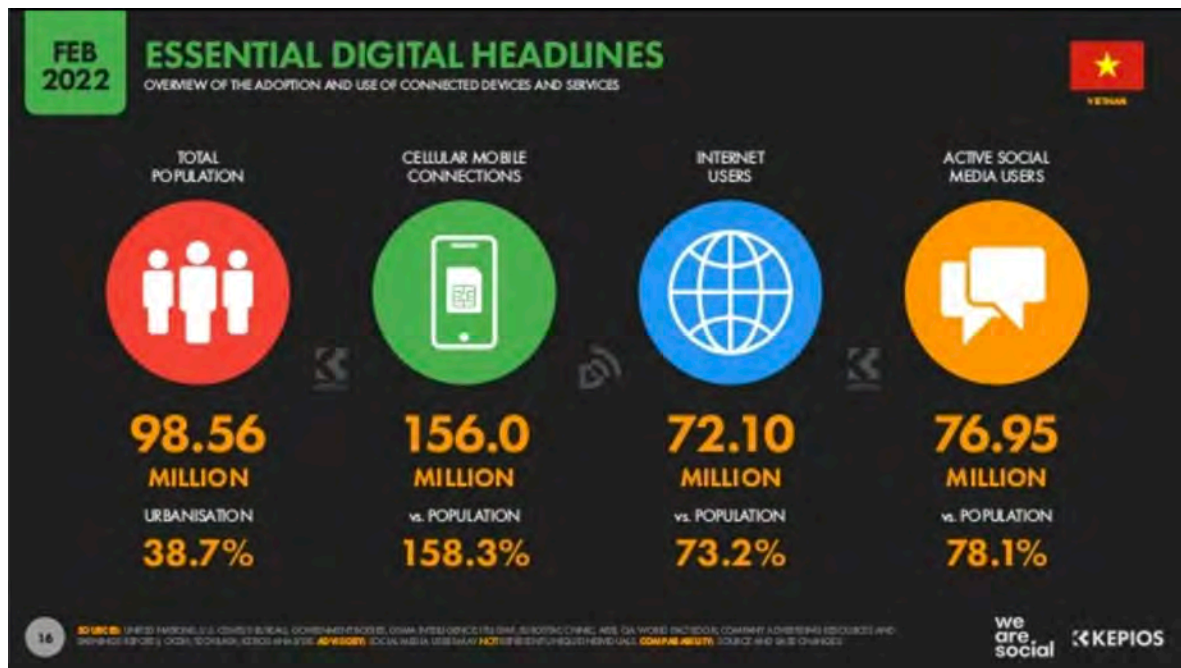
Vietnam's internet penetration rate. ©hootsuite.com

On average, Vietnamese users daily spend 6 hours and 38 minutes each in cyberspace which is equivalent to the administrative working time of office workers and approximately one third of the total time they have daily[86].
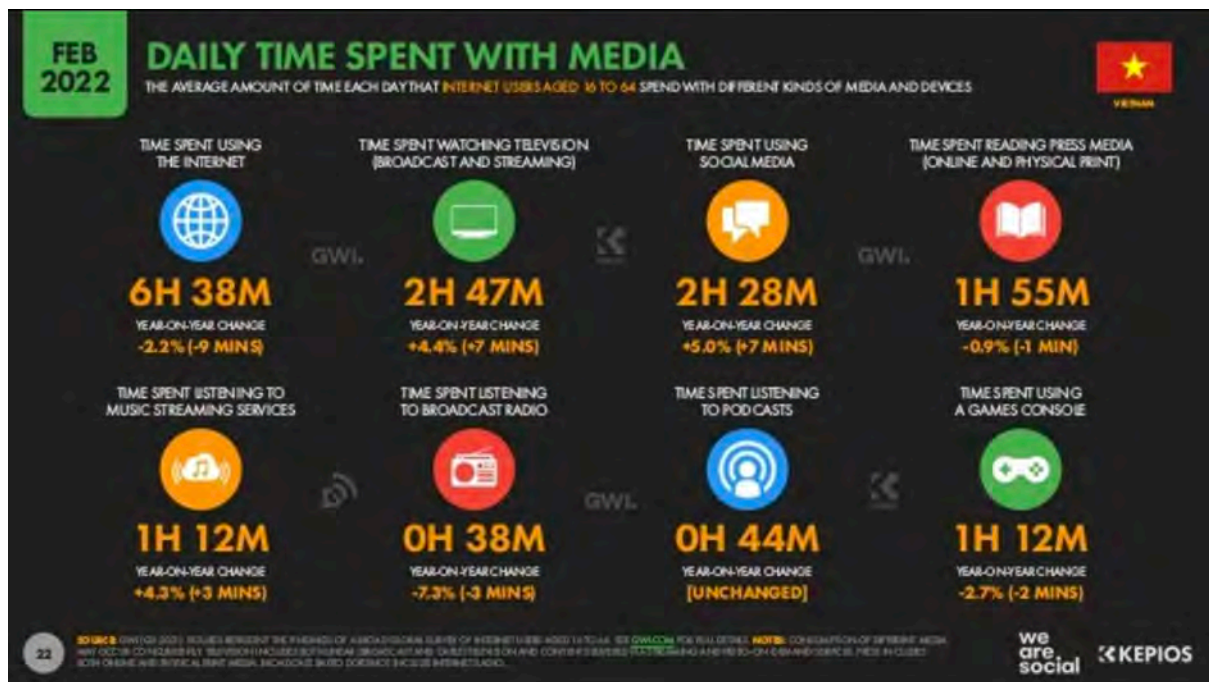
Daily time spend with media ©hootsuite.com

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[86] Kemp, S. (2022) Digital 2022: Vietnam, *datareportal.com*
https://datareportal.com/reports/digital-2022-vietnam?rq=vietnam

Vietnam ranked 13th on the list of countries with the largest digital populations in the world in 2022[87]. However, privacy in the internet space and Vietnam's cybersecurity index have always been among the lowest and most alarming in recent years[88] [89] [90] [91].
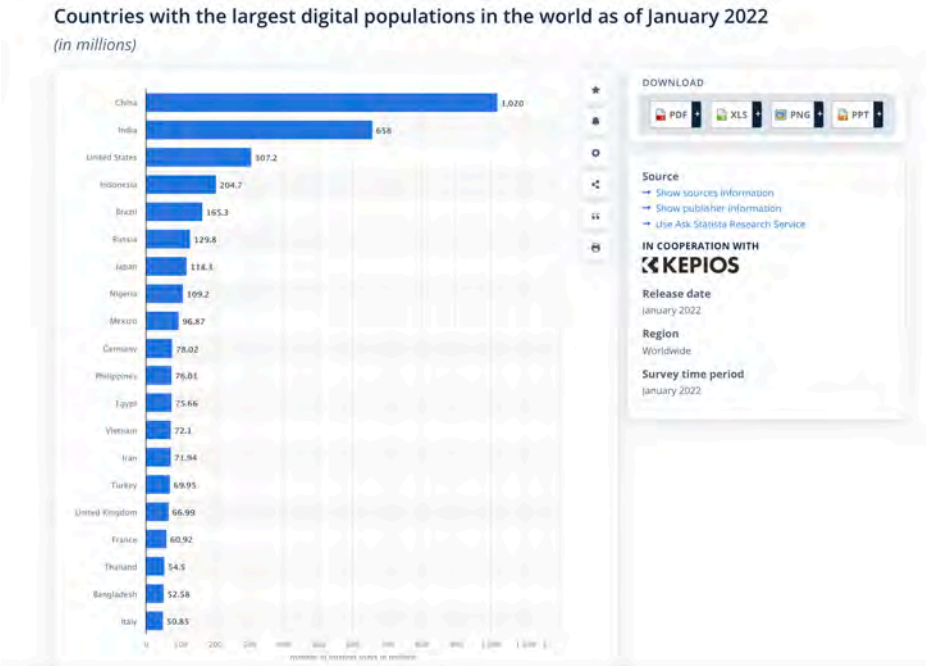
Countries with the largest digital populations in the world as of January 2022[92]
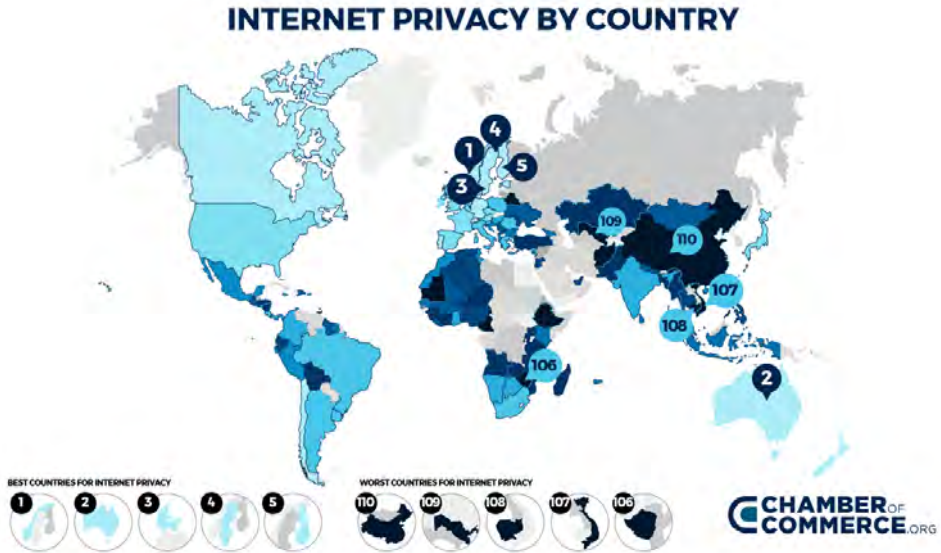
Group of countries with low internet privacy and cybersecurity in the world ©Chamber of Commerce.org

[87] https://www.statista.com/statistics/262966/number-of-internet-users-in-selected-countries/
[88] https://baochinhphu.vn/du-bao-an-ninh-mang-nam-2022-102220119142521952.htm
[89] https://www.researchgate.net/figure/Legislations-on-Data-Protection-and-Privacy-Across-the-World-Source-UNCTAD-2015-Data-at_fig4_330411763
[90] https://www.comparitech.com/blog/vpn-privacy/cybersecurity-by-country/
[91] https://ncsi.ega.ee/ncsi-index/
[92] https://www.statista.com/statistics/262966/number-of-internet-users-in-selected-countries/

Vietnam's legal framework for privacy and cybersecurity is still in its early stages of development. Although Vietnam has passed several laws, including the Law on Protection of Personal Information, the Law on Cybersecurity, and the Law on Information Security[93], these legal regulations may not be comprehensive enough to address all the challenges and concerns of today's digital world, especially emerging social phenomena related to artificial intelligence and machine learning-based automation[94]. The implementation of these laws is often inadequate, and enforcement is often lax[95]. Corruption and bureaucracy are the main reasons that make law enforcement even less effective.

The densely populated market and ineffective law barriers are reasons why Vietnam has become a profitable market for global technology corporations. According to the statistical assessment of *We Are Social and Kepios*, Vietnam's digital advertising market is estimated to be worth $812.9 million by 2022.
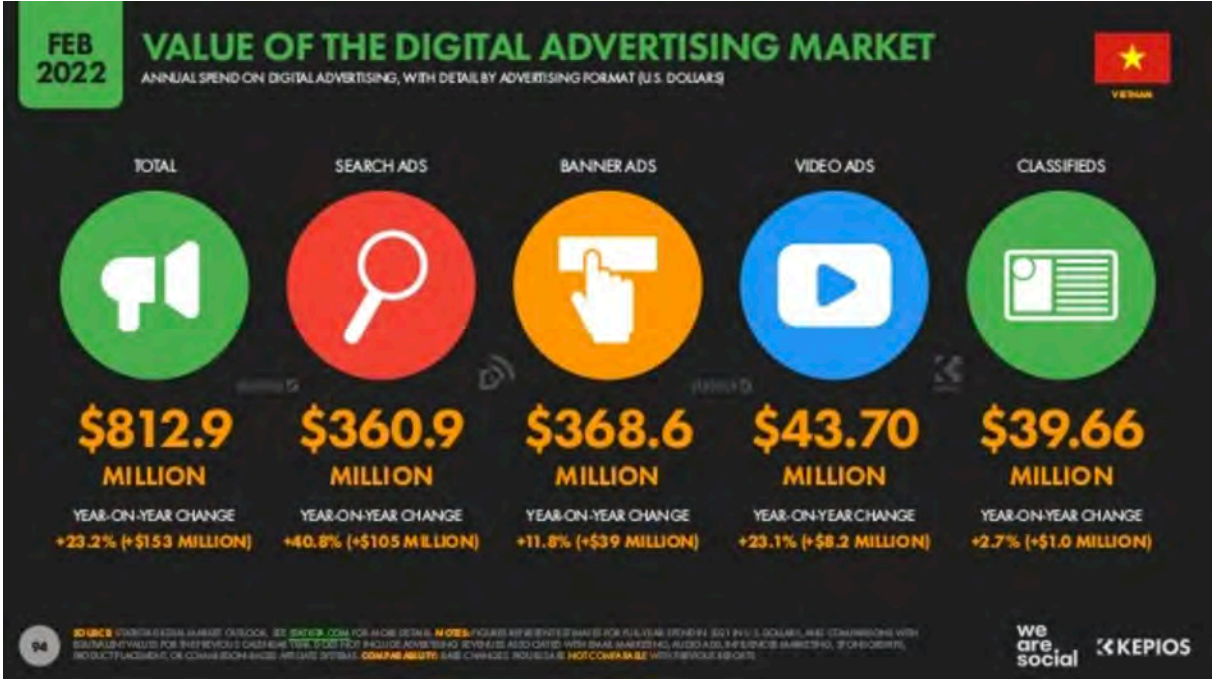
Value of the digital advertising market ©hootsuite.com

The Global South had been regarded as a potential market and a target by international traders as long as 200 years ago. For this reason, European merchants expanded their market and exploited colonies in the 18th and 19th centuries. Clearly, technology owners have a special preference for investing in this market in the 21st century.

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[93] https://nacis.gov.vn/nghien-cuu-trao-doi/-/view-content/214123/phap-luat-hien-hanh-cua-viet-nam-ve-bao-ve-du-lieu-thong-tin-ca-nhan-va-quyen-rieng-tu
https://thuvienphapluat.vn/van-ban/Cong-nghe-thong-tin/Luat-an-ninh-mang-2018-351416.aspx
[94] http://www.lapphap.vn/Pages/tintuc/tinchitiet.aspx?tintucid=210966
[95] https://vjst.vn/vn/tin-tuc/3303/tri-tue-nhan-tao-va-nhung-thach-thuc-phap-ly.aspx

In general, the colonization process in cyberspace has been carried out through the social appropriation process, which imposes the power of technology owners on those who directly or indirectly use their products and services. Firstly, technology owners occupy digital territories through various digital markets such as mobile phones, computers, search, e-commerce, social networks and e-finance. Secondly, they possess the means and materials of digital production, in which machinery, equipment, and technology are the fundamental means, and data is the most valuable material. Together with the acquisition of a cheap workforce, the colonization of today also appropriates human identities, personal information, and individual decision-making. Through these appropriations, cyber-colonialism creates a new social order. Digital power-sharing dominates various aspects of life from political economy to culture, and these take place in many parts of the world, especially in developing countries.

Share file 01: "Brave New Chapter"
Readymades
digital print, collage, size: A0
2019
Première exhibition: Europa Garage, 5un7 Gallery, Bordeaux (FR), 2019
Second exhibition: Crack, Artus Studio, Budapest, 2022
https://tranguyen.net/portfolio/the-brave-new-chapter/

Project description
The artwork focuses on colonialism transformation in the digital age and explores the reconstruction of the colonial relationship in cyberspace by reusing, overlapping, and manipulating two posters. These two posters refer to the connected historical events: the *Paris Colonial Exposition*[96] (1931) and its critical counter exhibition: *The Truth on the Colonies*[97] organized by the French Communist Party in the same year. This collage also shows a conflicting action within the political opposition (the popular phenomenon of political posters on the street). Meanwhile, it emphasizes the value of counter-media.

A small text named "cyber" has been added in the second poster aimed at the viewers' attention, linking the past and reality, and creating the context for the issue. "Brave New Chapter" is a pun modified from the title of the dystopian novel "Brave New World" by Aldous Huxley in 1932. The name of the work makes the connection with a futuristic world state in which advances in science and technology have created a beautiful social surface. But hidden within it is the bewilderment of many individuals, the pain of many social groups, oppression, and injustice, posing a series of intractable problems.

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[96] https://en.wikipedia.org/wiki/Paris_Colonial_Exposition
[97] Colonial exhibition
https://en.wikipedia.org/wiki/Colonial_exhibition#:~:text=The%20French%20Communist%20Party%20held,s%20criticisms%20of%20forced%20labour.

Brave New Chapter ©Tra Nguyen

Share file 02: "Dialectic of Cyber-Enlightenment"
Readymades, found object, intervention
size: 45 × 600 cm
2020
Première exhibition: Colonial Warehouse, Archives Bordeaux Metropole, France, 2020
Second exhibition: Crack, Artus Studio, Budapest, 2022
https://tranguyen.net/portfolio/dialectic-of-cyber-enlightenment/

Project description
The work reflects on the transforming and changing structures of contemporary culture in which the developments of cyber-culture are constantly revealing the inherent limitations alongside new conflicts.

Inside the scroll book, one can find manipulated quotes of a well-known philosophical thesis written by the Frankfurt School philosophers Max Horkheimer and Theodor W. Adorno – *Dialectic of Enlightenment* (1944). The major part of the citations comes from the chapter *The Culture Industry: Enlightenment as Mass Deception,* a clear depiction of the corporation dominancy, and of the political and economic interests behind, that can be applied to the contemporary cyber-culture as well.

The work was inspired by the context of the exhibition – the Archives Bordeaux Métropole – where numerous important historical documents are conserved. The form of this work is reminiscent of a classic scroll book, through which the aim was to record a social phenomenon of our times. The book was made up of technical elements of toner cartridges, and a transparent foil of the retro overhead projectors.

Dialectic of Cyber-Enlightenment. Courtesy of Szabolcs KissPál

Dialectic of Cyber-Enlightenment. ©Tra Nguyen

Dialectic of Cyber-Enlightenment. ©Tra Nguyen

POST 02
CLASSICAL TRICKS, NEW TECHNIQUES

2.1 Media industry in the age of AI

As living organisms, communication is a fundamental activity of connecting individual entities in order to develop linkages and form groups. For human society, communication is considered an important component in the formation of communities, it is the glue that binds individuals together. The communication process is defined as the **transmission of information**. Communication activities are the act of developing meaning among entities or groups through the use of a sufficient number of mutually understood signs, symbols, and semiotic conventions (Cobley, 2008)[1]. The communication act always involves a specific medium to form and forward information. Initially, humans use their bodies as mediums to create and transmit information. We use limbs to make gestures, carriage, and eyes to receive those. The palate can make sounds; through sounds, oral language is formed and emitted, and then received by the ears.

Throughout the history of *Homo Sapiens*, we have witnessed the parallel shift between *remarkable social changes* and *significant transformations in the communication medium*[2]*;* in particular, we have seen how information content has been created and the means by which information is transmitted. As an example, the introduction of written communication marked a new stage in social knowledge formation, historical documentations, and collective memory establishment. Knowledge and history have been condensed into recorded characters and commonly used by governors. From hand writing to woodblock printing, books have been an integral part of religious and administrative apparatuses for thousands of years. That is why the oldest known printed book is the *Diamond Sutra* - an important *Mahayana Buddhist* text from the Chinese[3]. Or, the first book in the world to adopt mass printing techniques with moveable types is the *Christian Bible*.[4]

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[1] Cobley, Paul (2008), "Communication: Definitions and Concepts", in Donsbach, Wolfgang (ed.), *The International Encyclopedia of Communication*, Chichester, UK: John Wiley & Sons, Ltd, p.71
[2] **communication medium** such as human body, human voice, paper, pen, engraving, printer, radio, TV, phone, computers, smartphones, wearables, VR…
[3] https://en.wikipedia.org/wiki/Diamond_Sutra#/media/File:Jingangjing.jpg
[4] https://en.wikipedia.org/wiki/Gutenberg_Bible

Diamond Sutra ©Wikimedia Commons

Gutenberg bible Old Testament Epistle of St Jerome
©Wikimedia Commons

Indeed, human society has entered a new era together with the formation of ***mass communication media*** such as the printer, radio, television, phone, computer and smartphone. The involvement of machines and mass production marked the beginning of the technological era. When automation first became a critical part of civilization, ***social connections gradually shifted from direct to indirect ways through mechanical means***. Instead of face-to-face communication by talking, distance communication through phone, text message, chat, email, or video call were introduced and became an indispensable section of the modern information exchange process. The large scale of social communication increased rapidly. More recently, the invention of the Internet has created simple and ubiquitous connections, unprecedented at any time in history.

Along with the birth and development of mass communication, there has been the continuous upgrowing of the ***media industry***, where all the elements related to the communication process have become commodities. The media business has ***turned the natural social activity***, the communication process, ***into a productive activity through the process of privatization of means and control of information production, storage, and distribution***. Knowledge exchange through writing has been steadily acquired by publishing and search engine businesses, while mail exchange had traditionally been controlled by the postal service industry and, more recently, by email service providers. Social connections have been taken over by social network platforms.

In the digital age, the global communication industry is owned by international media conglomerates and new technology empires. Aside from the classic media capitalists such as publishers, newspapers, magazines, radio and television centers contemporary society has witnessed the rise of multinational information technology capitalists. The achievements of digital technology and computer science have supported the current communication industry to become versatile and efficient machines; they are able to simultaneously produce, store and distribute information; likewise, they are able to work with huge volumes of data and perform highly accurate tasks. The most significant among all the new technologies are artificial intelligence, Big data, and the Internet of Things.

Using classic media tactics, contemporary technologies have helped media owners adopt new technical methods for information production, storage and distribution. Previously, the information had been produced exclusively by professional personnel; currently it is often being created by amateurs; and soon, machines will gradually take over this task. Information production previously targeted large social communities; in the present, it tends to be produced for small groups and distributed precisely to the right individual target. While it was necessary to purchase information in the past, that same information has now become a free product.

Fundamental changes in production personnel, production goals, and financial operating mechanisms have created a new face for the media industry in the era of artificial intelligence and automation.

Information producing workforce

Throughout the 20th century, the majority of information was generated by professional personnel, such as journalists, writers, editors, photographers and designers, working for newspapers, radio, television stations, and publishers. The emergence of digital media contributed to the new personnel management of the media industry. In the 1990s, the rise of the Internet generated strong, utopian expectations about a new freedom paradigm of the online communication that is mainly dominated by individual, amateur information producers and independent publishers (Wilson, 2003)[5]. Information consumption was expected to shift from professional to amateur production sources. The weblog is an early example of independent, individual publishing platforms on the WWW[6] and YouTube also witnessed the blooming of independent content producers—the Youtubers—in the early stages of development of the platform. However, soon after that, at the end of the 90s, independent digital media was rapidly subsumed by the appropriation mechanism of capitalism. A new model of labor was introduced into the system: the pseudo-independent producers, who in fact represented the covert professional production staff; for instance, behind the various known reviewers' websites or YouTube influencers there is often a large team of professional helpers.

By now, Youtubers, Facebook Live-streamers and Tik-Tokers have become actual professions. There is a complex ecosystem of educational, managerial and design services to support these new positions[7]. The artificially constructed 'individual publisher' has generated the fake illusions of success in many youngsters of the contemporary digital space. Over the past two decades the desire of many individuals to become successful influencers has contributed to the transformation of cyberspace into a dynamic content creation environment. This dynamism contributes to the smooth and less expensive operation of the digital media industry as well. Instead of investing in content production, the industry is rather focused on providing the storage and distribution infrastructure, while there is a significant increase in the amount of invested work

[5] Wilson, P. L. (2003). *Pirate utopias: Moorish corsairs & European renegadoes*. Autonomedia. https://hermetic.com/bey/pirate-utopias/index
https://theanarchistlibrary.org/library/hakim-bey-pirate-utopias
[6] https://web.archive.org/web/20150530144950/http://www.rebeccablood.net/essays/weblog_history.html
[7] How To Become A Successful Youtuber, the Udemy online course
https://www.udemy.com/course/how-to-become-a-successful-youtuber-making-youtube-channel/?utm_source=adwords&utm_medium=udemyads&utm_campaign=DSA_Catchall_la.EN_cc.ROW&utm_content=deal4584&utm_term=_._ag_88010211481_._ad_535397282064_._kw__._de_c_._dm__._pl__._ti_dsa-45828071535_._li_9040350_._pd__._&matchtype=&gclid=Cj0KCQiA9YugBhCZARIsAACXxeIzx-k7HOaMKUxUaQ24FVDLWybPpUep85M6VND-aX-yVvJ4iTLGn_gaAmkJEALw_wcB

in content production by individuals themselves. With a huge amount of time and effort spent on creating and distributing information on social networks, ordinary users are becoming a free workforce in the service of the information market. In the past, journalists were paid by editorial offices for their writings and photos, while by now the majority of the users–the 'digital proletariat'–are investing their work in social media for no revenue at all.

The amateur and unauthenticated information sources from individuals have also made the fake news phenomenon more and more popular. Even though fake news has a long history, with the speed of spreading rapidly through the internet space, the phenomenon of fake news has become more threatening, causing more critical consequences and becoming a significant problem of our current society. Fake news can lead to financial market destruction. For example, in 2013, $130 billion in stock value was wiped out in a matter of minutes by an AP tweet about an "explosion" that injured Barack Obama (Kapoza, 2017)[8]. Fake news has led to mass murders, such as Dylann Roof's shooting at the Charleston church on June 17, 2015, in the the U.S. state of South Carolina [9]. Fake news has also sabotaged many presidential elections around the world; among them, the election of Donald Trump in the U.S 2016 and the Facebook - Cambridge Analytica scandal[10] is the most notable. Producing and circulating fake news can be considered a criminal act. In recent years, penalties for fake news publishing on social media have been enshrined in law by several countries.

Using the pretext of controlling fake news, media owners have increased their dominance and act of censorship information in cyberspace. *Fake news* is, indeed, published by the authorities themselves, and often spread *legally* for the purposes of political propaganda. In contrast, *real stories* may not be conducive for the purposes of media owners since they are often *constrained* and may sometimes be *banned* from public circulation. Although users are allowed to post personal statements and data on social media, many digital networks and countries have erected barriers of censorship. Information censorship is essentially just moving from offline to online spaces.

Contemporary users are actively creating information within digital networks; nonetheless, their personal information is also an important data source in a passive sense. The user information that has been indirectly generated, after being processed through data analysis is secondary information. This information is a valuable commodity for trade and exchange on the data business market. The need for analyzed information is a foundational demand in all fields of the

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[8] Kapoza, K. (2017) Can 'Fake News' Impact The Stock Market? *Forbes*
https://www.forbes.com/sites/kenrapoza/2017/02/26/can-fake-news-impact-the-stock-market/?sh=56dbf952fac0
[9] https://en.wikipedia.org/wiki/Dylann_Roof
[10] https://en.wikipedia.org/wiki/Facebook%E2%80%93Cambridge_Analytica_data_scandal

present society. Traders and manufacturers know the market's demand for their products. The educators need to know the psychology of the learners they manage. The researchers need to know about the impact rates of issues of interest and citations. The medical staffs want to understand the biological body parameters of large social groups, such as heart rate, breathing, blood pressure. The politicians need to know about the specific political trends of the population they will be running for. Promisingly, all of these needs can be served by data analysis results. Through storing personal information, behaviors and actions in digital space, users have contributed to an expansive store of information—the Big Data. Users unconsciously help digital product and service providers amass their personal data, and this becomes the foundation for data owners to conduct analysis and produce statistical information.

Moreover, based on the development of machine learning algorithms, AI content becomes familiar to users today. AI can help correct grammar or spelling and complete documents in different styles. These text completion applications have been adopted widely by service providers such as Google, Apple, Grammarly and other widely used platforms. AI is now applied to text translation with increasingly improved accuracy, such as in the service of Google Translate. AI can also generate informational content for learning, correspondence, business, blog posts, and social media content. Text creation tools appeared very early as *Talk with Transformer* (Hart, 2019)[11] which has created great expectations for the business of automated news creation. Up to now, there have been many automatic news creation service providers such as Jasper, Copysmith, Writesonic, Kafkai, Article Forge, Articoolo, Rytr, CopyAI, and Peppertype (Hull, 2022)[12]. The Washington Post and Reuters have tested models where *bots*[13] write simple stories, sometimes using artificial intelligence, where the goal is to help the bots improve their writing over time. The Washington Post employs its *Heliograf tool*, which generates short stories based on structured data about topics such as election results and sporting events. Forbes is developing an AI assistant for writers called Bertie. Bertie learns from writers' styles, topic choices, and platform publishing preferences (Wittmann, 2022)[14].

By far, machine learning can use data and neural networks in a way that mimics the working of a biological brain. Self-study and thinking will bring great strides to the potential of machines to

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[11] Hart, M. (2019) This Ai Text Generator Is Terrifyingly Human, *Nerdist*
https://nerdist.com/article/ai-text-generator-human/
[12] Hull, C. (2022) 9 Best AI Content Generators for Every Kind of Content in 2023, *Jasper*
https://www.jasper.ai/blog/ai-content-generator
[13] Bot is a computer program that runs automated tasks over the internet
https://www.oxfordlearnersdictionaries.com/
[14] Wittmann, A. (2022) Chasing Profitability in a Changing Media Landscape, *Oracle Net Suite*
https://www.netsuite.com/portal/resource/articles/financial-management/media-revenue-models.shtml

create content. Certainly, the involvement of AI in news creation will accelerate the production processes of the media industry in the coming decades.

Information production and distribution objectives

In the early days of the media industry, communication products created based on the favors and ideas of the manufacturers - publishers. When the information was hard to find, every piece of news became extremely valuable. In my childhood, I still remember that I used to cut out beautiful illustrations or photos, good stories, news pieces from the newspaper(s), and store them. The children of my generation in Vietnam still gather at exactly 6:45 p.m every day to watch only 15 minutes of cartoons on the national public television program. Having access to the press, news and entertainment from the late 20th century is very rare and privileged in my region of Vietnam. Twentieth century information producers often paid less attention to the audience.

The production goal of 20th century media aimed at the masses and large community groups. The social groups defined by gender (male or female), by age (children, adolescents, middle-aged and elderly), and by race (people of color, whites, people of Asian descent) became more obvious in media strategies in the late 20th century. The early stages of the public relations industry have mostly targeted changing the mass perception. The lack of and thirst for information made any piece of it extremely valuable; therefore, they have an enormous impact on society. In addition, in South-East Asia in the period preceding the 1970s, there were sharp characteristics of a less divided society, collectivism strongly dominated many communities after some major wars, and society navigation in large groups seemed quite convenient. Mass targeting was the most obvious goal of the 20th-century media industry.

Entering the information overload era, media becomes superfluous, supply is over demand, and the economic value of news decreases remarkedly. Societies of the late 20th and early 21st centuries had experienced the rise of a noticeable social divide, with individualism spreading from developed to developing countries. From that point on, the media industry had to take a different turn. Media conglomerates began to focus more closely on individual needs. The characteristics of each reader have been scrutinized because media owners recognize that, in the new age, information only becomes valuable if it fits the needs of each customer. Properly capturing individual needs becomes the central paradigm of producing and distributing information in contemporary society.

With the assistance of AI, personal data is easily recorded, analyzed, and made available through digital platforms. Demand characteristics of each user becomes an available and accessible data. Machine learning algorithms can optimize the production of information and send the right information to the right people. For example, the machine is able to identify a user who is a

woman, has a MBA degree, works in accounting, has a stable job at a bank, has frequent feelings of sadness, and longs for weight loss. Her specific personal data was recorded through her various activities on digital services that the woman left behind in cyberspace. The information about this woman will be coded as a set of keywords such as woman, high education, accountant, bank, sad and weight. This code may then be stored on the platform and used to sort relevant marketing information over time. The targeted information will normally appear on the personal digital interface such as mobile apps, web searches or social networks. This automatically generated information can be extremely diverse, such as invitations to join program, advertisements on banners web, video commercials on YouTube and compatible search results on search engines.

Meanwhile, media have identified personalizing as the essential goal in production, storage and distribution of information in order to successfully compete in the age of information overload and to take advantage of AI technology.

Financial operating mechanism

In the last century, subsidies from political organizations and governments and the direct sales of news have been the main financial sources of the media industry. If readers cared to find single, independent sources of information to replace the politically altered propaganda, they had to pay. In the late 19th century, the main revenue of the media industry depended on the sales of books, newspapers, and magazines. Following that, the forms of commercializing information through radio were popular in the first decades of the 20th century, when customers could call or ask the switchboard operator on the telephone for information such as: weather, gold price or lottery results. In the middle 20th century, customers could buy specialized TV channels such as news, films, sports and shows by subscribing to various TV stations.

Presently, in the digital media world, the digital media world provides most information free of cost. Internet users are able to freely search and use a huge and varied amount of information available to them in cyberspace. With information so readily available on line, with free access a widespread phenomenon, the economic and political value of traditional media has decreased significantly. Consequently, political communication is less effective than previously, with lower revenues flowing to classical media outlets. Users gradually switch to finding and using free information instead of paid information In this new financial environment, many newspapers and radio stations have difficulties maintaining their operations. The shrinking of traditional media owners, such as books, newspapers, radio, and TV, has spurred the expansion of digital media owners. At the beginning of the 21st century, the media industry began to gradually transition to a new financial operating mechanism.

Even though media income from direct sales and subsidies has shrunk, and most information is distributed free of charge, digital media owners remain the wealthiest businesses in the world[15]. If most of the information is free, from where do their profits come? In fact, media empires still make their fortune from information, but *not from the media delivered to customers, but from the customers' information they systematically and, at times, secretly collect.* Changing the direction of information flow has become the strategy for making today's information technology corporations more profitable. Harvard Professor Shoshanna Zubov, the author of the book *The Age of Surveillance Capitalism* considered that we had come into this new world thinking that we were social media users. She also wondered whether we use the social media, or the other way around: "We mistakenly believed that we were searching Google and had no idea that Google was searching us."(Fanning, & Docherty, 2019)[16]

Media revenues gradually have gradually shifted toward selling user data, advertisements, or rights-to-use and recurring subscriptions. User information is the raw material that is used to create valuable statistical information for many industries. The groundwork for targeted advertising, especially, is found in the captured individual characteristics of harvested user information. Advertising optimized by machine learning algorithms has reaped enormous profits for digital media companies. User information has also been employed in the operation of licensing services or recurring subscriptions system. For example, the entertainment channels such as Netflix will optimize the topic scope through user data, which allow them to send the most suitable and attractive products to the customer. This is also the way to keep users within certain media service packages in the long term, while effectively increasing the revenue of digital media corporations. Personalizing in the production and distribution of information is a prominent feature and the new monetization method of the contemporary media industry.

Old tricks, new forms
In the 1920s, Edward Bernays, Sigmund Freud's American nephew, conceived of the public relations profession and was the first person to take Freud's ideas and use them to manipulate the masses. Bernays introduced American corporations to *how they could make people want things they didn't need* by systematically *linking mass-produced goods to their unconscious desires* (Curtis, 2002)[17]. Bernays' tactics of influencing society through psychological effects still have a dominant value today.

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[15] https://en.wikipedia.org/wiki/List_of_largest_companies_by_revenue
[16] Fanning, D. & Docherty, N. (2019) *In the Age of AI*, Documentary film, Frontline
 https://www.youtube.com/watch?v=5dZ_lvDgevk
[17] Curtis, Adam (2002) *The Century Of The Self Part I: The Happiness Machines*, Documentary Series, BBC Two, 17 March 2002
https://www.youtube.com/watch?v=DnPmg0R1M04

In the documentary series *The Century of the Self*[18], Adam Curtis pointed out that Bernays was one of the coaches for modern media. He was famous for his techniques of mass-consumer persuasion, using different tactics, from celebrity endorsement and outrageous public relations stunts to eroticize the motorcar. One of the most memorable demonstrations of Bernays' communication strategies was breaking the taboo on women smoking by persuading them that cigarettes were a symbol of independence and freedom. He proved that this was ***more than just a way of selling consumer goods, rather a new political idea of how to control the masses***. Communication has the ability to encourage the need to satisfy the inner irrational desires that Sigmund Freud had identified. Through this satisfaction, people could be made happy and thus docile. That is how the consuming self was established, a concept which has come to control today's world.

Basically, the modern media conspiracy is grounded in this specific application of Freud's psychoanalytical methods. By proposing a ***technique to probe the unconscious mind***, Freud provided useful tools for discovering the secret desires of the masses. His work served as the precursor to the world with many political spin-doctors, marketing moguls, and a society that believes in the pursuit of satisfaction and happiness as humankind foremost goal.

Recognizing the importance of the unconscious mind, media owners from the 20th century to the present have invested considerable effort and resources in social psychology research. The contemporary world has revealed a change: rather than manual survey techniques with paper and pen, with multiple choice questionnaires or face-to-face interviews, the digital survey technique, using machines on a large scale, became the main research method. With lower cost, faster speed, and more up-to-date technology, an automated process of probing society's unconscious mind with automatic tools is more effective in this new age.

While media systems of commercial companies try to maintain an apparatus that produces the demand for happiness and satisfaction, the media systems of different governments attempt to influence the subconscious mind of individuals with endless anxieties and fears. It has become possible for commercial and political media to actually generate conspiracy theories. The fake news and propaganda that create fears from events that may never happen generates commercial and political advantages for media owners. *In Media Control: the Spectacular Achievements of Propaganda* (Chomsky, 2002)[19], Noam Chomsky once wrote "You've got to keep them pretty scared, because unless they're properly scared and frightened of all kinds of devils

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[18] Curtis, Adam (2002) *The Century Of The Self Part I: The Happiness Machines*, Documentary Series, BBC Two, 17 March 2002

[19] Chomsky, N. (2002). *Media control: The spectacular achievements of propaganda*. Seven Stories Press.

that are going destroy them from outside or inside or somewhere, they may start to think, which is very dangerous, because they're not competent to think."

As a result of a model scenario played out in many countries today, the media are being used by the political class to create constructed images of the 'evil' that threatens national interests; at the same time, political channels create the image of heroes as well – namely, the politician who protects the nation from the illusory enemy. Most of these villains usually belong to other races, foreigners, and immigrants; their image is associated with actions of taking jobs, occupying land, destroying culture and mixing noble bloodlines. These political plays contribute to the selfish nationalism that has sprung up in many parts of the world. Media conspiracies associated with extreme nationalism are one of the many media tactics that political parties have used over the centuries and are still popular in digital world today.

By distancing the images of the world from reality and implementing the lie and threat scenarios, many media companies attempt to dominate and control societies in the name of democracy and individual freedom. The virtual space has pushed these scenarios further and further away from reality, as Noam Chomsky formulates: "The picture of the world that's presented to the public has only the remotest relation to reality. The truth of the matter is buried under edifice after edifice of lies upon lies. It's all been a marvelous success from the point of view in deterring the threat of democracy, achieved under conditions of freedom, which is extremely interesting.". (Chomsky, 2002)[20]

As in the last century, the media have created countless images representing all issues in the most beneficial way to sponsors – business owners, corporations, organizations, and governments. The concept of beauty is constantly sharpened and changed according to social media campaigns. The standard lifestyle has been shaped through online advertising campaigns. Mainstream political support has been guided through the waves of news spread on social media networks. Inner irrational desires and fears of individuals have been encoded in the complex system of signs, symbols, signals, and semiotic conventions through cyberspace. The remarks of Guy Debord in his 20th century book, *The Society of the Spectacle* remain valid today; societies have been defeated by the current production conditions when life has been presented as an immense accumulation of spectacles. Any direct lived experience has receded into representation through the impact of the content of: articles; magazines; books; images; sound; entertainment forms such as games, movies, and music; research information production; survey data; and advertising. Perception of modern human life is attacked in full force by *artificial spectacles*.

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[20] Chomsky, N. (2002). *Media control: The spectacular achievements of propaganda*. Seven Stories Press.

Entering the hyper-fake online society, the skills required of 21st century people are to question what is named the truth, what is the necessary distance to be able to re-evaluate the representative images, and how to control emotions in front of spectacular and skillful fake performances. Max Weber noted: "It is not true that good can follow only from good and evil only from evil, but that often the opposite is true. Anyone who fails to see this is, indeed, a political infant." (Weber, 2013)[21]. Comparing and contrasting information and critical thinking are much more important in the digital media age.

Media owners have positioned people into naive and silly spectators of different political plays, setting them up for unfounded panic and erroneous beliefs. The most obvious difference we see in the current media technological change is that the intensity of influence increases, the means of the impact are enriched, and the personalization is higher. The new situation contributes to the creation of deep beliefs and fears in society.

In the age of AI and automation, we are witnessing changes in production personnel, production objectives, modes of production, sales and delivery of information, and ways of generating revenue for the media industry. The vast amount of information is mainly consumed online. The domination techniques of the new media industry are mostly relying on machines and efficient algorithms. However, the nature of social manipulation through the media has not changed considerably since the dawn of the last century.

2.2 Posthuman Creativity

"The media are not toys; they should not be in the hands of Mother Goose and Peter Pan executives. They can be entrusted only to new artists because they are art forms."
Marshall McLuhan - *Counterblast*[22]

Canadian communications theorist Marshall McLuhan was the first to use the term **media** in its modern sense related to communication channels. In his book *Counterblast* (1969)[23] he considered the media an art form. Elements of signs, symbols, images, and sounds are the essential foundation for constituting media content. Artists, painters, designers, photographers, and filmmakers are the key personnel in the classical media industry. Media design has become a growing career associated with digital media. Consistent with the changes of the media industry in the age of AI and automation, ***media design gradually moved to a new stage resulting in the***

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[21] Weber, M. (2013). *From Max Weber: essays in sociology*. Routledge.
[22] McLuhan, M., & Parker, H. (1969). *Counterblast*. New York: Harcourt, Brace & World.
[23] McLuhan, M., & Parker, H. (1969). *Counterblast*. New York: Harcourt, Brace & World.

shrinking of professional personnel, expanding digital design support tools, and moving towards artistic creation by machines.

In the early 20th century, when mass media appeared, posters were often hand-crafted by famous artists, and the period of hand-designed media lasted until computers became popular in the 1990s. Computer graphic interfaces and specialized design software generated explosive decades of professional media design in the late 20th century. Since the beginning of the 21st century, many semi-automated design tools have been released, supporting untrained media image makers. Users can design logos on automatic services like Wix.com, easily create a text and image layout through Canva.com, design websites through the Elementor tool, and make movies with Adobe spark. Many similar software and design tools are being developed and widely used.
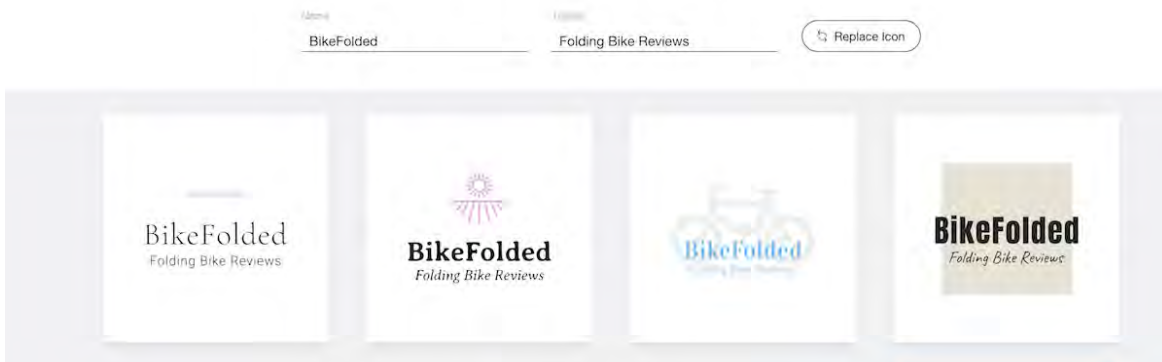
© Wix.com
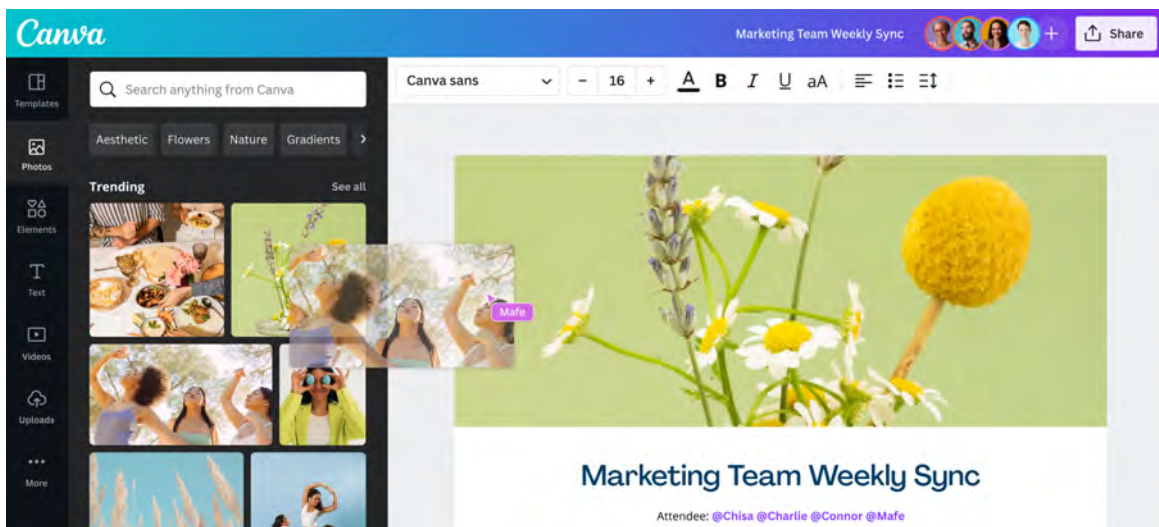
© Canva.com
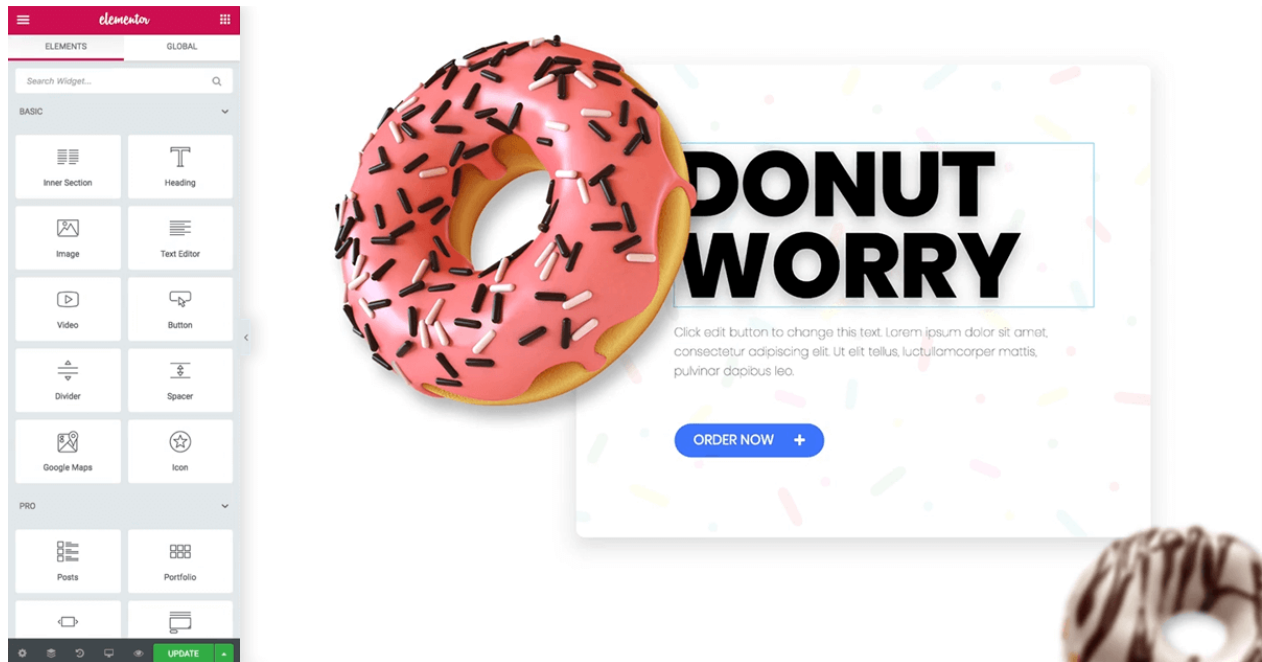
© Elementor tool
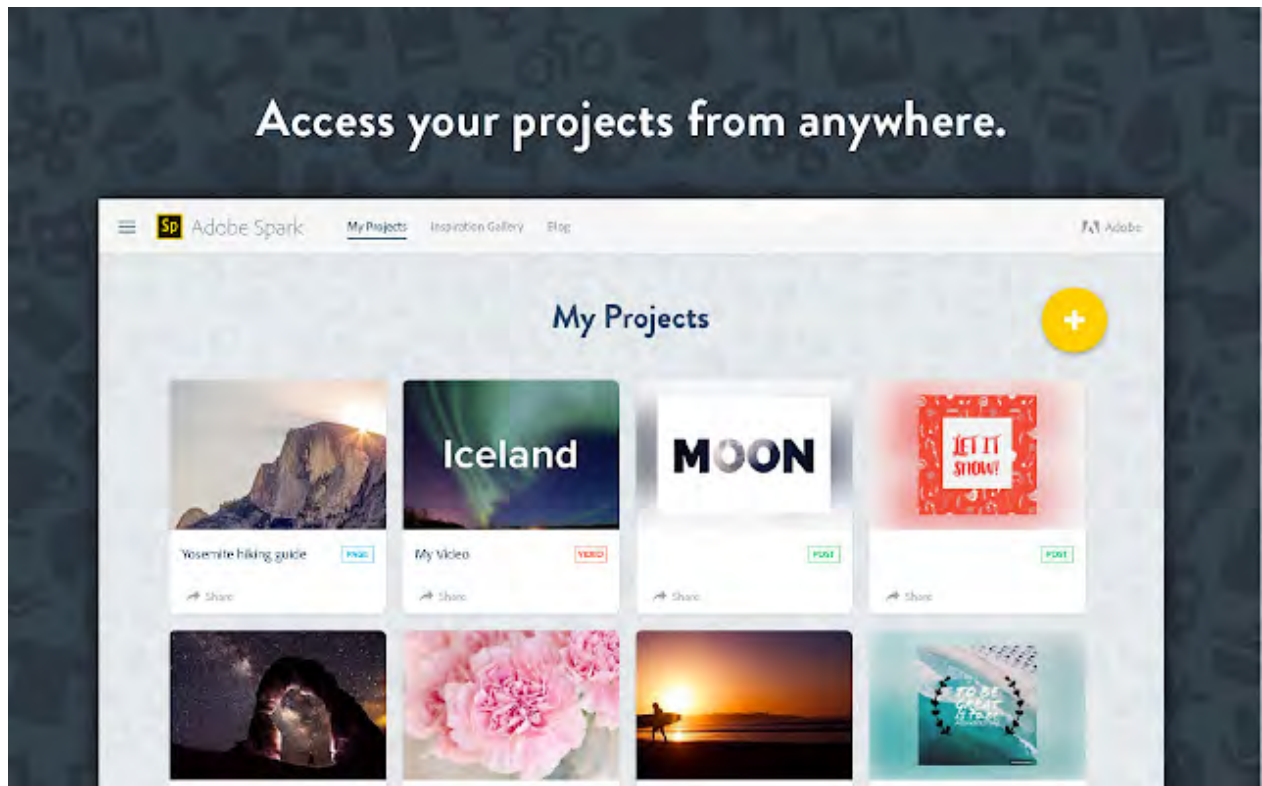
© Adobe spark

Most design support services operate based on accessing a large data stock – a design library. Basically, in the design tool services, the important design elements like composition, the shape of the objects and style are already fixed. With ready-made templates, the services only show users how to replace the necessary design elements to make their own product. Easy to use, these design services became powerful tools for untrained designers. This easy and convenient design process created a society where design elements are everywhere. In the book *Made In China, Designed in California, Criticised in Europe, Amsterdam Design Manifesto,* Mieke Gerritzen and Geert Lovink referred to this phenomenon: "Automation has afforded the affluent citizen of the Western world both more space to shop and more time to exercise their creative chops. Here, designer and consumer merge. The ubiquity of software has meant that suddenly everyone is a de-signer. How hard can it be? The discipline has been democratized from cross-discipline to anti-discipline. But what have we lost, now that craft doesn't count anymore and design has become a lubricant for any social process imaginable? Design suffers from inflation, becoming absorbed into anything and everything." (Gerritzen, & Lovink, 2019)[24]

Furthermore, with machine learning algorithms, ***fully automatic tools for design could soon become even more popular***. Image generation shall become faster. AI image generation software like DALL-E 2 is one impressive example. This AI system has learned the relationship between images and text. DALL-E 2 allowed users to create images from textual descriptions. By explaining an idea, the machine could automatically generate a realistic image. One of the first cases of using image generation AI for design purposes are Karen Chen, a digital artist, who created a magazine cover for Cosmopolitan using DALL-E 2.

Image Cosmopolitan ©rockcontent[25]

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[24] Gerritzen, M., & Lovink, G. (2019). *Made In China, Designed in California, Criticised in Europe,* Institute of Network Cultures, Amsterdam.
[25] https://rockcontent.com/blog/artificial-intelligence-design/

Two "variations" of Girl With a Pearl Earring generated by DALL-E 2[26]
©Wikimedia Commons

The other example is the portrait image generator with SofGAN or TL-GAN. This software has been used to create billions of virtual characters with real human features. These images have been used commonly for virtual accounts on social networks. It is also a source of artificial characters and "virtual influencers"[27] for the advertising market. For example, luxury fashion brand Prada created virtual influencer *Candy* to become the new face of the *Prada Candy* perfume.

Prada Candy perfume ©virtualhumans.org [28]

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[26] https://en.wikipedia.org/wiki/DALL-E

[27] Virtual influencers are someone (or something) with the power to affect the buying habits or quantifiable actions of others by uploading some form of original—often sponsored—content to social media platforms like Instagram, YouTube, Snapchat or other online channels.
https://en.wikipedia.org/wiki/Influencer_marketing

[28] Hiort, A. (2021) Prada Creates Virtual Muse Named Candy, *Virtual Humans*
https://www.virtualhumans.org/article/prada-creates-first-virtual-muse-candy

The support of new technology has created new entities in post-human society. Users can have many virtual accounts and express their personalities differently from real and virtual life. The flexibility to switch personalities creates multi-personality individuals that are becoming increasingly popular in the new age. In addition, virtual characters that are entirely composed according to the owner's purpose become a new social group – the cyborgs who can mimic or have human characters. One of the characteristics that programmers strive to equip in this machine-human is creativity.

Presently, in the graphic design industry, artificial intelligence machines are able to generate multiple variants after recognizing a pattern. The algorithm is able to extract colors and patterns of a design and then construct other variants within the range of identified colors and patterns. Taking the Nutella Unica design for instance, one testing algorithm was able to shape millions of new Nutella labels from the combinations of its old design (Ahmed, 2019)[29].

The Nutella Unica design ©jeffbullas.com

From Kjetil Golid's code art website, we could find five fruity savors from Kômô: Raspberry, Watermelon, Grapefruit, Mango, and Lemon. These are illustrated with artificial designs originating from the Crosshatch-Automata sketch:

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[29] Ahmed, U. (2019) The Top 6 Ways Artificial Intelligence Will Affect Design In The Future, *jeffbullas.com*
https://www.jeffbullas.com/artificial-intelligence-design/

Kômô design ©packagingoftheworld.com[30]

With visual recognition technology to spot people and objects, AI helps to more quickly and more simply remove the background from a picture. The algorithm analyzes the image, detects the main and secondary objects, and then cuts the picture respectively. The user can refine the cut for better results. Removebg, VistaCreate, Clipping magic and Photoscissors are free AI background removal tools in the existing software market.

©create.vista.com

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[30] https://packagingoftheworld.com/2021/01/komo-probiotic-packaging-made-with-ai.html
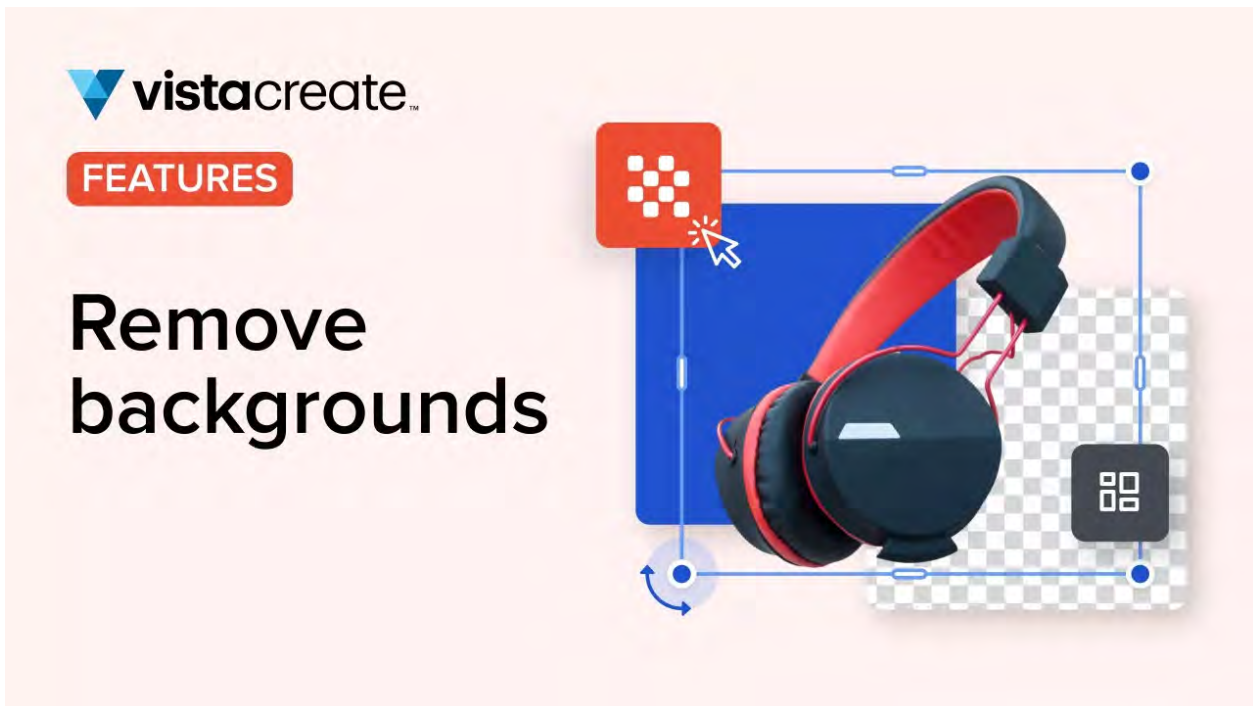
AI has also brought new strides in improving image quality. Some of the most prominent examples of AI image enhancement tools include Vance AI, Upscaleics, Remini, and Let's Enhance. Several AI-based image enhancement tools are capable of helping to adjust noisy, blurred images to be of high quality, clear and sharp. Using these tools, AI is very proactive in restoring images and improving resolution. AI image enhancement tools are able to replace blurred areas, sharpen them, and save them. In addition, the tool is able to fix poor lighting, contrast, and accuracy in colors in just a few seconds. These tools can also can also resize images without stretching or blurring[31]. AI photo editing applications are now automatically installed on personal mobile devices, profoundly affecting user perception of self-image and the world around them.

©remini.ai

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[31] 6 Ways Artificial Intelligence will Affect Design in the Years to Come, *rockcontent.com*
https://rockcontent.com/blog/artificial-intelligence-design/

The perfected image of society is a distinct feature of posthuman living conditions when machines are deeply involved in constructing the concepts of life. According to Gerritzen & Lovink, "In today's visual culture, images are more real than real. There is nothing beyond the image" [32], and indeed nothing seems real unless we post it on social media. The individual existence is dominated by the image of cyber-representation that is obviously distorted fully by devices, machines and software controlled by a small group of people. Therefore, every image around us today is just a designed, subjective reflection.

For a long time, design has been acknowledged as a creative career. When identifying the focus professions of the creative industry, design has always been mentioned first (Howkins, 2001[33]; Hesmondhalgh, 2002[34]). Creativity is a human essential ability that emerged from the early time of humankind. According to Collins Dictionary: "A creative person has the ability to invent and develop original ideas, especially in the arts. Creative activities involve the inventing and making of new kinds of things." In the posthuman condition, with the active participation of technology and machines in the creative process, especially in art and design, the standard of new things becomes more controversial.

With the deep intervention of machines in creative activity through design tools, the data library system becomes the foundation for every new product, and the new designs mostly use the existing design elements in the library. Creative modules work by connecting available sets of information. The sets of digital models of artistic styles, color tones, characters, and scenarios generated by information systems become the foundation of contemporary creativity. The less data a library has, the lower the level of design element combination, while the more data a library has, the more diverse the matching will be. Nevertheless, creativity through libraries often does not go beyond what already exists. Thus, the novelty of designing products seems to hang around in the data stock. Somehow, the role of designers might change from creators to curators. The standards of beauty are attributed to certain forms of templates. Mass and similar beauty have become increasingly popular in contemporary media design aesthetics.

In addition, following the personalization trend in marketing, individual needs are identified at the heart of the design process in the present time. "Design thinking" focuses all of its energy on offering solutions to satisfy target customers. The creative process mainly focuses on problem-solving instead of creating new ones. In the words of Gerritzen & Lovink, designing products is

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[32] Gerritzen, M., & Lovink, G. (2019). *Made in China, Designed in California, Criticised in Europe*: Amsterdam Design Manifesto, Institute of Network Cultures, Amsterdam.

[33] Howkins, John (2001), *The Creative Economy: How People Make Money From Ideas*, Penguin

[34] Hesmondhalgh, David (2002), *The Cultural Industries*, SAGE

"invariably the result of a technical solution. Such a model limits reflection to the pragmatic – and paradigmatic – procedural steps: making is reflecting. God forbid that our reflection leaves us empty-handed." And that is definitely not what we want from creative activities. [35]

If creativity has been formulated through a reflection process, it obviously loses novelty – the creative core. The creative process may come to an impasse if the involvement of machines is dominant in the design practice. In the main branch of humanist philosophy, human nature is considered autonomous, rational, capable of free will, and unified in itself as the apex of existence. However, in the posthuman context, humans seemingly have been dominated strongly by external factors and digital devices. All the acts of contemporary humans, from awareness to actions are all manipulated. Even the creativity of design navigates according to an existing scenario. Overall, we now live in a society where everything is related to design, and our society only changes when design results are refreshing. In contrast, when the creative process is simply the act of combining what is available in a given library and creativity is coordinated by a small group of programmers, the development of society becomes threatened.

As with other professions in the traditional media industry, the media design field has witnessed fundamental changes in the job market. While the number of professional media designers has diminished along with growth in the number of amateur media designers, the proliferation of automated design tools will increase.

Predictively, expert designers will be playing an important role in the near future until technology takes further steps and overcomes its current limitations. Simultaneously, unprofessional designers as a group are likely to diminish and even disappear over time. Analogue design methods that do not involve digitization will have the opportunity to survive and enter the same high-priced niche as the current antique market. *New* design jobs will appear with *new* platforms with *new* technology applications. In the next 10 years, the 3D design and virtual reality will have a larger market share than they currently have. Video design will prevail over still image designs. Post-human societies will witness boundless intermingling in the design work of humans and machines. In order to make the parallel existence of humans and machines add goodness to life, the acts of analysis, criticism and revolution in the present are very important and decisive.

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[35] Gerritzen, M., & Lovink, G. (2019). *Made in China, Designed in California, Criticised in Europe*: Amsterdam Design Manifesto, Institute of Network Cultures, Amsterdam.

Share file 03 "Ring the Bell"
Radio, installation, 2022
with the contribution of Rick Fendrick
Dial phone, audio, duration: 20 minutes,
Première: Crack, Artus Studio, Budapest, Hungary, 2022
https://tranguyen.net/portfolio/ring-the-bell/

Project description
The piece reenacts a popular American radio show, *The story behind the headlines* (1930s-1940s) in order to analyze some of the controversial recent media news related to surveillance capitalism.

The work pays tribute to the very first telephone newspaper service in the world, the Telefon Hírmondó (Telephone Herald) launched in Budapest in 1893 by the Hungarian Tivadar Puskás.

The critical narration referring among others to the American whistleblower Edward Snowden interprets and analyses in a popular language the various public statements of CEO of leading tech giants, such as Mark Zuckerberg (Facebook/Meta), Jeff Bezos (Amazon), Satya Nadella (Microsoft), Sundar Pichai (Alphabet/Google), Tim Cook (Apple) or Elon Musk (Neurolink, OpenAi).

Ring the Bell ©Tra Nguyen

Ring the bells that still can ring

Forget your perfect offering

There is a crack, a crack in everything

That's how the light gets in

- Leonard Cohen, Anthem

Ring the Bell. Courtesy of Andrea Bánóczy Varga

POST 03
THE BUSINESS OF DEEP LEARNING

3.1 The development of AI

Humans consider themselves superior in intelligence when comparing themselves with other species while they are also concerned about and want to overcome the limitations of their own cognitive abilities. Consequently, humans are constantly striving to create a new entity with the ability to think along the same cognitive processes as humans, an entity that may eventually perform in a way that humans cannot. ***AI was born to that expectation***.

In antiquity, man-made apparatuses with intelligence appeared as storytelling devices and have been common in fiction (McCorduck, 2004)[1]. In the 2nd century BC, the early analogue computers and the study of mechanical reasoning began with philosophers and mathematicians[2]. In the twentieth century, the research of mathematical logic led directly to Alan Turing's theory of computation, which suggested that a machine, by shuffling symbols as simple as "0" and "1", could describe and simulate any act of mathematical reasoning imaginable. The idea that digital computers can simulate any process of formal reasoning is known as the Church–Turing thesis (Berlinski, 2000)[3]. Along with simultaneous discoveries in neurobiology, information theory and cybernetics, the researchers looked at the possibility of building an electronic brain (McCorduck, 2004; Crevier, 1993; Moravec, 1988)[4]. McCullouch and Pitts' formal design for Turing-complete "artificial neurons" (1943) is considered the first work that is presently recognized as an example of AI (Russell & Norvig, 2003)[5].

In the 1950s, there were two visions on how machine intelligence emerged. Symbolic AI or GOFAI was the vision of using computers to create a symbolic representation of the world and systems that could reason about the existing world. The second was known as the connectionist approach and sought to achieve intelligence through learning (Manyika, 2022)[6]. These two approaches to the mind (Symbolic AI) and the brain (connectionist) have been compared by Lames Manyika. He argues that symbolic approaches dominated the push for artificial intelligence in the 1950s, due in part to its connection to the intellectual traditions of Descartes, Boole, Gottlob Frege, Bertrand Russell, and others. Connectionist approaches based on cybernetics or artificial neural networks did not receive much attention in the past,

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[1] McCorduck, Pamela (2004), *Machines Who Think* (2nd ed.), Natick, MA: A. K. Peters, Ltd., ISBN 1-56881-205-1
[2] https://en.wikipedia.org/wiki/Antikythera_mechanism
[3] Berlinski, David (2000). *The Advent of the Algorithm*. Harcourt Books.
[4] McCorduck, Pamela (2004), *Machines Who Think* (2nd ed.), Natick, MA: A. K. Peters, Ltd.,
Crevier, Daniel (1993). *AI: The Tumultuous Search for Artificial Intelligence*. New York, NY: BasicBooks
Moravec, Hans (1988). *Mind Children*. Harvard University Press
[5] Russell, Stuart J.; Norvig, Peter (2003), *Artificial Intelligence: A Modern Approach* (2nd ed.), Upper Saddle River, New Jersey: Prentice Hall
[6] Manyika, James (2022). "Getting AI Right: Introductory Notes on AI & Society". *Daedalus*. **151** (2): 5–27. doi:10.1162/daed_e_01897.

but this strategy has become particularly noticeable in research in recent decades. (Manyika, 2022) [7]

In the 1960s, 1970s, and 1980s, AI has repeatedly become a focus of investment and development in several developed countries because of the promise that "machines will be capable of doing any work a man can do" as Herbert Simon predicted (Crevier, 1993)[8]. Nonetheless, unresolved failures and difficulties caused the so called "AI winter" periods to regularly occur at the end of each decade of this blooming period of thirty years.

In the late 1990s and early 21st century, by finding specific solutions to specific problems, AI gradually restored its reputation. The narrow attention allowed AI researchers to produce verifiable results, exploit more mathematical methods, and collaborate with other fields such as statistics, economics and mathematics (Russell & Norvig, 2003; McCorduck, 2004)[9]. With faster computers, algorithmic improvements, and access to large amounts of data, there was a significant advance in machine learning and perception; data-hungry deep learning methods started to dominate accuracy benchmarks around 2012 [10]. The number of AI journal publications increased by 34.5% from 2019 to 2020[11].

Meanwhile, academic researchers became concerned that AI was no longer pursuing the original goal of creating versatile, fully intelligent machines. Much of existing research involves statistical AI, which has been entirely used to solve specific problems, even highly successful techniques such as deep learning. This concern applied to to the subfield of artificial general intelligence (or "AGI"), which was backed by several well-funded institutions by the 2010s (Pennachin, & Goertzel, 2007)[12].

A part of artificial intelligence, with its effective applications and tangible economic value, **machine learning** has become the development focus of contemporary technology. Fundamentally, machine learning algorithms generate a model based on sample data, known as training data, in order to make predictions or decisions partly without being explicitly programmed to do so[13]. Machine learning algorithms have been introduced to the different applications of various fields, such as medicine, email filtering, speech recognition, agriculture and computer vision. In order to perform the needed tasks machine learning has also been applied in difficult or seemingly unfeasible functions to solve specific cases. A subset of

[7] Manyika, James (2022). *"Getting AI Right: Introductory Notes on AI & Society"*. Daedalus. 151 (2): 5–27. doi:10.1162/daed_e_01897. S2CID 248377878.

[8] Crevier, Daniel (1993). *AI: The Tumultuous Search for Artificial Intelligence*. New York, NY: BasicBooks.

[9] Artificial Intelligence Index Report 2021, Stanford University https://aiindex.stanford.edu/wp-content/uploads/2021/11/2021-AI-Index-Report_Master.pdf

[10] "Ask the AI experts: What's driving today's progress in AI?". *McKinsey & Company*

[11] "Ask the AI experts: What's driving today's progress in AI?". *McKinsey & Company*

[12] Pennachin, C.; Goertzel, B. (2007). "*Contemporary Approaches to Artificial General Intelligence"*. Artificial General Intelligence. Cognitive Technologies. Berlin, Heidelberg: Springer.

[13] https://en.wikipedia.org/wiki/Machine_learning

machine learning is closely related to computational statistics, which focuses on making projections into future processes by using computers; however, not all machine learning is statistical learning. The research of mathematical optimization delivers methods, theory and application domains to the field of machine learning. Data mining is a related field focusing on exploratory data analysis through unsupervised learning (Bishop, 2006)[14]. Data mining is of dominant usage among the practical applications of machine learning today. In the business field, machine learning is also referred to as predictive analytics. Some current machine learning uses data and neural networks in a way that mimics the working of a biological brain (Zhou, 2019)[15].

At the present time, within the development of artificial intelligence, we witness the breakthroughs of **deep learning** methods. Deep learning is a class of machine learning algorithms that uses multiple layers to extract higher-level features from the raw inputs. In image processing, for example, lower layers able to identify edges, while higher layers can identify concepts relating to people, such as numbers, letters, or faces[16]. Deep learning is also known as deep structured learning. Currently, the method would be implemented at different levels, such as supervised, semi-supervised, or unsupervised (LeCun, Bengio & Hinton, 2015)[17]. Deep learning architectures such as deep neural networks, deep trust networks, deep reinforcement learning, recurrent neural networks, convolutional neural networks, and transformers have been applied to different fields, including *computer vision, speech recognition, natural language processing, machine translation, bio-informatics, drug design, medical image analysis, climate science, material testing, and board game programs*. In some cases, the recent deep learning systems have been able to produce results comparable to the performance of the human expert (Krizhevsky, Sutskever & Hinton, 2012)[18].

3.2 Deep learning aesthetics

With the new development of deep learning methods, the world has been observed, recorded, and evaluated by computer vision. The tasks of aesthetic judgment and aesthetic generation have been researched and are currently being applied to various sciences (Sonka, Hlavac & Boyle, 2008)[19]. **AI systems have become widely influential automated "aesthetic judges"** and have created **"constructed aesthetics" for contemporary society.**

Today, with billions of users, there is an enormous social impact realized from platforms created by Google, Facebook, Amazon, Apple, Samsung, WeChat, Baidu and Xiaomi in the

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[14] Bishop, C. M. (2006), *Pattern Recognition and Machine Learning*, Springer

[15] Zhou, Victor (2019). "Machine Learning for Beginners: An Introduction to Neural Networks". *Medium*

[16] https://en.wikipedia.org/wiki/Deep_learning

[17] LeCun, Yann; Bengio, Yoshua; Hinton, Geoffrey (2015). *"Deep Learning"*. Nature. 521 (7553): 436–444.

[18] Krizhevsky, Alex; Sutskever, Ilya; Hinton, Geoffrey (2012). *"ImageNet Classification with Deep Convolutional Neural Networks"* (PDF). NIPS 2012: Neural Information Processing Systems, Lake Tahoe, Nevada.

[19] Sonka Milan; Hlavac Vaclav; Boyle Roger (2008). *Image Processing, Analysis, and Machine Vision*. Thomson

ways they compare values and evaluate aesthetics. ***While applying "Western aesthetic" standards to these man-made systems, machine learning also shapes a monotonous aesthetic environment, an aesthetic space dominated by consumerism, and it may even be able to identify the aesthetic biases already present in our society.***

There are various aesthetic approaches based on the orientations of different philosophical schools. The aesthetics and the philosophy of art are some of the most prominently debated issues from ancient philosophers to recent times. There are concerns about the ontology of aesthetics, such as whether aesthetics exists in nature outside of the subjective influence or cultural and social impact; the attention towards the epistemology of aesthetics has become of great research interest to experts in the field of applied sciences, especially among computer programmers. How do people perceive and evaluate aesthetics? How can machines acquire the same capabilities? These are the two main inquiries for programmers.

Computational strategies for aesthetics arose amid efforts to operate computer science methods in order to predict, convey, and evoke an emotional response to a piece of art. In this field, aesthetics is not assumed to be dependent on taste, but it is rather a matter of cognition, and consequently learning (Jahanian, 2016)[20].

Experimental aesthetics has been considered the central research direction of computer science related to aesthetics. The discipline itself was founded by Gustav Theodor Fechner in the 19th century, originally characterized by a subject-based, inductive approach. The analysis of individual experience and behavior based on experimental methods played a key role in experimental aesthetics. The discipline is intensely oriented towards the natural sciences, while the modern approaches mostly originate from the fields of cognitive psychology (aesthetic cognitivism) or neuroscience (neuroaesthetics)(Martindale, 2007)[21]. Therefore, the perception of works of art, music, websites or other IT products is studied.

In 1928, the mathematician George David Birkhoff developed an aesthetic measurement formula for aesthetic judgement, the M=O/C, where M stands for the ratio of order to complexity (Moles, 1957)[22]. Later on, in the 1970s, Abraham Moles and Frieder Nake were among the first to analyze links between aesthetics, information processing, and information theory (Moles, 1957)[23]. Then in the 1990s, German computer scientist Jürgen Schmidhuber described an algorithmic theory of beauty which takes the subjectivity of the observer into

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[20] Jahanian, Ali (2016) *Quantifying Aesthetics of Visual Design Applied to Automatic Design*. Cham: Springer. pp. 11–12. ISBN 9783319314853.
[21] Martindale, C (2007). *"Recent trends in the psychological study of aesthetics, creativity, and the arts".* Empirical Studies of the Arts. 25 (2): 121–141.
[22] Moles, A. A. (1957). Théorie de l'information et perception esthétique. *Revue Philosophique de la France et de l'Étranger, 147,* 233-242.
[23] Moles, A. A. (1957). Théorie de l'information et perception esthétique. *Revue Philosophique de la France et de l'Étranger, 147,* 233-242.

consideration, and postulates that among several options classified as comparable by a given subjective observer, *the most aesthetically pleasing is the one that is encoded by the shortest description*. A specific example of Schmidhuber's method describes an aesthetically attractive human face whose proportions can be described by very few bits of information, drawing inspiration from less detailed 15th century proportion studies by Leonardo da Vinci and Albrecht Dürer (Schmidhuber, 1997)[24].

Schmidhuber's thesis explicitly makes a division between the *beautiful* and the *attractive*, stating that *interesting* corresponds to the first derivative of subjectively perceived beauty. He concludes that each human observer continuosly tries to enhance the predictability and compressibility of their observations by identifying regularities, like repetition, symmetry, and fractal self-similarity. Similarly whenever a machine observer's learning process leads to improved data compression, the observation sequence can be described by fewer bytes than before, and the temporary power of the data to hold ones' attention corresponds to the number of saved bits. The compression progress is proportional to the human observer's internal reward, also named "curiosity reward". A reinforcement learning algorithm has been used to maximize future expected rewards by learning to execute sequences of action, which generate additional interesting input data with yet unknown, but learnable predictability or regularity. The principles can be realized in artificial agents constructing a form of *artificial curiosity*. (Schmidhuber, 2006). [25] [26]

In 2005, computer scientists attempted to invent automated techniques to presume the aesthetic quality of images (Datta, Joshi, Li & Wang, 2006)[27]. These approaches follow a machine learning methodology, where large numbers of manually rated photos have been used to "teach" a computer about what visual properties can be attributed to an aesthetic quality. The study by Y. Li and C.J. Hu employed Birkhoff's measurement in their statistical learning technique, in which *the order and complexity of an image determined aesthetic value*. The image complexity was calculated by using information theory and the order was determined through the usage of fractal compression (Chio, 2010)[28] Developed at Penn State University, the Acquine engine is another example that rates natural photographs uploaded by users. [29] Computational approaches have also been applied in filmmaking by using a

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[24] Schmidhuber, Jürgen (1997). "*Low-Complexity Art*". Leonardo. 30 (2): 97–103. doi:10.2307/1576418..

[25] Schmidhuber, Jürgen (1990) Papers on artificial curiosity since 1990: https://people.idsia.ch/~juergen/interest.html

[26] Schmidhuber, J. (2006). "*Developmental robotics, optimal artificial curiosity, creativity, music, and the fine arts*". Connection Science. 18 (2): 173–187.

[27] Datta, R.; Joshi, D.; Li, J.; Wang, J. (2006). "*Computer Vision – ECCV 2006*". Europ. Conf. on Computer Vision. Lecture Notes in Computer Science. Vol. 3953. Springer. pp. 288–301.

[28] Chio, Cecilia Di; Brabazon, Anthony; Ebner, Marc; Farooq, Muddassar; Fink, Andreas; Grahl, Jörn; Greenfield, Gary; Machado, Penousal; O'Neill, Michael (2010). Applications of Evolutionary Computation: EvoApplications 2010: EvoCOMNET, EvoENVIRONMENT, EvoFIN, EvoMUSART, and EvoTRANSLOG, Istanbul, Turkey, April 7-9, 2010, Proceedings. Berlin: Springer Science & Business Media. p. 302. ISBN 9783642122415.

[29] "Aesthetic Quality Inference Engine – Instant Impersonal Assessment of Photos". Penn State University.

software model developed by Chitra Dorai and researchers at the IBM T.J. Watson Research Center; this tool estimates aesthetics based on the values of *narrative elements*.[30]

In general, in the relation to computer-based aesthetic approach, the value of aesthetics for the most part, depends on the various formulas. By examining the shortness, length, simplicity, complexity, or location of the information, the computer produces corresponding aesthetic judgments, which leads to the critical role of the formula creators, the programmers who set the rules for judging beauty or tastes through these devices. What kind of principle do programmers usually rely on to create aesthetic formulas? That becomes a dire question in times when computer aesthetics are having a profound impact on contemporary life.

Based on human intelligence simulation, the aesthetic perception of machines is a clear reflection of the subjective aesthetic perceptions of society. The most concerning is that it might not comprehensively represent the diversity of aesthetic views and values. Based on a limited number of individual perceptions, the machine aesthetic could make this reflection monotonous and might reveal various misjudgments.

Currently, the majority of computer aesthetic formulas are rooted in classical aesthetic judgments, that is the beauty concepts of the European Renaissance. The golden ratio calculation formulas (Livio, 2008)[31] and the perspective and proportion formulas (Guan, & Aslaksen, 2005)[32] became the measure of computer aesthetics (Wright, 1988)[33]. Meanwhile, we have witnessed a "*coup*" in aesthetic perception since the early 20th century, when various anti-beauty (Foster, 1983)[34] concepts emerged influencing significantly modern art. The ideas of high and low art, beautiful and ugly generated various questions, such as: is simplicity beautiful, or is complexity bad? These queries are no longer clear. From the last century on, we have witnessed intense debates and confrontations in formulating what art is, what beauty is, and how to judge aesthetic values.

Overall, the art environment of the early 21st century exposes the parallel existence of multiple views of beauty; the idea of art and aesthetics has been widely broadened. Therefore, in the current context the question arises: ***can computer aesthetic formulations involve the complexity and richness of contemporary aesthetic approaches?*** In other words, given the current technical (algorithmic) and personal (programmers) limitations, the formulations of

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[30] Dubnov, S.; Musical Information Dynamics as Models of Auditory Anticipation; in Machine Audition: Principles, Algorithms and Systems, Ed. W. Weng, IGI Global publication, 2010.

[31] Livio, M. (2008). *The golden ratio: The story of phi, the world's most astonishing number*. Crown.

[32] Guan, K. H. S., & Aslaksen, H. (2005). *Perspective in Mathematics and Art.,* National University of Singapore https://citeseerx.ist.psu.edu/document?repid=rep1&type=pdf&doi=a6f9f364430004af4c9eb74c68d3d066f762c5ad

[33] Wright, R. (1988). Some issues in the development of computer art as a mathematical art form. *Leonardo, 21*(5), 103-110.

[34] Foster, H. (1983). Postmodernism: A preface. *The anti-aesthetic: Essays on postmodern culture*, ix-xvi.

computer aesthetics seem to be drawing back contemporary culture to the aesthetic values of past centuries.

Aesthetic judgments through computers not only lack a comprehensive view, but they also generate the aesthetic dominance of media owners, the aesthetic manipulation of corporations, ultimately serving the constant development of consumerism.

Formed in the late 17th century and flourishing with its multiple tactics in the 20th century (Trentmann, 2016)[35], the consumerism of the 21st century has been associated with the psychological manipulation of consumers through digital devices in which aesthetic manipulation is the most complex and compelling manipulative tool. Aesthetic appeal serves as a veil camouflaging the psychological manipulation of the user that is being carried out by the designers, activated by the marketing strategies of media owners and producers.

Computational manipulation of social aesthetics is implemented widely through formulating collective tastes of user communities in cyberspace. In particular, images play a significant role in this, advertising and propaganda online channels serving as the main media.

As a matter of fact, users often have the illusion of participating actively in the evaluation process of beauty in cyberspace by commenting, liking, sharing, rating, following, or subscribing; however, they might not recognize that all these online activities are usually filtered, controlled and overwritten by algorithms. The represented number of likes, shares and followers could be regularly manipulated to serve different interests. A partisan candidate can pay to increase the number of likes on his fan page. Being able to manage the number of likes also points out the fakeness of popularity in this day and age. A brand can buy rates from retailers' websites, such as at Amazon, to gain credibility in promoting sales. A social media influencer, who might sign a contract with a travel agency, can coordinate and persuade the number of followers to increase the popularity of certain travel or service destinations.

In addition, digital images completely dominate today's visual culture; the majority of personal devices are equipped with a recording function, the usage of which is flooding social media sites. Videos from security cameras are stored everywhere. The current world is all recorded by humans and viewed through lenses. The digital imaging society has brought visual culture closer to computer vision, where everything is depicted by a device and observed the others. "The 21st-century image became purely technical. Seeing has become mediated by a universal lens: the smartphone. We swipe, "like," and move on, annihilating the gaze and any real

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[35] Trentmann, F. (2016). *Empire of things: How we became a world of consumers, from the fifteenth century to the twenty-first*. Penguin UK.

aesthetic judgment. At the same time, the image resolution is sometimes even better than we could perceive with the naked eye." (Gerritzen, & Lovink, 2019)[36]

With the wide-ranging connectivity between personal accounts, social taste on the Internet is influenced dramatically by social networking services. The spreading speed of images, audio, and videos is incredible through sharing functions between social network accounts. Instagram is one of the social network services that has the most influence on aesthetic tastes through images today. With the statistical and optimized function for sponsored accounts, Instagram has created a miniature social structure, where influencers take control of the beauty perception of their followers, and their stunning images become the aesthetic standard for the followers' community. In the same way, YouTube is the social network having the highest impact on aesthetic trends through moving images, videos, and music; the influencer channels constantly create attraction and form the perception of beauty as well.

Based on the illusional images of influences surfacing on social networks, contemporary teenagers spend endless time and effort building their image on social networks. Many of them try their best to find ways to fit their image to the trend or online idols. The wish to increase "*likes*" and "*followers*" is extremely popular among young users. As a result, there are very few people who achieve aesthetic satisfaction; most young users regularly experience symptoms of anxiety, depression, loneliness and disappointment. All these are able to induce psychological disorders caused by aesthetic frustrations associated with one's self-image. The social network's aesthetic victims often feel sad about their own body image. On the contrary, in the moment users silently suffer desperation the most, brands present effective tactical solutions. Through the help of media or platform companies, sellers of products and services are becoming the heroes who relieve their customers of aesthetic pain and suffering. For example, an instant skin smoothing cosmetic or diet supplement for belly fat loss is sent to users' account interface while the platform recognizes that users are worrying about their bodies, consequently targeting them with the appropriate product or services.

The aesthetic of the social network formulates the perfection of the user's body while it also creates the desire to achieve the same living standards as influencers and a higher social class. From a Marxist and neo-Marxist point of view, the class factor plays an important role that constitutes the critical influences on social tastes or the majority's aesthetic tendencies. The images of high-class people have often been the fascination of lower classes. In the digital advertising environment, high-class images are purposefully artificial representations. For instance, we regularly observe Facebook images of a beautiful, well-dressed young mother traveling all over the world to promote an online financial investment channel; likewise, there are the ever-present images of wealthy men in luxury cars, advertising real estate investment. The scenario of creating aesthetic anxiety, craving for constructed social tastes, and then

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[36] Gerritzen, M., & Lovink, G. (2019). *Made In China, Designed in California, Criticised in Europe,* Institute of Network Cultures, Amsterdam. p.21

providing solutions through products and services highly affects *consumer society*. The aesthetic frustration has now become a dangerous, infectious mental illness. As Susan Sontag notes: "Needing to have reality confirmed and experience enhanced by photographs is an aesthetic consumerism to which everyone is now addicted. Industrial societies turn their citizens into image-junkies; it is the most irresistible form of mental pollution." (Sontag, 2001)[37]

Sharing the power of social network, search engines constantly exploit technological advantage to dominate the aesthetics of users. The image search results coordinated by algorithms summarize the ways users perceive beauty. Frequently, the filter system of image search results is programmed to optimize the appearance of paid brands advertising on the search engine. For example, when users need to search for images of white daisy flowers on Google search, they are presented with the first 100 images from stock services, such as Shutterstock or Gettyimages, or flower products from retailers like Walmart, Amazone, or Alibaba. The image of a white daisy has been shaped through captures by brands and associated with their products and services. Another example is seen at Pinterest, a well-known visual search engine that efficiently pushes a personalized experience function for visual results displayed on user accounts. The aesthetic results of Pinterest have dominated the Internet image market for the past decade (the 2010s). Operating similarly to social networks by tracking the connection between accounts and by analysing each user's "Pins" actions (the saved form of favourite image content) when they surf the web, Pinterest contributes significantly to shaping aesthetic trends in cyberspace. Pinterest's aesthetic has even become a reference address for many designers and art makers. In many design tutorials, Pinterest has been mentioned as a "savior" for ideas and layouts[38]. In order to influence or manipulate aesthetic trends, various businesses have collaborated with Pinterest to preferentially filter their images[39].

The operating system of Pinterest is a collection of Pins from the users, boards, and topics followed, as well as the promoted pins and pins Pinterest itself has selected. On the main Pinterest page, a "pin feed" appears, depicting the chronological activity from the Pinterest boards followed by the user. In October 2013, Pinterest began displaying advertisements through "Promoted Pins." Promoted Pins are based on the interests of each user and their historical behavior on the platform, such as visiting an advertiser's site or app. Beginning in 2015, Pinterest applied a feature that allows users to search with images instead of words. Next, in 2017, they implemented a "visual search" function that allows users to search for elements in images (existing pins, existing parts of a photo, or new photos) and navigates users to similar content within Pinterest's database. The tools supported by artificial

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[37] Sontag, S. (2001). *On photography* (Vol. 48). Macmillan.p.27
[38] Learn Graphic Design By Yourself
https://www.youtube.com/watch?v=pPTWDeZBPmc
[39] Pinterest Business Webpage https://business.pinterest.com/en-us/shopping/

intelligence are known as Pinterest Lens, Shop the Look and Instant Ideas.[40] With these new funtions and capabilities, the advertising revenue of Pinterest increased dramatically, and the products of its advertising partners have gradually flooded and now dominate search results. It is claimed that, at a time around 2020, Pinterest began to flood search results in Google Images. In 2022, Google affirmed that it had performed modifications to increase "diversity" in the search results.[41] Pinterest confirmed that, as a consequence of Google's changes of November 2021, "U.S. monthly active users coming to Pinterest from the web, desktop and transferable web declined roughly 30% year over year".[42] This demonstrates the radical influence of search engines in how they literally navigate social aesthetics through what they allow users to see on their screens.

Personalized search is a hidden social categorization process implemented by the algorithm. The profiles of users have become the foundation for the AI regulatory system to associate people with a particular social class. Then, based on the taste attributed to that particular social class, the platform will target them with a suitable product or service. The desire to improve their social status has become the main subconscious drive for the majority of the users. Therefore, creating the *class desire* is the most direct way to manipulate social aesthetics. In general, the aesthetic orientation in cyberspace is closely related to class taste. The identification or ethos of social class in the technological age has been constructed by algorithms in a wide range of class stratification. It is no longer based only on property ownership, but users now are classed through various capital categories that they possess. According to Pierre Bourdieu's approach, this classification can rely on "economic capital, in the form assets convertible to money and secured as private property; or on other types of culturally constituted types of capital: personal cultural capital (formal education, knowledge); objective cultural capital (books, art); and further on on institutionalized cultural capital (honors and titles)" (Bourdieu, & Wacquant, 2013)[43]. Identifying customer class to stimulate consumer demand has always been an important marketing strategy and has contributed to the sustainability of consumerism.

In conclusion, the involvement of machine learning in constructing and evaluating beauty, appraising goods, and class-categorising aesthetic tastes has become an operational characteristic associated with contemporary culture. Since the emergence of mass media, beauty standards have always been constructed; nonetheless, today's formulaic beauty concept is gradually becoming fully dominant. In the era of artificial intelligence and deep learning, the combination of **computational aesthetics** and **aesthetic consumerism** will guide and dominate the aesthetic perception of society.

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[40] David Cohen (2017). "Pinterest Brings Its Visual Discovery Technology to the Advertising Side". *Adweek.* https://www.adweek.com/performance-marketing/pinterest-visual-discovery-advertising/
[41] "What Google Search Isn't Showing You". *The New Yorker*. 2022-03-10.
[42] Transcribing, Motley Fool (2022). "Pinterest (PINS) Q4 2021 Earnings Call Transcript". *The Motley Fool*.
[43] Bourdieu, P., & Wacquant, L. (2013). Symbolic capital and social classes. *Journal of classical sociology*, *13*(2), 292-302.

3.3 Biased aesthetic

In addition to the problems of aesthetic manipulation through AI, the machine learning system has other drawbacks that carry different negative consequences for society. Human-supervised deep learning systems have various limitations in aesthetic evaluations and in the programming process as well. Even in the case of unsupervised networks, the self-learning system may also pick up several constitutional, conscious and unconscious biases already present in society through the self-learning process in an open environment. Generally, aesthetic assessment and orientation based on social groups implemented by man-made algorithms are associated with many social problems that need to be taken into the consideration.

The computer vision system has recently revealed many prejudices and racist results. The results of the image enhancement tool strongly depend on the data sets the AI system has been exposed to. One of the most scandalous examples of this issue is the AI version of Barack Obama's photo.
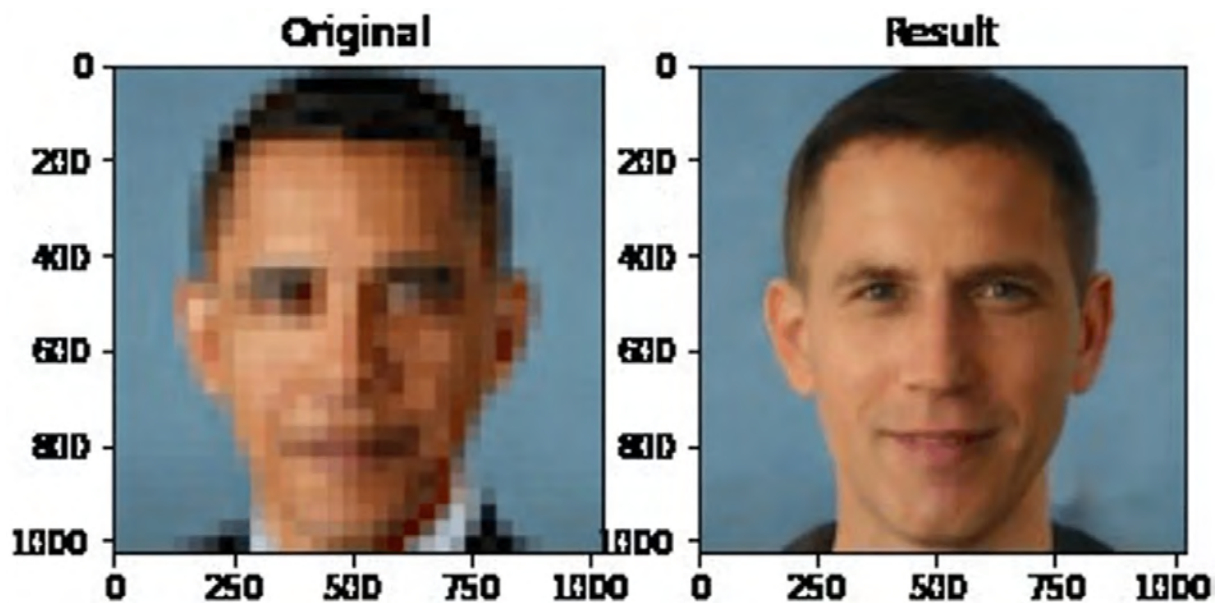
The AI version of the photo of Barack Obama ©theverge.com[44]

When the user uploaded a low-resolution portrait of Barack Obama, the first President of color of the United States, the algorithm automatically generated a picture of a man with distinctly white features[45].

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[44] https://www.theverge.com/21298762/face-depixelizer-ai-machine-learning-tool-pulse-stylegan-obama-bias
[45] https://rockcontent.com/blog/artificial-intelligence-design/

AI facial recognition systems used for criminal risk assessment have been found to be biased against black individuals [46][47]. Several criminal risk AI systems have been used in England and have been opposed by citizens because the identification results tend to discriminate against the poor[48]. In 2015, Google photos would tag black people as gorillas [49]. By 2018, this issue had not been resolved; however, it was reported that Google had developed a strategy to remove all images of gorillas from the training data. Therefore, after that event, the Google search tool has not been able to identify real gorillas at all[50]. Similar issues with recognizing non-white people have been detected in many other systems[51]. In 2016, Microsoft ran a chatbot that learned from Twitter, and it quickly picked up racist and sexist language on this social media platform[52].

Social grouping for manipulative effects in advertising is a probabilistic, sample-based method. On one hand, the grouping results are obviously not precise and they might be irrelevant to a particular individual. A machine learning system trained on current customers may not be able to predict the needs of new customer groups that are not represented in the training data. The mistake of grouping can lead to annoying information for users. YouTube advertisements, for example, target an individual account, while in the case of multiple users on common devices (such as workplaces, schools, etc), it is unable to send the relevant promotion to each individual user.

On the other hand, if the grouping results of algorithms are correct, they will significantly increase the differences between communities and social distances. For example, low-income groups are the target customers of multi-level financial investment services. As a result of these effects, most of the poor will be poorer, and the rich will be richer. Another example is how white people may be more often targeted with racist propaganda messages. Many violent attacks on people of color in the U.S. are rooted in automated inciting messages.[53] Manipulative social grouping may likely deepen the societal divide. John Dewey has implied that **the unity of aesthetics and ethics** has been reflected in our knowledge of behavior being **"*fair*"**, (Dewey, 1932)[54] the term having a double meaning of attractive and morally acceptable.

[46] Julia Angwin; Jeff Larson; Lauren Kirchner; Surya Mattu (2016-05-23). "Machine Bias". *ProPublica*.

[47] Israni, Ellora Thadaney (26 October 2017). "Opinion | When an Algorithm Helps Send You to Prison". *New York Times*.

[48] UK police are using AI to inform custodial decisions https://www.wired.co.uk/article/police-ai-uk-durham-hart-checkpoint-algorithm-edit

[49] "Google apologises for racist blunder". *BBC News*. 2015-07-01.

[50] "Google 'fixed' its racist algorithm by removing gorillas from its image-labeling tech". *The Verge*.

[51] Crawford, Kate (25 June 2016). "Opinion | Artificial Intelligence's White Guy Problem". *New York Times*.

[52] Metz, Rachel. "Why Microsoft's teen chatbot, Tay, said lots of awful things online". *MIT Technology Review*.

[53] Viral images show people of color as anti-Asian perpetrators. That misses the big picture. https://www.nbcnews.com/news/asian-america/viral-images-show-people-color-anti-asian-perpetrators-misses-big-n1270821

[54] Dewey, John. (1932)'Ethics', with James Tufts. In: *The Collected Works of John Dewey*, 1882–1953 Edited Jo-Ann Boydston: Carbonsdale: Southern Illinois University Press. p. 275.

To limit the misdirection of machine automatic learning systems, the ethical issues of artificial intelligence technology and the complement of legal regulations on the social responsibility of programmers would require special attention. Building and operating a responsible AI ecosystem should be a top priority of the global community.

The desire for beauty is a cultural demand that has emerged since the early times of human history. Aesthetics is a familiar concept of life and it obviously exists in individual perception. Beauty is evaluated in various ways by each individual, group, or community. Moreover, there have always been countless different, even contradictory views in the history of aesthetics studies. The richness of aesthetic approaches creates a dynamic environment for the emergence of new aesthetic elements, while the mechanization and monotony of aesthetic perception might easily lead to social prejudices, creating further negative consequences and suppressing the development of society. Hence, contemporary technologies and societies need to eliminate the monotonous aesthetic perceptions that are potentially generated by mechanised aesthetic formulas.

3.4 Attention economy, past and present

Advertising is considered the act or practice of calling the public's attention to a product, service or need[55]. Oral advertising is considered th e first form of advertising in human history. The announcements of sales or political messages are spread by community news-circulators. There is also evidence that Egyptians used papyrus to make sales messages and wall posters (Behal, & Sareen, 2014)[56]. Commercial messages and political campaign samples have been disclosed in the ruins of Pompeii and ancient Arabia. Lost and found advertising on papyrus frequently appeared in ancient Greece and ancient Rome. Wall or rock painting for commercial promotion is another indication of an ancient advertising form, which is present to this day in many parts of Asia, Africa, and South America.

The use of commercial and non-commercial messages to attract attention is an indication of an organized society where information is used to connect individual community members. A small group of the economically-, politically-, and socially-privileged targets a large and underprivileged group. Advertising media is an essential attention-grabbing channel that embodies a stratified society model, where those who dominate the distribution of information are able to impose their purposeful messages on various target groups. Historically, attention is an important target of advertising practitioners from the initial period. However, *the techniques of appropriating the attention of the community have constantly changed in different periods of time. The more sophisticated the attempts to*

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[55] https://www.dictionary.com/browse/advertising
[56] Behal, Vikas; Sareen, Sania (2014). "Guerilla Marketing: A Low Cost Marketing Strategy". *International Journal of Management Research and Business Strategy*. **3** – via Google Scholar.

appropriate attention, the more intense the human sufferance becomes, and the more the unconscious tension of societies increases.

With limited production capacity, small amounts of information, and small-scale distribution methods, there is no doubt that pre-20th-century advertisements impacted social perception differently from what we witness today. Before the emergence of mass media, there was a common information shortage, and, in general, products or services served small communities. Comparing the quality of various products or services and the advertising information was easily accomplished. The direct advertising messages were widely applied. Therefore, for a long period, advertising was considered to carry mostly reliable information. As an example, the first printed advertisement was a bronze plate dating from the Song Dynasty (10th to 13th AD). It used to print posters on a square paper with a rabbit symbol and the words "Jinan Liu's Fine Needle Shop."[57] Written above and below the copper printing plate were the sentences "We buy high-quality steel rods and make fine-quality needles, To be ready for use at home in no time". These messages identified the clear purpose of drawing customers' attention, building the reputation for the shop.

Page advertisement from Jinan Liu's Fine Needle Shop, Shandong Province, Song Dynasty.
©depts.washington.edu

In Europe, when the towns and cities of the Middle Ages began to grow and the general population was yet unable to read, instead of signs that read "cobbler," "miller," "tailor," or "blacksmith," images related to their trades would be used, such as a boot, a suit, a hat, a clock, a diamond, a horseshoe, a candle or even a bag of flour (Robinson, 2019)[58]. Most of these advertisements directly introduce the products and services to to attract the attention of customers.

In the 18th century, advertisements began to appear in the English weekly newspapers. These early print advertisements were used to advertise books and newspapers, which became

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[57] Commercial Advertising in China http://depts.washington.edu/chinaciv/graph/tcommain.htm
[58] Robinson, G. (2019). *Mass Commnunication and Journalism*. Scientific e-Resources.

increasingly affordable with the advancement of the press (Nevett, & Nevett, 1982)[59]. Parallel with this efficient production and distribution of commercial information, the emergence of false or "quack" advertisements was observed in the field of promotions. False pharmaceutical advertisements became a serious social problem, and skepticism about advertising arose, leading to the development of regulations for advertising content.

By the middle of the 19th century, mass production had become commonplace as a result of the commercialization that connected continents, this driven by colonialism throughout the globe. Printing techniques developed rapidly. The demand to promote products and services lead to the birth of the advertising industry. In this period, biscuits and chocolate became products for the masses. The British biscuit manufacturers were among the first ones to introduce the idea of a brand to distinguish between grocery products.[60] Huntley & Palmers cookies, one of the first global brands in the world, were sold in 172 countries in 1900, and their global reach was reflected in their advertisements[61].
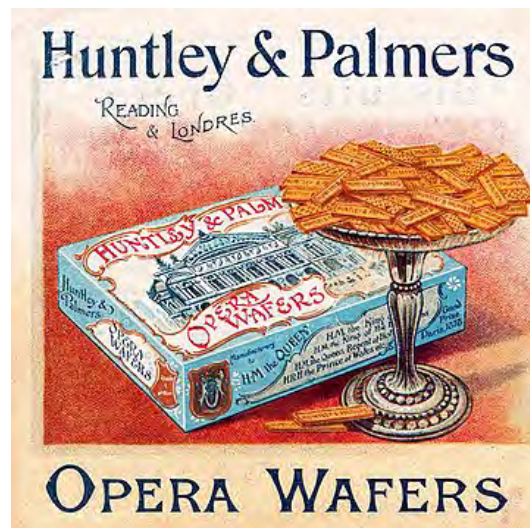
Advertising for Huntley & Palmers wafers c. 1890 ©Wikimedia Commons

La Press, one French newspaper, was the first to set up paid advertments on its pages in June 1836. This advertising service resulted in lower pricing for the newspaper, expanding its readership and increasing profitability. Soon after, this formula was copied by other news publishers (Thogmartin, 1998)[62]. In the 1840s, Volney B. Palmer founded the base of the modern advertising agency in Philadelphia. In 1842, Palmer began to purchase a large amount of space in various newspapers at discount prices, and he then resold the space to advertisers at higher prices. At that time, the copy, layout, and artwork was still prepared by the advertising companies. As a matter of fact, Palmer was the earliest space broker (Eskilson,

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[59] Nevett, T. R., & Nevett, T. R. (1982). *Advertising in Britain: a history*. London: Heinemann.
[60] "History Cook: the rise of the chocolate biscuit". *Financial Times*.
[61] "Huntley & Palmers Biscuits". Victoria & Albert Museum.
[62] Thogmartin, C. (1998). *The national daily press of France*. Summa Publications, Inc. pp. 53-54

2007)[63]. The spatial element in newspapers had become, by then, a commodity in the supply chain for the advertising production process.

N.W. Ayer & Son's first full-service advertising agency was founded in 1869 in Philadelphia. Ayer & Son offered to plan, develop and execute complete advertising campaigns for its clients. In the 1900s, the advertising agency had become the creative planning provider. Advertising established itself as a profession (Eskilson, 2007)[64]. In the meantime, in France, Charles-Louis Havas expanded the services of his news agency to include advertising brokerage, making it the first French group to organize advertisement space in the newspapers (Eskilson, 2007)[65].

Public spaces were also gradually commercialized into areas for advertising. Signs appeared in stores and advertisements in newspapers while advertising posters were produced and displayed throughout the city. The promoted posters also appeared on public transport vehicles to attract the attention of passersby in the early part of 20th Century[66].

George William Joy's depiction of the interior of a late 19th century omnibus conspicuously shows the advertisements placed overhead. ©Wikimedia Commons

By the beginning of the 20th century, targeted advertising tactics had been introduced through the practice of Thomas J. Barratt of London, known as "the father of modern advertising"

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[63] Eskilson, Stephen J. (2007). *Graphic Design: A New History*. New Haven, Connecticut: Yale University Press. p. 58.
[64] Eskilson, Stephen J. (2007). *Graphic Design: A New History*. New Haven, Connecticut: Yale University Press..
[65] Eskilson, Stephen J. (2007). *Graphic Design: A New History*. New Haven, Connecticut: Yale University Press
[66] Train & plane publicity and posters https://retours.eu/en/49-train-and-airplane/

(Mirzoeff, 2002)[67]. Consulting for the Pears soap company, Barratt formed various influential advertising campaigns to promote the products of the company, which involved targeted slogans, images, and phrases. One of his slogans, "Good morning. Have you used Pears' soap?" was very well known in its day and throughout the 20th century (Haig, 2005)[68]. In 1882, Barratt collaborated with the English actress, Lillie Langry to create the poster-girl for Pears; this role resulted in Langtry becoming the first celebrity to endorse a commercial product (Haig, 2005)[69]. Being the company's brand manager in 1865, listed as the first of its kind by the Guinness Book of Records, Barratt introduced many of the crucial ideas that lie behind successful advertising, which were circulated widely in his time. Thomas J. Barratt emphasized the importance of a strong and exclusive brand image for Pears, highlighting the product's availability through saturation campaigns. He also considered the importance of constantly reevaluating the market for changing tastes and mores. In 1907, he asserted that "tastes change, fashions change, and the advertiser has to change with them. An idea that was effective a generation ago would fall flat, stale, and unprofitable if presented to the public today. Not that the idea of today is always better than the older idea, but it is different – it hits the present taste." (Haig, 2005)[70]

Poster for Pears soap created under Thomas J. Barratt's leadership, 1900. Victoria and Albert Museum, London ©Wikimedia Commons

In the late 19th and early 20th centuries, the development of the 1st and 2nd industrial revolutions initiated a mass production period which eventually led to overproduction.

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[67] Mirzoeff, N. (Ed.). (2002). *The visual culture reader*. Psychology Press. p. 510.
[68] Haig, M. (2005). *Brand failures: the truth about the 100 biggest branding mistakes of all time.* Kogan Page Publishers.pp. 219, 266
[69] Haig, M. (2005). *Brand failures: the truth about the 100 biggest branding mistakes of all time.* Kogan Page Publishers.pp. 219, 266
[70] Haig, M. (2005). *Brand failures: the truth about the 100 biggest branding mistakes of all time.* Kogan Page Publishers.pp. 219, 266

Consequently, the supply of goods would grow beyond consumer demand. To be able to sell products, businesses began to use advertising as a means to bring their attention to and persuade customers to purchase. Modern advertising flourished during this period. The sophisticated advertising tactics that aimed to manipulate consumer spending have contributed to the formation of modern consumerism. From that time onward, consumer attention has been captured by business interest. Various scholars argued that "pre-twentieth-century advertising is almost portrayed universally as a simple announcement, contrasted with the cunning sophistication and subtlety of contemporary versions." (Williams, 1980; Dyer, 1982; Leiss et al., 1986) (McFall, 2004)[71]

In the 1910s and 1920s, advertisers in the US applied the doctrine that human instincts could be targeted and influenced, which "sublimated" into the desire to buy goods (Ewen, 1976)[72]. This is the mass manipulation method initiated by Edward Bernays, nephew of Sigmund Freud and founder of modern public relations, who was previously mentioned in Post 2 of this writing. The core of Bernays' communication philosophy is *linking mass-produced goods to the unconscious desires; it's all about directing consumer attention to their inner selfish desires, and the media will suggest ways to satisfy those desires with solutions, products, and services.*(Curtis, 2002)[73] Influencing human instincts by tactical scenarios has been the most profound intention of advertising from the 20th century until the present.

In the early 1920s, radio stations were founded firstly by radio equipment manufacturers, and then non-profit associations such as schools, clubs, and civic groups also installed their own stations (McChesney, 1999)[74]. Retailers and consumer goods manufacturers quickly discovered the prospect of radio to reach consumers in their homes, and soon these businesses adopted advertising techniques through this medium. Slogans, mascots, and jingles became familiar on the radio in the 1920s and television in the early 1930s (McChesney, 1999)[75]. Capturing public attention with sound became the most prevailing advertising method of the early 20th century. Advertising revenue in developed countries such as the US has increased rapidly since that time. There is recorded information – such as in the 1920s, under Secretary of Commerce Herbert Hoover–about the American government remarkably compelling advertising. Hoover himself transmitted an address to the Associated Advertising Clubs of the World in 1925 called "Advertising is a vital force in our national life." (Leach, 1993)[76] In October 1929, the head of the U.S. Bureau of Foreign and Domestic Commerce,

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[71] McFall, L. (2004). *Advertising: a cultural economy*. Sage. p.1
[72] Ewen, S. (1976). *Captain of Consciousness* New York.p. 34.
[73] Curtis, Adam (2002) *The Century Of The Self Part I: The Happiness Machines*, Documentary Series, BBC Two, 17 March 2002
[74] McChesney, R. (1999). *Educators and the Battle for Control of US Broadcasting*, 1928-35, Rich Media, Poor Democracy
[75] McChesney, R. (1999). *Educators and the Battle for Control of US Broadcasting*, 1928-35, Rich Media, Poor Democracy
[76] Leach, William (1993). *Land of Desire*. New York: Pantheon Books. p. 375.

Julius Klein, confirmed that "Advertising is the key to world prosperity" (Leach, 1993)[77]. According to a 1933 European economic journal, this was part of an "unparalleled" collaborative situation between business and government in the 1920s (Leach, 1993)[78].

The rise of mass media allowed brands to bypass retailers by advertising directly to consumers. It was a paradigm shift that forced manufacturers to focus on brands and to stimulate the need for understanding purchasing habits, usage behaviors, and the needs and aspirations of consumers (Petty, 2016).[79] The first series of radio drama was financed by soap producers. The genre became known as a soap opera (Copeland, 1991)[80]. Before long, radio station owners realized that they could increase advertising revenue by selling 'airtime' in small chunks of seconds or minutes that could be sold to multiple businesses. By the 1930s, these packets of time for advertising became well known and were being sold by the station's geographical sales representatives. Starting from the era of radio advertising until today, the "golden times" or "prime time" has been generally sold at the highest prices (Leigh, 1998)[81] which has been associated with the intensity of social attention.

By the 1940s, manufacturers began to notice how buyers developed personal relationships with their brands in a social/psychological/anthropological sense.[82] To collect consumer purchasing information, advertisers began to use motivational research and consumer research. For example, the forcefully branded campaigns for Chrysler and Exxon/Esso used insights-drawn research methods from psychology and cultural anthropology, which opened some of the most enduring campaigns of the 20th century.[83]

In the early 1950s, the Du-Mont Television Network initiated the modern practice of selling advertising time to multiple sponsors. In some cases, sponsors exerted intensive control over a show's content, allowing advertising agencies even to write TV shows themselves (Samuel, 2009)[84]. The public interest and attention have been directed to constructed program scripts. From then on, advertisements shifted significantly from direct to indirect persuasion methods.

By the 1990s, the emergence of the Internet ushered in a new period in advertising techniques. The attention of society began to shift from offline spaces to online spaces, and desktop advertising was born. The appearance of ad servers drove the online advertising

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[77] Leach, William (1993). *Land of Desire*. New York: Pantheon Books. p. 375.

[78] Leach, William (1993). *Land of Desire*. New York: Pantheon Books. p. 375.

[79] Petty, R. D. (2016). *A history of brand identity protection and brand marketing*, New York, NY: Routledge. p.104.

[80] Copeland, M.A., (1991) *Soap Opera History,* 1st ed., BDD Books;, ISBN 0792454510

[81] Leigh, F. (1998) *Historical Dictionary of American Radio,* Greenwood Publishing Group, p.8

[82] Mildred Pierce, Newmediagroup.co.uk Archived December 6, 2006, at the Wayback Machine

[83] Mildred Pierce, Newmediagroup.co.uk Archived December 6, 2006, at the Wayback Machine

[84] Samuel, Lawrence R. (2009). *Brought to You By: Postwar Television Advertising and the American Dream*. University of Texas Press. ISBN 978-0-292-77476-6.

development that contributed to the "dot-com" boom of the 1990s (Senn, 2000)[85]. Most businesses operated solely on advertising revenue. The principal part of desktop advertising in the early period of the Internet age utilized contextual advertising shown on website interfaces, banner advertising, pay-per-click text, and e-mail marketing. Through these ad forms, page owners could find additional revenue streams to support their content. For instance, the online service Prodigy displayed banners at the bottom of the interface to advertise Sears products (Briggs, & Hollis, 1997)[86]. In 1993, the first clickable web ad was sold by Global Network Navigator to a Silicon Valley law firm[87]. Web banner advertising was considered the mainstream of online advertising when HotWired, the online component of Wired Magazine, and Time Warner's Pathfinder sold banner advertising to AT&T and other companies in 1994. [88] The first AT&T ad on HotWired had a 44% click-through rate, and instead of directing clickers to AT&T's website, the ad linked to the online tours of the world's most famous art museums (Morrissey, 2013)[89].

With the emergence of innovative technologies in the 1990s, the interactivity of advertising methods increased. The ability to measure the reach of advertising entered a new stage, wherein relying on computational statistics had become much more accurate and simpler. The attention of targeted audiences was measured based on user engagement with the online ad. Through methods of stimulating user interaction with the applications—such as mobile apps—the navigating techniques on devices have been continuously developed and lead users into the advertising matrix.

Based on the combination of various tactics and strategies throughout a long period of time, and with the support of technological achievements, ***the advertising of the 21st century transfers the methods of domination and manipulation into digital formats that are comprehensively appropriating public attention, revealing mechanical subtlety, and boosting the development of a "tension society".*** The emergence of social networks, smart devices, and virtual assistants has created a deep connection between people and the digital environment. At the same time, it has also created giant storage covering the data of billions of users on the platform. Big data and AI have significantly contributed to supporting the advertising industry in terms of a better understanding the unconscious desires of users. Through investigation of individual profiles, machine learning algorithms have been programmed to send the right advertising messages, at the right time, to target customer psychology and manipulate customer decisions.

[85] Senn, James A. (2000). "Electronic Commerce Beyond the "dot com" Boom" (PDF). *National Tax Journal*. **53** (3, Part 1): 373–383. doi:10.17310/ntj.2000.3.04.

[86] Briggs, Rex; Hollis, Nigel (1997). *Advertising on the Web: Is there Response Before Clickthrough?*. Journal of Advertising Research. pp. 33–45.

[87] Briggs, Rex; Hollis, Nigel (April 1997). *Advertising on the Web: Is there Response Before Clickthrough?*. Journal of Advertising Research. pp. 33–45.

[88] "*Who Killed Time Inc.?, The Columbia Journalism Review*, February 1, 2018 ("But then, a Time Inc. business manager named Bruce Judson came up with the idea of banner ads")".

[89] Morrissey, Brian (2013). "How the Banner Ad Was Born". *Digiday*.

To some extent, users have become the victims of the emotional & psychological trauma created by consumerism and the digital advertising industry. This trauma manifests as excessive exploitation for attention, bewilderment by intertwined states of euphoria and anxiety, frustration with discontentment with what one possesses, and exhaustion of physical and mental resources. The tension level in contemporary societies is increasing. Stress is considered a common psychological phenomenon in modern humans. According to The US National Library of Medicine, "stress is a feeling of emotional or physical tension."[90] This psychological state is partly rooted in external factors, such as the social environment, and the functioning of the economy, politics, and contemporary culture in which advertising plays a remarkable role.

The tension caused by visual stress

"The power of marketing is always the power of getting someone's attention"[91]
– Naomi Klein, 2003 –

Every day people are faced with visual overload in their environment, an abundance of attention signals. Both online and offline spaces have been invaded, and every single "visual destination" is constantly navigated and dominated. Capturing the attention in public spaces is an essential interest of advertisers. Most bus stops, metro stations, airports, city roadsides are filled with billboards, from large to small, from unlit to lit, from printed posters to digital billboards. Regularly, there are advertising spaces seatbacks of trains and buses as well, where people are forced to stare during their journeys. Institutions and universities also allow private companies or corporations to display products and sell goods in their premises. Several coffee chains have even branded themselves as the name of libraries. For example, Starbucks cafe has appeared in the libraries of university around the world[92]. Their logos and signs are ubiquitous, especially in public places that attract the most views. According to Naomi Klein, the author of the book ***No logo*** (Klein, 2009)*[93]*, the invasion of the large franchise has created a ***'no space'*** society where people have no right to privacy, even in public spaces. Plenty of areas that used to be public spaces, have become just "pseudo-public spaces." Personal space is also no longer personal because of the aggression of brands and advertisements. People see advertising products attractive images everywhere, in books, magazines, on household items or on devices such as radio, TV, computers and phones.

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[90] Stress and your health https://medlineplus.gov/ency/article/003211.htm
[91] Klein, N. (2003) *No Logo: Brands, Globalization, Resistance*, Documentary film
https://www.youtube.com/watch?v=oeTgLKNb5R0
[92] Starbucks at various University https://tipton-associates.com/our_work/starbucks-university-of-kentucky/
https://www.bizjournals.com/seattle/news/2017/09/13/starbucks-opens-in-uw-suzzallo-library.html
https://commons.wikimedia.org/wiki/File:Takahashi_City_Library_Starbucks_Coffee_ac_%281%29.jpg
[93] Klein, N. (2009). *No logo: No space, no choice, no jobs*. Picador.

Students wait in line at a Starbucks store inside the Suzzallo Library (Photo by Assunta Ng)[94]
©nwasianweekly.com

In parallel with the offline environment, all "visual destinations" in cyberspace are also dominated by colours, symbols and moving images of brand signals. All users enter cyberspace with device interfaces, where the logo of the digital brand is first displayed. Following is the appearance of a series of icons, the other visual signal, that is targeting the attention of users. Advertising on website interfaces has become an unavoidable familiar element for users. Email and spam advertising are frustrating many people. Pop-up advertising on entertainment service interfaces and social networks has become the most obvious stressor that millions of internet users now face. The intensity of advertising signals at all times and in all places is a salient factor that contributes to stress experienced in contemporary society.

The colorful world has became the racetrack of brands. Color is a concept that has been constructed through human perception. Brands attempt to appropriate specific types of color and connect them with the perception of customers about their brand. Color has played an important role in branding attention tactics; hence, there is a competitive race between brands to target customers through color. In online space especially, digital codes of colors are used to specifically connect with the identity of brands[95].

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[94] https://nwasianweekly.com/2021/09/blog-advice-to-college-freshmen-then-and-now/
[95] Colors Used By Famous Brands https://digitalsynopsis.com/design/brand-colors/
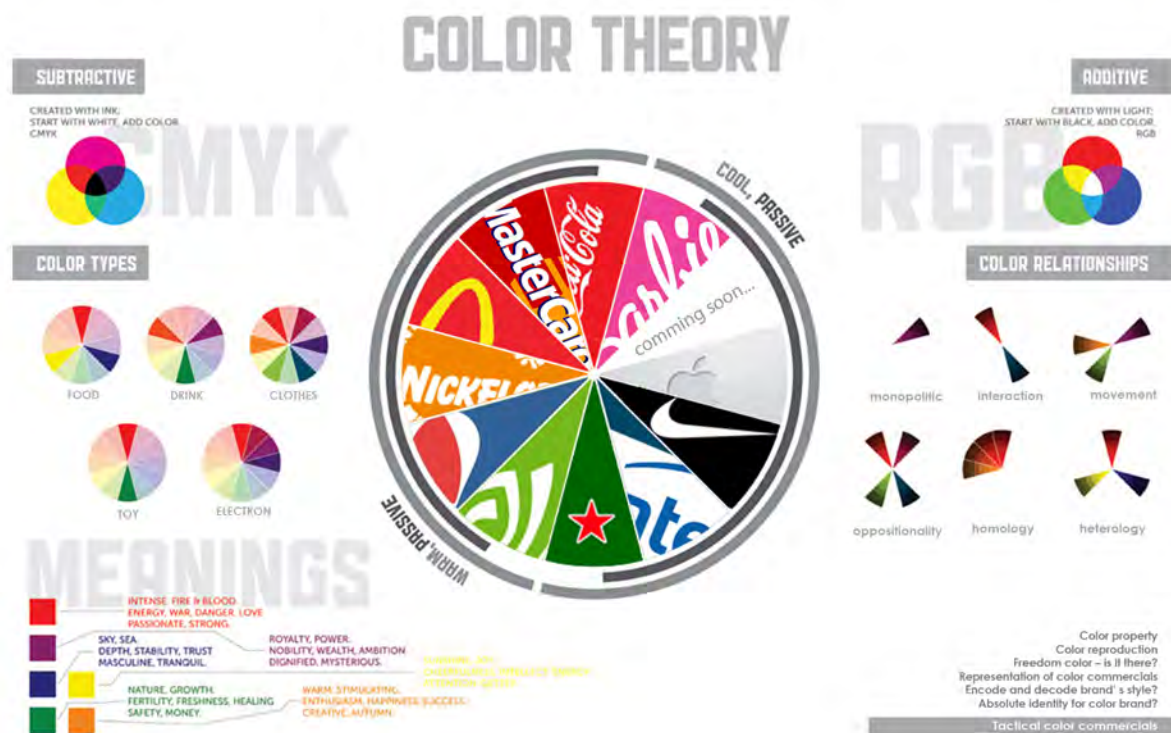
Image Colour theory @ tranguyen project 2011

Brand identity plays a significant role in differentiating a business from the rest of the competition in the market. Therefore, identity elements are included in the majority of design products. Fashion design, for instance, is using styles, materials and colors to identify their differentiation. Interface design takes graphic details and interactive movements as identifying signals. Various types of designs have paid special attention to highlighting the brand element. Designers have been trained carefully and comprehensively in a variety of visual principles and design methods in order to attract the viewer. The more successful the designs, the higher the visual appeal.

Design strategies are continuously generating new ideas and building impressive images and scripts. Advertising design in particular applies visually attractive methods in order to draw the attention of the viewer through creative and novel elements. In the present, we are being surrounded by designed environments, from living habitats to virtual habitats, and our visual attention is appropriated continuously and professionally.

Coca-Cola debuts drinkable billboard in Indianapolis ©campaignlive.co.uk[96]

The drinkable TV advertising ©tunedglobal.com[97]

Stress for the meaningless struggles

[96] https://www.campaignlive.co.uk/article/global-event-tv-coca-cola-unveils-drinkable-billboard/1341723
[97] https://blog.tunedglobal.com/innovative-trial-campaign-shazam-cokes-drinkable-ads

In addition to the effects of various visual strategies, the metaphorical images, indirect contents and hidden tactics of marketing campaigns also create a constant stress for consumers. With their attention targeted by many things, people face a large amount of detrimental information. French sociologist, philosopher and cultural theorist Jean Baudrillard in his book *Simulacra and Simulation* (Baudrillard, 1994)[98] wrote: "We live in a world where there is more and more information and less and less meaning."

Contemporary society is confronted with a crisis of "information overload", in which simulacra - images and symbols - begin to take precedence over reality itself. The cultural symbols are challenging the reality, advertising playing a critical role in accelerating the production of these symbols. Through media and advertising campaigns, products and services are skillfully transformed into social cultural representations that pretend to be the essential truth or unconditional needs, thus creating the desire for possession. In other words, "advertisements manipulate the relation between 'meaning' and 'reality' by appropriating pre-existing meanings to add value to unrelated products, and posits methods of decoding their true underlying significance" (McFall, 2004)[99]. For example, to connect with the cultural values, numerous classical paintings have been used to advertise products or services.

Da Vinci's Last Supper reimagined as a gambler's table ©tiqets.com[100]

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[98] Baudrillard, J. (1994). *Simulacra and simulation*. University of Michigan press. p.79
[99] McFall, L. (2004). *Advertising: a cultural economy*. Sage. p.6
[100] https://www.tiqets.com/blog/famous-art-in-advertisements/

Fine art stays fine when we ship it.

KRAFT ELS AG
Art logistics worldwide

Mondrian in rubbles ©tiqets.com

This is not a hammer.

This is a common finger squasher. Hopefully Allianz.

Allianz ⑪

This is not a Magritte ©tiqets.com

Local cultural symbols have also been connected regularly with the image of products and services by global corporations. One of my studies, *Cultural Symbols of "Tet" Holiday in Vietnamese Urban Lifestyles on Video Advertising* [101], introduced the manipulation of corporations on cultural symbols through video advertising in Vietnam. The images of Coca-Cola, Sony, P&G and Unilever have been associated strongly with with the cultural image of the Tet holiday, the New year festival of Vietnamese. Integrating, connecting, and blurring the boundaries between cultural symbols and product images is presented in the interactive work, Cultural Symbol Store, which I exhibited in 2012.

Cultural Symbol Store ©Tra Nguyen[102]

Movie stars, cultural idols or political personalities are positioned as symbols of beauty, wealth, power and satisfaction, and they have been efficiently used to connect brands and

[101] Nguyen, T. T. T. (2012). *Cultural symbols of "Tet" holiday in Vietnamese urban lifestyles on video advertising*, Master Thesis, media arts and design, Chiangmai University
[102] https://tranguyen.net/portfolio/cultural-symbol-store/

customers from the 20th century to the present. A glamorous super model, an actor in elegant outfit, or a wealthy professional sportsman has become a living symbol for many customers.

Coco campaign with Ines de la Fressange by Paolo Roversi,1984 ©chanel.com[103]

Tennis champion Roger Federer stars in Mercedes SUV advertisement. ©al.com [104]

[103] https://www.chanel.com/us/about-chanel/the-history/1980/
[104] https://www.al.com/businessnews/2012/08/tennis_champ_roger_federer_sta.html

The constructed social symbols have thus become the basis for defining one's ego. Consumer *sense of self* is directly connected to the feeling of having and possessing items (Belk, 1988)[105]. The promotional images have effectively linked products, services and social symbols with the ego of the customer. Customers are taught to crave the perfect bodies, elegant looks and luxurious living spaces. All these intend to give customers psychic powers about themselves.

However, ***the present struggle to assert the personal self is not much different from the race to assert the consumer's self***, the asserting of shopping ability, consumption, and ownership. Advertising and marketing have created fake relationships between customers and products through symbols. Going beyond the stimulation of demand for specific products, advertising generates consumption as a specific behavior. At the end of the 20th century, people witnessed a significant decline in the importance of instrumental, utility-driven consumption and a remarkable expansion in ***symbolic consumption*** (Campbell, 1987[106]; Baudrillard, 1988; Bauman, 2001).

The advertising industry has driven the 'sign economy' (Goldman & Papson, 1996) to bloom, creating a cultural production system based on symbols. Advertising has played a social-oriented role, dominating the worldview and lifestyle of the majority of individuals. The "Consumer's Self" has navigated the awareness and actions of each individual. Ownership is the driving force of consumer society. Contemporary life is all about the desire for difference and the expression of identity through the display of sign values. The "***no fact scenario***" of the struggle to assert the individual self has been constructed through images, symbols and icons. In the last paragraph of the book *Ways of Seeing*, John Berger wrote: "Capitalism survives by forcing the majority, whom it exploits, to define their interests as narrowly as possible. This was once achieved by extensive deprivation. Today in developed countries, it is achieved by imposing a false standard of what is and is not desirable."(Berger, 2008)[107]

Stressed by irrational desires and fears

For the majority of economic and political planners, masterminding and manipulating the public psyche is the essential method modeled and used since the 1920s until now. The applications of Freudian psychoanalysis to public relations and advertising continuously developed and has become much more threatening today. With the help of machine learning algorithms, the psychological methods are constantly perfected. Public manipulation tactics have been implemented efficiently through intelligent device systems.

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[105] Belk, Russell. (1988). Culture and consumption. *The Journal of Consumer Policy*.
[106] Campbell, C. (1987). *The romantic ethic and the spirit of modern consumerism* (p. 89). Oxford: Basil Blackwell.
Baudrillard, J. (1988). *Consumer Society*, in M.Poster (ed.), Selected Writings, Cambridge: Polity Press
Bauman, Z. (2001). Consuming life. *Journal of consumer culture*, *1*(1), 9-29.
[107] Berger, J. (2008). *Ways of seeing*. Penguin uK.p.154

Cyberspace has turned human emotions of happiness, satisfaction, anxiety, and fear into a type of product. The unconscious mind is investigated, surveyed, and evaluated by machines based on user data recorded through digital activities. The frequent concerns and interests of users have been recorded through search engines or traces of HTTP cookies. User habits are collected through personal devices, such as information about their routine time, regular travel routes and daily activities. From the information related to the user's personality, the algorithms analyze and make judgments about the characteristics of an individual mindset. The data related to the unconscious mind of each individual is the target product of contemporary advertising. Based on the characteristics of psychological data products, the advertisers adjust the process of producing and delivering advertisements. Fears of loss as well as longings for possessions are pushed to the extreme by targeted advertising delivered at the right time and to the right audience. Knowledge of user irrational desires and fears is the basis for psychological manipulations to work more effectively and easily.

Online advertising connects minds of users deeply to fake illusions, removing people from their life of reality, they have been guided to associate mostly with the past and worry about the future. In the words of John Berger: "Publicity images also belong to the moment in the sense that they must be continually renewed and made up-to-date. Yet they never speak of the present. Often they refer to the past and always they speak of the future." (Berger, 2008)[108] Advertising frequently projects the deficiencies of the past and the perfect images of the future to consumers. At the same time, online marketing campaigns regularly build up different new social standards and provide various personal social envy to the crowd. Those jealousies create the feeling of craving and add glamor to products and services. Anxiety and jealousy have driven consumers to constantly fill up for what they did not own yet, and it is a uninterrupted process. Prolonged stress and exhaustion are common living conditions in this time and age.

For example, the desire to own the new version of electronic devices has been sprinkled into the minds of consumers by marketers of electronic corporations. Every year, cell phone products of big brands such as Apple, Samsung and Huawei, launch a new model. The advertising campaigns of these products continuously create the desire to own and change devices annually for consumers, especially among young people. New devices are often promoted with new features, and new aesthetic appearances; but most importantly, these updated devices promise to represent the trendiness, stylishness and high social status of the owner. Each year millions of young consumers spend approximately $1300 each to update their self-image by owning new devices. The impressive numbers for iphone sales are a good example: 5 million iPhone 13 series were sold in China on the first day of pre-order in 2021[109]. With the introduction of the new model, the previous one quickly became useless, even though it had been used for only one year. In this case, the essence of uselessness is identified

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[108] Berger, J. (2008). *Ways of seeing*. Penguin uK.p.130
[109] https://thanhnien.vn/apple-da-ban-ra-tong-cong-2-ti-chiec-iphone-post1114574.html

by the incapacity to "show off" rather than by the inability to operate. The device's functionality has been gradually forgotten. The equipment waste and high investment in personal items have led to various social and environmental problems.

Female anti-ageing products are another example of how advertising generates the fear of consumers. Based on the common unspoken fear of getting old, anti-ageing products generate a sense of frustration among the elderly. Navigated by the hidden intentions of advertising, a biased perception of the elderly has been established in contemporary society (Kilkenny, 2017) [110]. Specifically, advertising have a strong influence on the emotions of women, depriving them of their self confidence through prejudices about age. In parallel with creating anxiety from the dangers of ageing, the advertisements also outline "up-to-date styles" with new cosmetics and "age-defying" models and "magical anti-ageing products". The image of a better appearance in the future repeatedly stimulates the demand for beauty. Various businesses guarantee that the use of cosmetics and beauty services help a woman retain her youth forever.

Furthermore, to increase the attractiveness to and attachment of customers, products and services also apply a number of psychological strategies through different discount and promotion programs. Free products, trial versions, promotional packages, and discount coupons are sent automatically to user accounts. This practice generates unrelenting desires and fear for online shoppers. The online marketing and advertising industry has produced countless emotional states in consumers. For example, emotional states include feelings of excitement generated by free trials, happiness in receiving a particular product or service without charge, and even worries about losing the opportunity for free shipping. All of these marketing programs continuously encourage consumers to spend time and energy on following brands, paying attention to products and chasing free trials, discounts or promotions. Unreasonable desires and anxieties continuously appear while people get hooked on sales and marketing tactics. The more costumers see and buy, the more they find it insufficient for the fulfillment of their own desires. Overall, these marketing scenarios induce stress in the consumers' unconscious. This irrational feeling of tension exists in parallel with the temporary comfort and excitement created by advertising.

Applying manipulation and deception techniques of commercial advertising, non-commercial advertisements also use similar schemes. Numerous presidential campaigns or referenda in many countries have been dominated and manipulated by psychological methods through data analysis systems. To influence the crowd, political marketing also uses various tactics to control the unconscious minds of people through automatic information systems. During President Trump's campaign in 2016, Cambridge Analytica secured a $15 million investment from Robert Mercer, the wealthy Republican donor, in order to use the machine learning

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[110] Kilkenny, K. (2017) How anti-aging cosmetics took over the beauty world, *Pacific Standard*
https://psmag.com/social-justice/how-anti-aging-cosmetics-took-over-the-beauty-world

algorithms that could identify the personalities of American voters and influence their behavior. According to former Cambridge employee Christopher Wylie, the company collected personal information from the Facebook profiles of more than 50 million users without their permission, making it one of the largest data leaks in the history of the social network. The breach allowed the company to exploit the private social media activity of a large number of American voters, developing the techniques that underpinned its work on the success of the 2016 U.S. presidential election for Donald Trump[111]. Based on the insight about user psychographic characteristics, Trump's supported media companies repeatedly sent fake news, smearing the image of Hillary Clinton – the opponent in the election, as well as creating the idea of a frightening future associated with the victory of Hillary's party. In parallel, positive messages associated with mystical spiritual elements about Trump were also intentionally pumped into social networks, creating excitement, hope, and high credibility for Trump.

The competition between brands and the race for power by political actors maintains a certain tension within societies. Companies, corporations, and organizations are now investing in and applying new technologies and manipulation techniques. The ability to control large numbers of digital accounts has become the determining factor for social power in the new era. Advertisements surround the users, targeting them with different psychological tactics, and offer users specific information, products, and services. Putting people in a state of being forced to use and forced to choose gives present users ***no choice.*** The permanent fear and desire in the unconscious mind of users, in some cases, could develop into a form of mental illness. Today, consumers have become subjects of psychological tactics applied in sales and marketing.

Consumers have been promised the freedom to choose, and to be cared for and listened to as special guests. However, in reality, they have very few opportunities to make their own decision without the effects of manipulated factors. Consumers constantly struggle with life, exhaust themselves to earn a living, and pay for a fake freedom. The advertising image is a stunning representation constructed by the dominant forces for the play that gives freedom and democracy to the "*consumer class*". Yet, in fact, this play tries to cover all of the undemocratic problems in society.

John Berger mentioned that "Everything publicity shows is there awaiting acquisition. The act of acquiring has taken the place of all other actions, the sense of having has obliterated all other senses". However, at the present, consumers are there instead, waiting on the internet space for manufacturers, organizations, socio-political forces, service providers, and media platforms to take their information, exploit and manipulate them freely.

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[111] How Trump Consultants Exploited the Facebook Data of Millions, *The New York Times*
https://www.nytimes.com/2018/03/17/us/politics/cambridge-analytica-trump-campaign.html

Digital capitalism now occupies both physical and virtual space, controlling both physical and mental properties, appropriating the energy, time and money of users, and dispossessing identities and egos in various ways. Being forced to live in a stressful situation, with **no space, no facts, and no choice** has become a common situation. Advertising is an efficient persuasive product, as well as a tool for manipulation that is an unavoided entity. The effects of advertising strategies contribute to developing a tensive, insecure, and potentially contradictive society. All in all, the unfair and stressful marketing environment could push social distance further and further, and stimulated by many other factors it might introduce instability to future societies.

3.5 Modern idea of love

In the present, **the modern ideas of love are about satisfying oneself**, whereas the traditional ideas of love in a communal way were that people surrender themselves to someone else. Giving oneself up has become a thrilling and frightening thought of the majority of contemporary individuals (Curtis, 2016)[112]. The love associated with self-sacrifice is slowly disappearing from life, while **individualism that first surfaced in the early 19th century (**Swart, 1962)[113] **now influences present-day society.**

Social involvement and compassion are popularly considered significant contributing factors to fatigue experienced by people in the face of the complexities and chaos of reality. Give up the thought of sacrificing, and just love yourself; give up the idea of caring and keep enjoying one's personal life with the great world where products and services are always available. This familiar flow of thoughts has generated many concerns for current society.

Media and advertising have preached the idea of self-love throughout the 20th century, and until today. *Be yourself* has become a life motto for many people. Existing independently has been considered as the way to escape from collective exploitation. However, in fact, the majority of contemporary people are bound and exploited by various hidden exploitation forces. Instead of detaching from the exploitation of organizations, institutions, religious and political communities, the ideas of individual independence are appropriated by capitalism. **By supporting individualism, capitalist logic intentionally separates the crowd, helping the exploiters more efficiently control and manipulate the public.**

Protestants admit that man has a personal relationship with God. This tenet powerfully contrasts Protestantism with the practices of Catholicism wherein adherents are more commonly expected to follow and obey the church hierarchy. The separation of humans from

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[112] Curtis, Adam (2016) *HyperNormalisation*, Documentary Series, BBC Two, 16 October 2016
https://www.youtube.com/watch?v=thLgkQBFTPw
[113] Swart, K. W. (1962). " Individualism" in the Mid-Nineteenth Century (1826-1860). *Journal of the History of Ideas*, *23*(1), 77-90.

powerful systems is a revolutionary idea. However, this detachment from religious institutions simultaneously generates another form of attachment. In *The Protestant Ethic and the Spirit of Capitalism* (Weber, & Stephen, 2013)[114], Max Weber cited the Protestant idea of a personal relationship with God as one of the main motivations that allowed capitalism to emerge. The detachment of oneself from the collective also promotes the desire for private property and the hope to become a master.

In Eastern countries, where Buddhism has an enormous influence, the ideas of "introspection," "self-cultivation," and "self-love" are also exploited and amplified by the logic of capitalism. Classical Buddhist philosophy, considered the enlightenment pathway, can be practiced easily through various ways. Although the "non-self"/"egolessness"[115] is one of the important doctrines of classical Buddhism, the popular Buddhist approach that circulates widely on social media seems to be rather different. Brands promote modern populist Buddhist ideas with the following tips: leave the turbulent life; protect all sentient beings; return to the inner self; be friends with oneself; and practice self-love. For example, "Touch your heart," and "Speak your way" [116] are common slogans in Vietnam.

From East to West, advertising has encouraged all society members to express themselves with these snappy, captivating slogans such as "Because I'm worth it" [117], empowering consumers to "Have it your way" [118] and "It's everywhere you want to be" [119]. The advertisement also firmly asserts "Your passion, our strength"[120], and we will stand "On Your Side"[121]. In general, contemporary individuals are driven to believe that they hold the care of institutions, organizations, parties, information providers, services, and products. The strong belief in personal power is nurtured daily by propaganda and advertising campaigns.

In addition, at the end of the 20th century, the Cold War period shaped various emerging social phenomena, such as the crisis of social trust, the acceleration in international trade, the advancement of computer science, mass automation and global internet connectivity. To face these remarkable changes, ***instead of confronting the complexity and chaos of society, the leaders of both private and public sectors have decided to create a fake and simple social environment.*** They have simplified society by coding the complex issues in several cases of mass representations, grouping complicated problems into one or two directions to provide solutions. The rigid and inhuman categories of gender, race and ethnicity are clear examples of the irresponsibility of the above mentioned simplistic social management.

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[114] Weber, Max, and Stephen Kalberg. (2013) *The Protestant ethic and the spirit of capitalism*. Routledge.
[115] https://en.wikipedia.org/wiki/Anatt%C4%81
[116] L'Oreal's slogan
[117] L'Oreal's slogan
[118] Burger King's slogan
[119] Visa's slogan
[120] Unilever's slogan
[121] Michael Dukakis's US presidential campaign slogans

Moreover, the organizers and/or controllers have also been very successful in creating social norms through symbols of consumption, building a society consisting of confident and isolated individuals. In *The Society of the Spectacle*, Guy Debord wrote that "The reigning economic system is a vicious circle of isolation. Its technologies are based on isolation, and they contribute to that same isolation. From automobiles to television, the goods that the spectacular system chooses to produce also serve it as weapons for constantly reinforcing the conditions that engender *lonely crowds*." (Debord, 2012)[122]

An unfair society where most interests belong to a small group, and the majority of individuals live in tension, discontent, and instability, is a society with potential struggles and resistance. Obviously, from various events of the last centuries, the rulers and the wealthy owners were threatened by collective power–the dangers of revolutions and class struggles. The failure of the old capitalists warned the contemporary capitalists to be wary of the collective power of the precarious class. The division is an efficient method of restraining the forces of struggle. Therefore, the motivation to divide society, turning society into a gathering of lonely people, becomes the hidden agenda of contemporary capitalist society. In *Media Control: The Spectacular Achievements of Propaganda*, Noam Chomsky also assumed that "The rest of the population ought to be deprived of any form of organization, because organization just causes trouble. People have to be atomized and segregated and alone. They're not supposed to organize, because then they might be something beyond spectators of action." (Chomsky, 2002)[123]

Individualism has been multiplied as a psychological strategy in the current living environment. The enormous capacity of server systems and machine learning methods allows for more efficient implementation of the social divide. Each individual is represented by one or eventually several digital profiles where all their information about demographics, psychographics, and behaviors can be systematically recorded. Once machine learning systems know users better than themselves, digital powers such as media centres or platforms have the potential to easily influence the unconscious mind of the users and navigate their decision. Surrounding the users with numerous means and information, making them love themselves more and more, and encouraging themselves to express their egos while caring for themselves, digital businesses efficiently nurture the consumer self of each individual.

Indeed, contemporary capitalism creates the ideal conditions for consumers to realize slef-love. With only one click, technology delivery services are ready to deliver various commodities to consumers in order to express themselves, from cars to clothes, all manner of "products" that they can use to express their identity. Parallel with user activity, covert personal data mining dominates cyberspace. Employing user information to coordinate

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[122] Debord, G. (2012). *Society of the Spectacle*. Bread and Circuses Publishing. p.10, originally published by Editions Buchet-Chastel (1967)

[123] Chomsky, N. (2002). *Media control: The spectacular achievements of propaganda*. Seven Stories Press. p.13

advertisements or propaganda messages, influencing user perceptions and emotions, and manipulating user behaviors, all are automatically implemented by algorithms. In the words of many CEOs in Silicon Valley, ***"This is incredibly efficient"[124]***. This smooth, seamless process of manipulation by platforms targets the user upon entering cyberspace, placing the user in the "You're done" [125] situation, like the slogan of Amazon.

The growing significance of individualism and the enormous support of AI technology have fueled the growth of ***personalized marketing and targeted advertising***. The traits of the promoted product or targeted person are considered the main factors for producing and distributing advertisments. Product and service characteristics are often provided intentionally by the businesses themselves as they are also the advertising sponsors. While personal information is being recorded and exploited non-publicly against the intentions of the users. Individual characteristics are normally formed through demographic information that focuses on race, nationality, economic status, gender, age, generation, education level, income level, and employment status, or psychological traits that focus on consumer values, personalities, attitudes, perspectives, lifestyles and preferences. The characteristics of users can also be recorded through behavioral variables, such as browser history, purchase history, and other recent online activities. At present, personal traits in cyberspace have often been collected and recorded through search engines, websites, social networks, Internet Protocol television, Mobile devices, and Smart electronical devices.

Personalization is a common notion for online services strategy today. Usually, the personalized functions are propagated tendentiously as a superior feature for user online experiences [126] . The personalized services, such as personalized search results and personalized advertising are being introduced as tools of miraculous convenience for users. Whenever the users turn on the personalized features of their electronic devices, web browsers and search engines the digital service providers may record user passwords, search history, and the address of the pages they visited. With the activation of a personalized function, the users do not need to log in back and receive targeted information suitable for them. Providers may especially suggest specific products or services that they have been, or will be interested in. The personalization process enables providers to efficiently collect personal data, the crucial raw material for the ***data industry***. Personal data is also the backbone of ***database marketing*** and the foundation resource of ***programmatic advertising***.

[124] Microsoft Innovate, The keynote of Satya Nadella
https://www.youtube.com/watch?v=0v1vyWJQlzs&t=2101s
Google, The keynote of Sundar Pichai https://www.youtube.com/watch?v=nP-nMZpLM1A&t=387s
Apple, The keynote of Tim Cook https://www.youtube.com/watch?v=-rAeqN-Q7x4
[125] Amazon Logo and Tagline https://logotaglines.com/amazon-logo-and-tagline/
https://commons.wikimedia.org/wiki/File:Amazon_logo.jpg
[126] 10 Personalized Features Every Website Must Have to Improve User Experience
https://thenextscoop.com/personalized-features-to-improve-user-experience/

A major part of political propaganda and business advertising is applying and exploiting personalized digital strategies because "it's incredibly efficient".

Personalized functions have obviously generated the pleasure and comfort experience for users, which is the reason why users generally rarely hesitate to turn on the personalization features of digital products and services. At the same time, personalization is a persuasive reason for the activities of recording, exploiting, and manipulating user behavior; it is an influential tool in the age of AI information technology.

Using search engines to understand users and reach targeted audiences is one of the most common types of personalized marketing in cyberspace at the present. The searching keywords, the IP address, the HTTP cookies, and interactive behaviors related to users are the clues for knowing customer interests. The combination of account information and browsing data is considered an input source that determines the targeted online display advertising. Advertisements on the web banner or promoted messages on web interfaces are mostly navigated based on data from the search engine's system. The platform companies do not only use the browsing information of billions of users for delivery advertising inside their system, but they can also commercialize this valuable social statistical information across the data market.

It is a common understanding that the most popular keywords are connected to the most interesting issues, products or services; and it is also believed that the rank hierarchy of search results indicates the reputation of websites, organizations, companies, or products. The top search results are considered the most popular search interests. However, the connection between the business or political reputation and top search results can be fully manipulated. As a matter of fact, the hierarchy of research results are constructed through the influence of the platform's algorithm and the control of government censors. In numerous countries, the search results are displayed according to the wish of government perception on any specific issue. Otherwise, through investing in advertising on search engines, ad sponsors can also reach a priority position on the search result list. Sponsored search advertisements are sold typically through real-time auctions, where advertisers bid for keywords. Moreover, setting a maximum price for each keyword or bid can include time, language, geography, and other constraints (Jansen, & Mullen, 2008)[127].

Applying targeted advertising within social media is the only other focused strategy of information technology businesses. By encouraging users to post their statuses, share their personal images, and express their emotions (by emotional icons such as like, love or sad) comment on the content of others, send messages and share the posts of others, the providers of these social networking services collect user psychology and behavior information easily. Aside from demographic and geographical data, psychographics and

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[127] Jansen, B.J.; Mullen, T. (2008). "Sponsored search: an overview of the concept, history, and technology". *International Journal of Electronic Business*. **6** (2): p.114-131. doi:10.1504/ijeb.2008.018068.

behaviors are the critical data source for the targeted advertising effectiveness. For example, Meta (formerly Facebook Inc) collected massive amounts of user psychology and behavior data from their surveillance infrastructure on the different platforms such as Facebook, Instagram, and WhatsApp. The personal photos from Instagram, the private conversations on WhatsApp and the interactive activities on Facebook are valuable data that can be used to depict the characteristics of a given user.

News Feed is an important feature of Facebook that employs users' data analysis system to influence the users. Based on insight about customers, this platform shows users the "breaking news" related to them, their friends and relatives, and shared sociocultural information or the "pretended prominent information". The personalization and customization functions of News Feed are no different from *personalized newspapers* set up by Facebook for each user. The targeted contents and targeted distribution methods have remarkably increased the engagement of users with Facebook[128]. Similar to a tabloid dedicated to advertising, the recent Facebook News Feed is filled with commercial advertisements and propaganda information. Currently, this social network platform publicly allows their general ad partners to use comprehensive lists of various types of targeting options, including user interests, demographics and behaviors.[129]

Statistics of user behavior data are not only the basis for determining and predicting customer interests and navigating how each individual makes decisions, but it is also *the evidence for evaluating the effectiveness of advertising and the basis for the advertising cost payments.* There are several pieces of user information that are used to charge sponsors, such as CPC - cost per click - each time a user clicks on the advertisements; CPE - cost per engagement - cost based not only on an ad unit loaded on the page, but also logging whether that the viewer saw or interacted with the ad; CPV - cost per view on video advertising; and CPI - cost per install, cost of installing applications, most activities active on mobile advertising.

The digital personalized advertising process is usually a complex operation that involves plenty of parties such as publishers, advertisers, ad networks, and ad exchanges. In the simplest case, the website publisher selects and serves the advertisement directly. Publishers who run their own advertising departments use this method. Ad services from online newspapers such as The Washington Post or The New York Times may apply this technique. Alternatively, the majority of advertisements are currently outsourced to an advertising agency under a contract with the publisher and served from ad agency servers of which Google and Facebook are specific examples. Ad space is normally offered for sale in the bidding market using ad exchanges and real-time bidding through agency servers. This automatic ad trading, producing and delivery method is called programmatic advertising.

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[128] The Facebook Dilemma (2018), Documentary film, *Frontline*
https://www.youtube.com/watch?v=T48KFiHwexM&t=55s
[129] The Complete Facebook Ads Interest Targeting List https://leadsync.me/blog/facebook-ads-targeting-guide/

Programmatic advertising is the most important sales and delivery advertising model in the age of AI and automation. With this method, digital ads are circulated, generated and sold automatically across websites and platforms through a software (Thomas, 2018)[130]. The process of producing, distributing, buying, and selling online ads between publishers, advertisers, ad networks, and ad exchanges are potentially implemented only through a complex, powerful and intelligent computational infrastructure, conditions only available to the big techs. At the moment, Google and Facebook are the two largest platforms operating digital advertising based on the application of programmatic sales and delivery models. In 2021, Google's share of digital advertising revenues worldwide was around 28.6 per cent. Following, Facebook's digital ad revenue share was 23.7 per cent, while Alibaba came in third position with 8.7 per cent[131].

Owning the most massive, complex, and effective user personal data mining system, Google and Facebook now dominate the contemporary digital advertising market. Alphabet, the parent company of Google provides a variety of products and services in cyberspace, such as the android operating system, chrome web browser, Google search engine, Gmail service, Google map, Google Drive, Google Translate, Google Meet, Google Calendar, Google Play, GooglePay, Google Photo, Youtube, Google Business and Google Ads. Notably, more than 80% of Alphabet's revenue comes from Google ads, which generated $147 billion in 2020 revenue[132]. Most of the services Google offers are free, in exchange for users "providing voluntarily" their information for Google's data system through their digital activities on Google services. Google users essentially become the advertising target of all Google partners. The text format ads are displayed automatically via email and message, image ads can be displayed on partner web interfaces through Chrome, and video advertising can appear on the social networking platform YouTube. Location ads will soon become another popular ads product of Google on Google maps 3D real-time street view.

Gmail had 1.5 billion active users worldwide in 2019[133]. An estimated 3.2 billion internet users were using Chrome as their main browser on over the world in 2021[134]. According to Stat Counter, as of December 2022, Google's global search engine market share was at 92.58%[135], absolutely dominating the business field of the search platforms. As of 2023, YouTube has

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[130] Thomas, Julian (2018). "Programming, filtering, adblocking: advertising and media automation". *Media International Australia*. **166** (1): 34–43. doi:10.1177/1329878X17738787. ISSN 1329-878X.

[131] Net digital advertising revenue share of major ad-selling online companies worldwide from 2016 to 2023 https://www.statista.com/statistics/290629/digital-ad-revenue-share-of-major-ad-selling-companies-worldwide/#:~:text=In%202021%2C%20Google's%20share%20of,with%20an%20expected%208.7%20percent.

[132] How Google's $150 billion advertising business works https://www.cnbc.com/2021/05/18/how-does-google-make-money-advertising-business-breakdown-.html

[133] Petrova (October 26, 2019). "Gmail dominates consumer email with 1.5 billion users". *CNBC.com*.

[134] User population of selected internet browsers worldwide from 2014 to 2021 https://www.statista.com/statistics/543218/worldwide-internet-users-by-browser/

[135] Search Engine Market Share Worldwide https://gs.statcounter.com/search-engine-market-share

become the second biggest social media in the world, with over 2.5 billion active users[136]. Ranked first among social networking service providers, Facebook owns 2.9 billion active users globally at the beginning of 2023. Meta generated 114.93 billion U.S. dollars in ad revenues in 202[137]. The three influential social networking platforms, Facebook, Instagram, and WhatsApp all belong to Meta. Both Alphabet and Meta collect a massive amount of first-party data (data collected directly from interactions with customers and audiences and normally not shared publicly). At the same time, they have become the trading center for various second-party data (indirectly collected data and generally shared only with trusted partners) and brokers for third-party data (indirectly collected data and commonly shared with many companies[138]. ***Google and Facebook "rule" the global programmatic targeted advertising market by exclusively owning and coordinating enormous amounts of data.***

Digital personalized service providers create the feeling of a free-of-charge, convenient working, entertaining and communicating environment, where users can express themselves freely; they can type angrily or beautifully or however they want into the internet at all times, everywhere, when, in fact, the user-self in cyberspace is a psychological illusion constructed by digital consumerism. Personalization is a "brilliant trick" to divide users, to give consumers a sense of individuality, and then, quietly categorise users based on their digital profiles, place them into appropriate groups, and sell them the same kind of product, while creating for them the same identity. The act of tracking, dividing, observing, investigating, classifying and giving the same identity character for clusters of users in the present does not seem much different from the previous anthropological surveys conducted by colonial countries. In the other words, programmatic targeted advertising contributes significantly to the establishment of cyber-colonialism.

Moreover, targeted advertising essentially works based on the predicted behavior of the online customers; thus, ***user prediction is considered the main task of the AI advertising system***. Almost all shopping, investment or election decisions are future-oriented, which will occur after the users accessing advertising; therefore, predicting user psychology and behavior is an important task in dominating and manipulating user decisions. After determining the "customer type", the machine learning system predicts what information will be appropriate to influence that person. For example, if the user is a regular customer of Coca-Cola, the advertisement for Pepsi drinks will necessarily need to be different from advertising to Pepsi loyal customers.

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[136] Search Engine Market Share Worldwide https://gs.statcounter.com/search-engine-market-share

[137] YouTube Statistics 2023 https://www.demandsage.com/youtube-stats/#:~:text=As%20of%202023%2C%20YouTube%20is,in%20the%20world%20access%20YouTube.

[138] The Difference Between First-party, Second-party and Third-party Data https://blog.treasuredata.com/blog/2021/07/28/the-difference-between-first-party-second-party-and-third-party-data/

Predicting the future has always been a human aspiration from ancient times; it is the basis to make reasonable changes and to navigate life in a beneficial direction. Digital capitalism has exploited this principle very effectively. The algorithms of the deep learning method in the present are able to make rather accurate predictions about what will happen in the future. The weather forecast is a good example. The large server systems of weather forecasting centers are able to process high volumes of data taken from reality to make forecasts for the near future weather patterns. For example, IBM's The Weather Company - the World's Most Accurate Forecaster - runs on an IBM POWER9 supercomputer; this global weather model updates hourly and at a 3 – 4 km resolution to create the most accurate weather picture presently[139]. Business prediction through data analytics is another example of using machine learning technologies. Based on previous business data and common impact factors, the algorithm is able to find repetition patterns and predict similar development scenarios for businesses. Current algorithms produce relatively accurate results about near-future problems. However, the accuracy of current machine predictions still faces some common limitations related to insufficient data scale, insufficient data processing ability, the lack of ability to cover unusual impact factors such as new information that appears in time, and data that has not been recorded yet in the system. Moreover, based on the principle of statistical probability, the true randomness of machine-predicted results still meets a general scepticism.

Today, despite the above mentioned existing limitations, various prediction methods have already been put into practice; therefore there should be a legitimate doubt and serious concerns about the accuracy of the possibly misleading effects that machine prediction can altogether generate. The application of personal illness prediction in medicine is one of the major concerns and considerations because deviations may lead to wrong treatments or unnecessary psychological crises for the patient. In addition, divination and personal prediction applications have become common data collection tools performed by third-party developers (companies that build games and apps for the platform) or third-party vendors (partners specialized in data mining and reselling it to stakeholders). Attacking through the curiosity of users, through the freely installable applications, prediction app service providers penetrate personal devices and collect user data. This is the most popular method applied in mobile targeted advertising.

Generally, in addition to buying and selling space, duration, program content, and public attention, today's advertising industry also buys and sells user identities based on the commercialization of user demographics, psychology, behavior, the context of interaction, life circumstances and future. Powerful individualism has become the dominant idea appropriated by current capitalism. Personalization and customization are "mass deceptions"

[139] IBM's The Weather Company Continues to Be the World's Most Accurate Forecaster Overall
https://newsroom.ibm.com/2021-07-29-IBMs-The-Weather-Company-Continues-to-Be-the-Worlds-Most-Accurate-Forecaster-Overall

(Adorno, & Horkheimer, 1997)[140] aimed at isolating individuals through the idea of self-love and the illusion of freedom, encouraging individuals to have an enthusiastic presence in Cyberspace. Personal data is the foundation for categorizing users, merging them into target groups, and labeling them with the same identity profiles. Our society is a collective of "lonely crowds"(Debord, 2012)[141]; our "culture today is reflecting everything with the sameness" (Adorno, & Horkheimer, 1997)[142], our freedom experience at the moment is a constructed feeling. Neo-slavery is a current consideration. No choice, no negotiation, and the majority of social issues are being managed automatically; contemporary society is operating like a market economy in which personal identity business dominates the cyber world.

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[140] Adorno, T. W., & Horkheimer, M. (1997). *Dialectic of enlightenment* (Vol. 15). Verso. p.94
[141] Debord, G. (2012). *Society of the Spectacle*. Bread and Circuses Publishing. p.10
[142] Adorno, T. W., & Horkheimer, M. (1997). *Dialectic of enlightenment* (Vol. 15). Verso. p.94

Share file 04: "Systematic Error"
Installation
Antique ICA photo camera, scale, batteries, text,
dimensions: 600 × 200 cm
2022
Première: Crack, Artus Studio, Budapest, Hungary, 2022
https://tranguyen.net/portfolio/systematic-error/

Description
The installation refers to the dystopian character of the social credit system relying on personal data harvesting and analysis by AI algorithms in order to control the population. The complex evaluation mechanism of citizens is already fully operational, for example, in China. Surprisingly enough, among thousands of features used to evaluate the individuals, the delinquency rate (applied in the risk management of banks) is closely related to the battery charge level of personal mobile devices. The regular low battery level information results in a high delinquency rate classification of a person by the man-made algorithm system.

When one's battery is often low, that does not necessarily mean carelessness, unreliability, or poverty; there could be many other reasons behind it. For example, an environmental consideration: the quantity of battery usage is strongly connected with the cobalt mining problem. The global demand for the ingredient of lithium-ion batteries causes significant social disasters in countries like Congo. That's why an "algorithmic error" of a faulty social system can generate various wrong consequences.

Systematic Error ©Tra Nguyen

Systematic Error ©Tra Nguyen
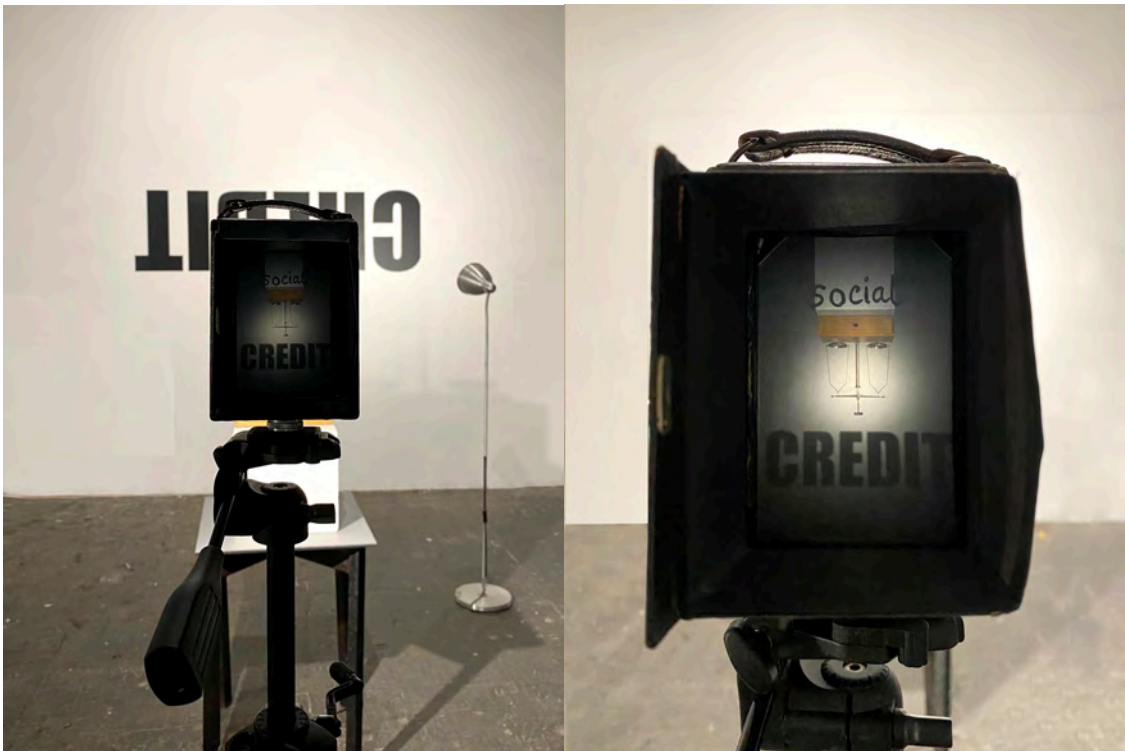
Systematic Error ©Tra Nguyen

Share file 05: "Data Hot Pot"
Zine contribution
Print, size: 60 × 60 cm, pages 44-47
2021
Première: Contemporary Cosmopolitan Cookbook, pages 44-47
HUFA, Budapest, Hungary, 2021
https://tranguyen.net/portfolio/data-hot-pot/

Description
Published as a zine contribution in the online publication "Contemporary Cosmopolitan Cookbook"- a joint project of Fine Art Theory students and the SH-DLA students from the Hungarian University of Fine Arts.

The conceptual recipe of a well-known Vietnamese dish, *the hot pot*, is being adapted to the phenomenon of online data consuming. The tension of this parallel lies in the fact that while hot pot meals are characterized by a collective generosity of sharing common resources, the global hot pot of online data redistribution is rather biased, and highly unfair.

Hot pot, also known as soup-food or steamboat, is a popular cooking method around East Asia. It is prepared with a simmering pot of soup stock on the dining table, a variety of foodstuffs and raw ingredients being displayed near the pot that are ready to be cooked during the eating time. Hot pot meals are often joined by several people such as family members or colleagues who sit around a pot, talking and eating together. Each person chooses their favorite ingredients to put in the pot and takes the food out by themself. Self-cooking in and serving from the same pot, as well as eating instantly at the table, is a characteristic dining style of hot pot.". Due to the high popularity and the unique way of eating, hot pot has already become major attraction of the tourism industry around Asia.

Inspired by the popular hot pot of East Asia, where I was born and raised, *Data Hot Pot* is a fictional dish containing personal data *'cooked'* in *'technological pots'*. Based on a strong connection with the special cooking methods of East Asian's hot pot, Data Hot Pot will help users see how they are 'cooking' their personal data. The recipe below will lead readers to a special dining environment similar to a hot pot, where we are the ones who put our own ingredients - personal data - in a technological pot. Nonetheless, there is a paradox wherein we are unable to take it out ourselves when it is cooked and ready to eat; others will be 'eating' our personal data.

DATA HOT POT

Data Hot Pot ©Tra Nguyen

DATA HOT POT

Concept. –Inspired by the popular Hot pot of East Asia - where I was born and raised, Data Hot Pot - is a fictional dish containing personal data 'cooked' in 'technological pots'. Based on a strong connection with the special cooking methods of East Asian's hot pot, Data Hot Pot will help users see how they are 'cooking' their personal data. The recipe below will lead readers to a special dining environment similar to a hot pot, where we are the ones who put our own ingredients - personal data - in a technological pot; but the paradox is, that we can't take it out ourselves when it's cooked and ready to eat - other people will be eating them instead of us.

——:o:——

[Time. ~ About 24/7.]

Remarks - This recipe is specially created for the "Google Pot". But you should check how to cook your data with "Microsoft Pot", "Facebook Pot", "WhatsApp Pot", "Apple Pot", "Samsung Pot", etc., in the Privacy Setting section.

ARTICLES. – Personal data such as Web & App Activities, Location History, YouTube History, etc.

DIRECTIONS. – Go to Manage your Google account > Privacy & Personalization> Ad personalization > Go to ad settings >

+ If your Ad personalization is ON - it means that your data have been tracked by Google and their advertising partners, go to Learn how to control the ads > Stop getting personalized ads from other ad networks > AdChoices (You will see who is tracking you and don't forget to switch them off)

+ Even if your Ad personalization is OFF, still keep scrolling down to see who are still tracking you) > Click on Your Online Choices (You will see a bunch of companies that are still tracking you, and don't forget to switch them off.)

Data Hot Pot ©Tra Nguyen

DATA HOT POT

The origin of the cooking method

Hot pot, also known as soup-food or steamboat, is a popular cooking method around East Asia. It is prepared with a simmering pot of soup stock on the dining table, a variety of foodstuffs and raw ingredients being displayed near the pot that are ready to be cooked during the eating time. Hot pot meals are often joined by several people such as family members or colleagues who sit around a pot, talking and eating together. Each person chooses their favorite ingredients to put in the pot and take the food out by themself. Self-cooking and serving in the same pot, as well as eating instantly at the table is a characteristic dining style of hot pot. Due to the high popularity and the unique way of eating, hot pot has already become the major attraction of the tourism industry around Asia.

https://en.wikipedia.org/wiki/Hot_pot

Data Hot Pot ©Tra Nguyen

05_05_2021

Tra was born in Vietnam. As a lecturer at Hue University of Arts, she mainly teaches and researches in the field of Media Art and Design. Currently, she is a doctoral researcher in Doctoral School, Hungarian University of Fine Art.

She participated in several media art and design exhibitions and festivals in Asia and Europe. By observing the transformation of various emerging phenomena in the everyday life, her research explores the new structures in society, culture and art, and it serves as a background for her artistic practice. She is currently engaged with an artistic research-based project related to cyberspace, digital capitalism and creativity in the age of AI and automation.

As a media artist, she has used various forms of arts in her works, such as design, photography, film, interactive media, installation, etc.

Chef _ Tra Nguyen
Visit her website at tranguyen.net

Easy lessons in nutrition
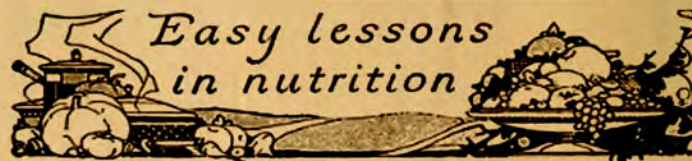
Data Hot Pot ©Tra Nguyen

Share file 06: **"Priscilla's Snack Bytes"**

Performance

Consumable icons from agar jelly cakes, stamp, dimensions: 3,8 x 3,8 cm

2022

Première: Crack, Artus Studio, Budapest, Hungary, 2022

https://tranguyen.net/portfolio/priscillas-snack-bytes/

Description

The playful interactive performative piece refers to the commercialization of the psychological effects of the interactions within social media communication. The title refers to Priscilla Chan, the wife of Mark Zuckerberg, the CEO of Meta Platforms, the multinational technology conglomerate. Audience members were asked to have an imprint of 'Like' stamped on their wrist as they arrived at the exhibition space. However, during the performance, only those who had not agreed to the 'Like' stamp on their wrists received cakes.

Priscilla's Snack Bytes ©Tra Nguyen
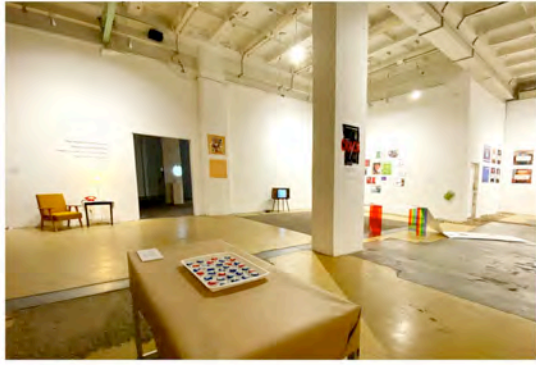
Priscilla's Snack Bytes ©Tra Nguyen

Description

The conceptual magazine uses the language and typology of commercial marketing with a subversive attitude in order to define the Artusive, a new type of consumer 'discovered' in the so-called Indie-shelter (in fact, the Artus Studio). The project has a site-specific character as this type of personality is illustrated with the portraits of the artists working in Artus who, through their love of freedom and social justice, are successfully avoiding being targeted by commercial marketing strategies.

In identifying the taxonomy of personality types, the narrative makes reference to the anthropological racism of the early 20th century, a controversial pseudoscientific colonial approach, the traces of which can be discovered in the actual corporate profiling.

In the marketing industry, especially in Digital Personalized Ads, there is a popular tactical idea about dividing consumers into four types. The industry calls this classification "the 4 'A's of Marketing"–Amiable, Attentive, Analytical, and Assertive. Marketers analyze in detail each type of consumer, especially their personality traits. This analytical information helps the digital marketer learn more about customers based on their demographic, contextual, and behavioral data. This behavioral data, as well as being able to track consumers' habits, allows firms to better determine what advertising campaigns and marketing efforts bring customers in and what demographics they influence. In short, it is a form of personal data exploitation for business purposes.

I provided two parallel narratives: one is related to the conspiratorial truths of the marketing industry in the age of AI and big data; and the other describes the harsh realities of the ordinary people who need to struggle with taxes and bills every day for the growth of multinational tech-giant corporations. The magazine reflects the racist bias method wherein current capitalism treats contemporary human subjects as dictators treated native people in the past. The photos documenting the Nazi's anthropological "research" have been used to make a reference to the contemporary term "Corporate Fascism". Corporate fascism is closely related to "corporatism" when it moves toward the fascist corporatism direction. It is a political/economic system in which power is exercised through large organizations (businesses, trade unions and their associated lobbying efforts); usually with the goal of influencing or subsuming the direction of the state and generally only to benefit their own

socio-economic agendas at the expense of the will of the people, and to the detriment of the common good.

Recommended to see:
+ The talk at the 2017 SXSW Conference, Kate Crawford - Microsoft Researcher - on the topic: *DARK DAYS: AI and the Rise of Fascism* (https://www.youtube.com/watch?v=Dlr4O1aEJvI)
+ Documentary film: James Jaeger: *Corporate Fascism: The Destruction of America's middle class*, Cornerstone-Matrix Entertainment 2010.
(https://www.youtube.com/watch?v=hTbvoiTJKIs)
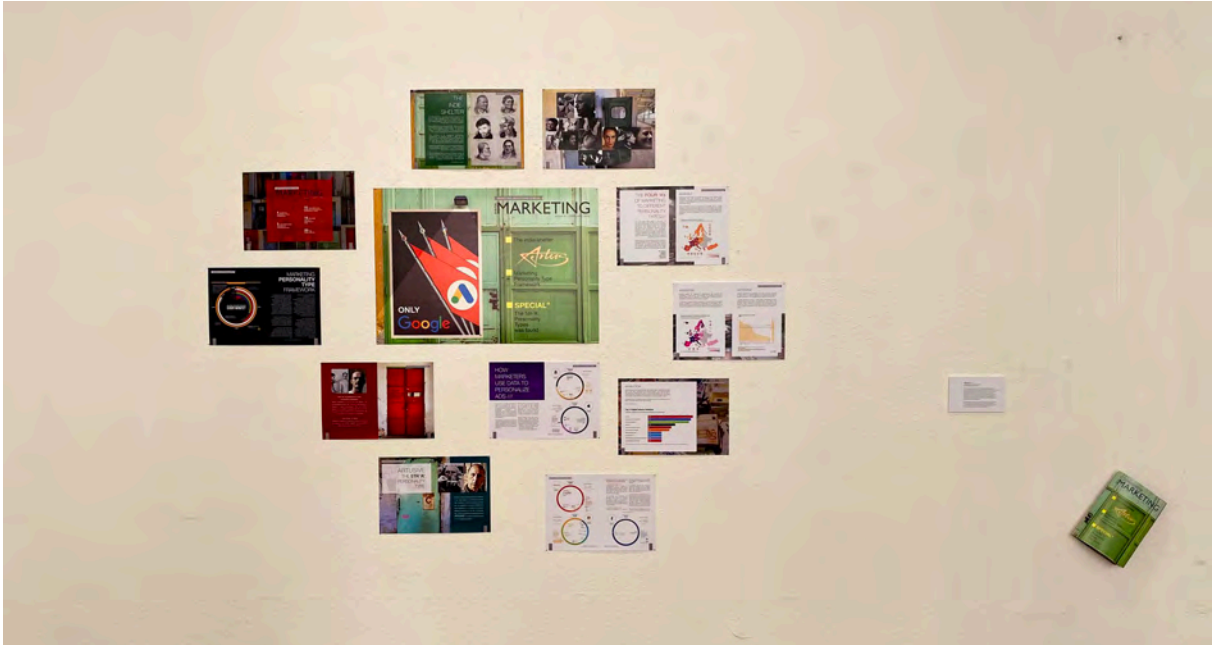
The 5Th "A" ©Tra Nguyen

The 5Th "A" ©Tra Nguyen
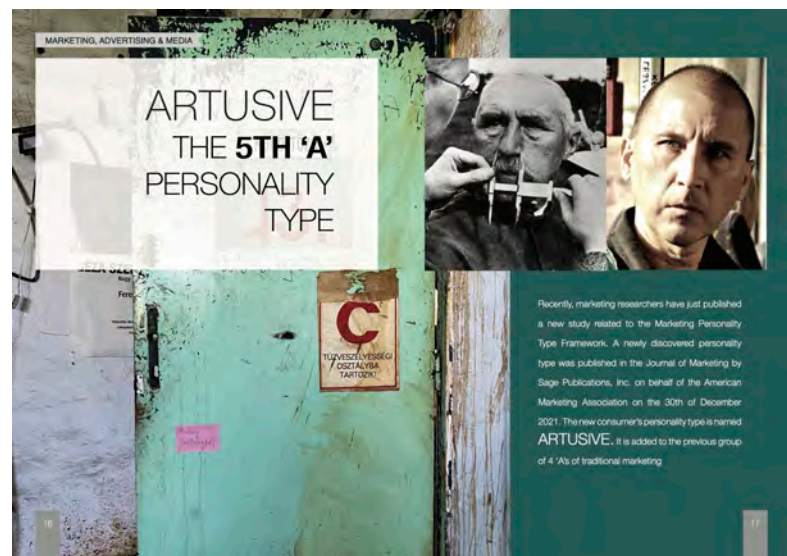
The 5Th "A" ©Tra Nguyen

The 5Th "A" ©Tra Nguyen

The 5Th "A" ©Tra Nguyen

Installation
12 found objects, 12 tarot-cards
2022
Première: Parallel Hungary II, Profil Gallery, Budapest, Hungary, 2022
https://tranguyen.net/portfolio/parallel-predictions/

Description
Parallel Predictions presents 12 forms of fortune telling in different cultures related to artists participating in Parallel Hungary II exhibition. Most of the objects were suggested by the artists through intimate conversations among the group. In addition to the real objects, there are 12 redesigned Tarot cards that refer to 12 digital applications corresponding to the various historical forms of fortune telling. The back side of each card contains the symbols and texts that navigate the view through each fortune-telling example while delivering the main message of the artwork.

Future is a concept that refers to time that has not yet happened. The curiosity, the need to know in advance about what is coming has been a common demand throughout the long course of history. In various cultures, predicting the future has been a form of cultural practice associated with everyday life. From the oracles of the Greeks to the prophets of various religions, and from the priestesses who practiced ritual ceremonies in Africa to the monks in Buddhist temples in Asia, forecasting is an attempt to search for the future. The prediction can aim at broad social issues and individual problems as well. Numerous individual predictions or fortune telling are popular through the present day in various cultures. Furthermore, many ancient forms of fortune telling and divination practices have been converted into digital applications. While the majority of historical fortune telling practices rely on the interpretation of randomness in natural patterns, shapes, forms or occurrences, in these applications this works rather differently. In order to simulate the randomness, normally a special computer system should be set to generate immense quantities of sufficiently random numbers, which would require a great number of computational resources. In reality, today's fortune-telling apps are generally designed rather primitively and on a small scale, and they are often free of charge in order to attract the users; indeed, this is the reason why the randomness are obviously extremely limited. Fundamentally, these apps have another tactical intention. They are principally launched to collect user data and serve the purpose of predicting, controlling interest, manipulating imagination, and limiting the randomness of future possibility, which really belongs to nature

In the majority of cultures, predicting the future is not only for knowing and accepting the things that have been decided or chosen, prediction is also used to guide actions and turn the future in the most favorable direction. Prediction has become a foundation for action planning in everyday life. Today, prediction techniques have turned to a new phase with the

involvement of digital technology. In particular, with the support of AI and Big data huge server systems have transformed forecasting techniques and boosted the efficiency of results. Apart from the undeniable benefits of digital forecasting technology (such as in weather forecasting or healthcare prediction), there are also various potential risks affecting human rights, in which individual user predictions for marketing and advertising ends is the prime example. Through personal data mining, giant servers collect the demographic and psychographic information of users to track their personal intentions and to predict their interests in order to produce future demand for them. Personal data is the main source of "energy" for capitalism to make predictions and create specific future scenarios for users that serve the interests of companies, corporations and organizations.

By introducing 12 ancient forms of fortune telling, the artwork creates a miniature space, presenting the cross-cultural elements of the international artists group, thus creating a connection between traditional and contemporary prediction practices. All these reveal the transformation and the existing problems of contemporary society related to data mining issues. Through the narration of the exhibited objects, the viewers discover the stories of the past while seeing the ongoing reality and recognizing the importance of contemporary prediction activities that, in fact, decide the future of each and every individual.

Parallel Predictions ©Tra Nguyen
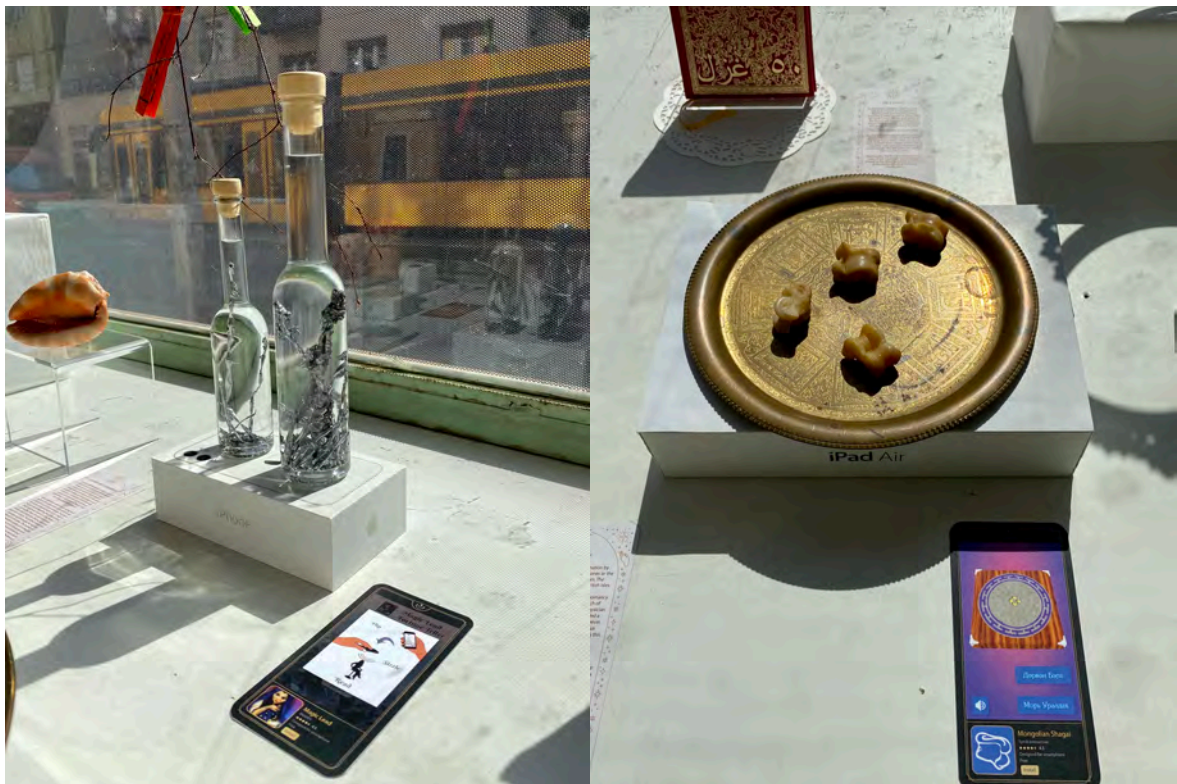
Parallel Predictions ©Tra Nguyen

Parallel Predictions ©Tra Nguyen

Parallel Predictions ©Tra Nguyen

Parallel Predictions ©Tra Nguyen

POST 04
ALTERNATIVE

4.1 Faith and fears

"There is no alternative"[1]

This well know capitalist pro-market slogan is associated with the former Conservative British Prime Minister Margaret Thatcher (Robinson, 2013)[2]. The quote not only influenced the British political economy but also widely affected the global neoliberal ideology, popular culture, work, education, and mental health of the contemporary society (Reynolds, 2017)[3]. "No alternative" is an assertion of capitalist ideology about the only suggested way for social development; the capitalist economy is considered the best and unique system that can work. The debate about the alternative social systems supposedly ended in the last century with the decline and collapse of the Soviet Union. The slogan also conveys an optimism about how "Globalised capitalism, so-called free markets, and free trade were the best ways to build wealth, distribute services and grow a society's economy." (Flanders, 2013)[4]. Thatcher's policies continue to influence the politics of today, contributing to despair and fear in large parts of society, especially among those who are oppressed, exploited and living in precarious situations created by unstable jobs and incomes. That is the idea of "*no alternative*" sharply portends *a future without hope for change*.

The growth of global corporations, especially the impressive achievements of high-tech corporations, has confirmed that "capitalism is the outstanding economic system". These developments are intended to fill up society with the optimistic globalist flows associated with new techno-capitalist economies. Making a profit on digital platforms and AI technology has become the key method in the day and age. However, the broad influences, and the profound impacts of multinational technology conglomerates, also raise various questions about the operation of a market economy connected with superpower ownership or monopolistic competition. Ensuring social justice in a free, growing economy is becoming a challenge for contemporary societies. The feeling of being lost and confused in the matrix of the digital economy intertwined with faith and fears towards new technology generated a global ***sense of dilemma*** within societies.

To a certain extent, technological optimism is considered a general attitue in present society. At minimum, this perspective is reflected widely in mass media. Promoting technological

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[1] There is no alternative
https://en.wikipedia.org/wiki/There_is_no_alternative#:~:text=%22There%20is%20no%20alternative%22%20(,British%20prime%20minister%20Margaret%20Thatcher.
[2] Robinson, Nick (2013). "Economy: There is no alternative (TINA) is back". *bbc.com. BBC News*.
[3] Reynolds, Simon (2017). "Mark Fisher's k-punk blogs were required reading for a generation". *The Guardian*.
[4] Flanders, Laura (2013). "At Thatcher's Funeral, Bury TINA, Too". *The Nation.*

achievements on news, radio shows, TV programs and YouTube channels is a familiar content. The economic policies and social action programs in various countries have special priorities for scientific and technological development. Techno-optimism has a tendency to rather emphasize the benefits than the drawbacks of technology to society. There is a common perception that human progress is achieved through overcoming obstacles. Life regularly raises various problems, questions, and mysteries; people need to find ways to solve them or reduce the consequences of those problems. From the invention of the wheel to the Internet, technology is believed to have helped people to overcome ample obstacles or limitations. Scientific discoveries are considered to have made human life easier; technology is the promised potential drive for the development and progress of society.

Techno-optimism often criticizes Hollywood dystopian tragedies and argues that those are exaggerated fantasies. The society that will be decimated and destroyed by the rise of robots is an exaggeration; it is an attractive dramaturgical trick of film productions[5]. Meanwhile, optimists strongly believe in the union of man and machine. They are convinced by all the positive aspects of new-tech such as it may give "longer lives, less absolute poverty, fewer life-threatening illness, [and] more equality of opportunity"[6]. Those are the generally attributed values to technological developments.

Information technology and the Internet are known as great inventions created to serve people. People are promised to have instant and unlimited access to all knowledge. This technology is able to make communication and social connection simpler, cheaper and more convenient. New technology is believed to have simplified all living activities, such as payment, scheduling, route finding, translations, shopping and entertainment. According to Miklos Sarvary - Professor at Columbia Business School, "platforms are creating so much value for consumers"[7] globally.

Particularly, it must be admitted that "*Technology optimism was so deeply ingrained in the value system and in the beliefs of people in Silicon Valley*"[8] - the birthplace of hundreds of new technological discoveries every day. Technology corporations have spread strong beliefs about the transcendent world of the future associated with technological achievements for popular culture with large-scale marketing and communication strategies. The majority of tech leaders are constantly propagating the best things that technology will provide, like "We are doing it

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[5] A New Philosophy on Artificial Intelligence, Kristian Hammond, TEDxNorthwesternU
https://www.youtube.com/watch?v=tr9oe2TZiJw
[6] A New Philosophy on Artificial Intelligence, Kristian Hammond, TEDxNorthwesternU
https://www.youtube.com/watch?v=tr9oe2TZiJw
[7] How Digital Technologies Are Transforming the Media Industry, Miklos Sarvary, Columbia Business School
https://www.youtube.com/watch?v=QuU8qDVz4gg&t=122s
[8] Kara Anne Swisher - a journalist, who co-founded Vox Media's Recode mentions these ideas in The Facebook Dilemma, Frontline https://www.youtube.com/watch?v=T48KFiHwexM&t=55s

for everyone", we "solve problems at scale", "empower people" and "make our services cost less and more connected"[9].

In fact, technological optimism is purposefully propagated to maximize the influence, expand markets, develop manipulation tactics and benefit businesses. **Sundar Pichai** - the CEO of Alphabet Inc. and its subsidiary Google - has emphasized the conglomerate's ambition by introducing deep learning technology, *"We've been focused ever more on our core mission of organizing the world's information. And we are doing it for everyone. And we approach it by applying deep computer science and technical insights to solve problems at scale. That approach has served us very, very well; this is what has allowed us to scale up seven of our most important products and platforms - to over a billion monthly active users each. And it's not just the scale at which these products are working, users engage with them very heavily."[10]* The worlds "engaging heavily" here means deepening the level of dependence of the user, a dependency with no way out. For example, let us imagine someone's Gmail account suddenly disappeared - that would be the worst nightmare scenario not only for one single user, but for more than 1.5 billion people around the world.

The CEO of Microsoft from 2014, **Satya Nadella** also mentioned: *"Our mission simply put is to empower you to create that tech-intensity in your organization, in your institution, so that you can have a broad, deep impact on the broader society."[11]* In addition, **Mark Zuckerberg,** co-founder of the social media platform Facebook also made clear his expansionist ambitions when, in 2021, he changed Facebook's name to Meta. He stated, *"We want to serve as many people as possible, which means working to make our services cost less, not more. Our mobile apps are free. Our ads business model is an auction, which guarantees every business the most competitive price possible. And it worked. Billions of people love our products, we have hundreds of millions of businesses on our platform, and we have a rapidly growing ecosystem and a thriving business. That's the approach that we want to take to help build the Metaverse, too."[12]*

Techno-optimism has clearly dominated the perceptions of consumers and tied them to the services and products of the platform. Building loyalty ties was the strategy of feudalism in the past and performed by capitalism in the present. *Customer engagement methods* are the

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[9] Microsoft Innovate, The keynote of Satya Nadella https://www.youtube.com/watch?v=0v1vyWJQlzs&t=2101s
Google, The keynote of Sundar Pichai https://www.youtube.com/watch?v=nP-nMZpLM1A&t=387s
Apple, The keynote of Tim Cook https://www.youtube.com/watch?v=-rAeqN-Q7x4
Metaverse, How We'll Build It Together, 2021, Mark Zuckerberg
https://www.youtube.com/watch?v=Uvufun6xer8&t=80s
[10] Google IO 2021 keynote - CEO Sundar Pichai
https://www.youtube.com/watch?v=mMSfUeJ49yk
[11] Microsoft AI: Empowering Outcomes in the Intelligent Cloud - Satya Nadella
https://www.youtube.com/watch?v=yc0Gi0w3ldM
[12] The Metaverse and How We'll Build It Together - Mark Zuckerberg
https://www.youtube.com/watch?v=Uvufun6xer8&t=80s

core activities to establish customer loyalty to techno-brands. The *loyalty business model*[13] is applied widely in digital business management. The main goal of this model is to build customer satisfaction that is the foundation for user loyalty and the basis for customer manipulation.

Based on the number of accounts that big tech platforms possess, the impact of these platforms is much broader than the influence of the national government. Billions of people are profiled and governed by technology corporations. With the "supranational" scale, millions of social problems have arisen within the platform's society; however, ***the operating apparatus and staff of these corporations have been continuously simplified, reduced and automatized by intelligent computing, causing countless social problems that*** have not yet been fully solved***.***

The Arab Spring (2010-2012) is a remarkable example of the irresponsibility of social media platforms with important political issues that are deeply impacted by cyber activities[14].
With the help of a Facebook page protesting abuses by the regime of Hosni Mubarak, in just 28 days, the activities of social media activist teams had led to the fall of the regime. Wael Ghonim, who played a prominent role in sparking the Egyptian Revolution of the year 2011, expressed to CNN reporters: *"I want to meet Mark Zuckerberg one day and thank him"* shortly after the success of the revolution and the step down of President Muhammad Hosni Mubarak. But soon later, Ghonim bitterly said: *"The hardest part for me was seeing the tool that brought us together tearing us apart. These tools are just enablers for whomever, they don't separate between what's good and bad. They just look at engagement metrics."*[15]
Despite being asked to intervene in provocative developments that could lead to violence in Egypt, the Facebook platforms were silent and did not take any action[16]. Instead of giving hope to a "digital democracy", many incitements to violence from social media have sparked bloody actions in this region. Marc Lynch of George Washington University stated in a Foreign Policy article, "There is something very different about scrolling through pictures and videos of unified, chanting Yemeni or Egyptian crowds demanding democratic change and waking up to a gory image of a headless 6-year-old girl on your Facebook news feed."[17]

Inhuman political forces are able to use technical tricks to benefit from inciting violence, intervening in the truth and even interrogating and torturing their targets since they

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[13] *The loyalty business model* is a business model used in strategic management in which company resources are employed so as to increase the loyalty of customers and other stakeholders.
https://en.wikipedia.org/wiki/Loyalty_business_model
[14] "Opening Closed Regimes: What Was the Role of Social Media During the Arab Spring?". Ictlogy.net. 22 May 2012.
[15] The Facebook Dilemma, 2018, Documentary film, FRONTLINE
https://www.youtube.com/watch?v=T48KFiHwexM&t=55s
[16] The Facebook Dilemma, 2018, Documentary film, FRONTLINE
https://www.youtube.com/watch?v=T48KFiHwexM&t=55s
[17] "Twitter Devolutions". *Foreign Policy*. Archived from the original on 7 October 2016.

understand the operating logic of algorithms and the technological loopholes. With the ability to affect others anonymously, various political forces can attack individuals in numerous ways, such as sending spam or email bomb[18], hacking social media accounts or spreading fake news about the targeted victim. In cyberspace, we witness an increment in the use of "cyber-torture" on a global scale. This problem has been alerted by specific UN[19] reports of professor Nils Melzer in 2020. States, organizations, and criminal groups are not only capable of conducting cyber-operations that cause critical suffering to countless individuals but do so for the specific purpose of torture. Cybertechnology may also be used to cause or contribute to severe emotional distress, most notably through intimidation, bullying, harassment, surveillance, public shaming, and defamation, as well as appropriation, deletion, or manipulation of information[20].

Revolutionary activists and politicians have complained to Facebook about **troll factories contributing to political instability in different regions of the world,** but the silence was the most common solution by platforms. Another example, the fake news about Ukraine's political situation spread from Russian troll factories. Dmytro Shymkiv - a top adviser to Ukraine's president (from 2014 to 2018), met Facebook representatives and asked them to intervene in the proliferation of fake news about the Ukraine situation circulating on the Facebook platform. Shymkiv recounted the response from Facebook: "Sorry, we are an open platform in which anybody can do anything"[21] In fact, Facebook did not care about fake accounts or troll factories that operated on their platform for a long time.

Fraud and cheating in cyberspace in general, and in social media in particular, have become a common and out of control problem in many places, ***especially in developing countries*** where legislation regarding technology are still inefficient. For example, various fake accounts were set up to mimic real users in order to misappropriate money from their relatives and friends. Scam investment, counterfeit goods business, and fake services through social networks have become common issues in developing regions, especially in South East Asia. Live stream sales have become a high-revenue business phenomenon in Vietnam since 2016. Most sellers will set up sales channels on social platforms, regularly livestreaming videos introducing real products at attractive prices. In numerous cases, customers receive counterfeit goods from these unknown online sales services. These livestream sellers often

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[18] An email bomb is a form of net abuse that sends large volumes of email to one address to overflow the mailbox and overwhelm the server where the email address is hosted or as a smoke screen to distract the attention from important email messages.

[19] UN warns of rise of 'cybertorture' to bypass physical ban, *The Guardian*
https://www.theguardian.com/law/2020/feb/21/un-rapporteur-warns-of-rise-of-cybertorture-to-bypass-physical-ban

[20] UN warns of rise of 'cybertorture' to bypass physical ban, *The Guardian*
https://www.theguardian.com/law/2020/feb/21/un-rapporteur-warns-of-rise-of-cybertorture-to-bypass-physical-ban

[21] *The Facebook Dilemma*, Documentary film, Frontline*,* 2018
https://www.youtube.com/watch?v=T48KFiHwexM&t=55s

pay significant amounts to advertise on such as Facebook, allowing their live-stream videos to appear on the 'news feeds' of target audiences, even engaging in excess of 10,000 followers [22]. With the allurement of liveliness, skillful narration and attractive images, and a series of fake maneuvers (such as setting up a fake-buyer account system to interact, post and share), several livesteamers in Vietnam have earned up to 400,000 euros per month selling "*knock-offs*" [23] through livestream methods on the Facebook [24]. Nevertheless, there is a lack of regulation from both platforms and legal institutions to protect customers. In the current Vietnamese situation, no one seemingly controls the quality of the selling products and the trustworthiness of information in the advertisements on these platforms.

The existence of social problems arising from online advertising does not detract from the growth of this industry. On the contrary, online advertising creates new orders in popular culture. The emergence of digital stars on social network platforms has gradually replaced classical celebrities. For example, product reviews, tutorials, and entertaining videos on the Youtube platform have created new form of stars. YouTube Stars such as MrBeast, Jake Paul, And Markiplier have reached nearly 90 million YouTube subscribers and earned from 18 million to 54 million US dollars per year, and nearly half of their earnings come from the ad revenue. In addition, these stars have branded merchandise lines that have supported them or help them to make money[25].

There are seemingly 1001 mysteries and business tactics in the operation of the information technology world. Edward Snowden mentioned: "The screen may be off as it's sitting on your desk, but the device is talking all of the time. The question - we have to ask is who is it talking to? Even if your phone is not hacked, right now, you look at it, it's just sitting there on the charger. It is talking tens or hundreds or thousands of times a minute to any number of different companies - who have apps installed on your phone. It looks like it's off, it looks like it's just sitting there, but it is constantly chattering. And unfortunately, like pollution, we have not created the tools that are necessary for ordinary people to be able to see this activity."[26]

Not many are able to understand the complex operating mechanisms inside the current computational system; in addition, various undisclosed digital business tactics drive technological mysteries to go further. Although the new technological terms such as artificial intelligence, machine learning, deep learning, Big Data, Internet of Things, and cloud computing are mentioned quite often in public media, the majority of ordinary customers are

[22] https://vnexpress.net/livestream-tren-thuong-mai-dien-tu-nghe-hot-cua-gioi-tre-4359693.html
[23] *knock-off is* a cheaper copy of an expensive and popular product
[24] https://zingnews.vn/livestream-ban-hang-lau-thu-chuc-ty-moi-thang-post1104703.html
[25] The Highest-Paid YouTube Stars: MrBeast, Jake Paul And Markiplier Score Massive Paydays, Forbes https://www.forbes.com/sites/abrambrown/2022/01/14/the-highest-paid-youtube-stars-mrbeast-jake-paul-and-markiplier-score-massive-paydays/?sh=756b07901aa7
[26] "I Remove This Mysterious Tiny Chip Before Using The Phone!" Edward Snowden https://www.youtube.com/watch?v=0dGqR4ue8dg&t=1s

still far from knowing what exactly they are, how they work, and how they affect each user. With self-learning and self-making decision abilities, the performance of present AI systems even goes beyond human understanding capabilities (David Weinberger, 2017[27]). The recent open letter with signatures from hundreds of the biggest names in the technology scene, including Elon Musk[28], has urged the world's leading artificial intelligence labs to take a break in training new super-powerful systems for six months. The letter pointed out that

> "Advanced AI could represent a profound change in the history of life on Earth, and should be planned for and managed with commensurate care and resources… Unfortunately, this level of planning and management is not happening, even though recent months have seen AI labs locked in an out-of-control race to develop and deploy ever more powerful digital minds that no one – not even their creators – can understand, predict, or reliably control." (Perrigo, 2023)[29]

Moreover, the invisible strategy plans of tech-owners worsen the mysterious situation related to new-techs. According to Frank Pasquale, while technology has deeply pushed us into "the black box society" (Pasquale, 2015)[30], where 'powerful businesses, financial institutions, and government agencies hide their actions behind nondisclosure agreements, 'proprietary methods', and gag rules, our own lives are increasingly open books' (Pasquale, 2015)[31]. For example, how do data broker companies collect information, where do they store it, how do they use the user's data, and for what? Those questions are the 'obvious mysteries' in our contemporary society. The mystery of the technology world might be one of the special arguments for **the common feelings of faith and fear in new tech** of users.

Martin Heidegger noted in the book *The Question Concerning Technology*[32] that the modern people create an almost unscientific worship of science. We seem to be overwhelmed by the ideas of efficiency and productivity related to technological achievements. Without awareness of the actual underground problems of new technology, the achievements of science may dangerously slip out of the public's control. Technology is not a mere instrument, it is not a mere neutral tool. It is created by humans and serves firstly serves human purpose to the benefit of its creators (Heidegger, 1977). It is certainly true that the majority of present technology research centers, the birthplace of new inventions and applications, require a huge amount of capital to maintain research and experimental activities. The largest technology

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[27] Our Machines Now Have Knowledge We'll Never Understand, *Wired*
https://www.wired.com/story/our-machines-now-have-knowledge-well-never-understand/

[28] The founder, CEO and chief engineer of SpaceX; angel investor, CEO and product architect of Tesla, Inc.; owner and CEO of Twitter, Inc.; founder of the Boring Company; co-founder of Neuralink and OpenAI; and president of the philanthropic Musk Foundation.

[29] Perrigo. B, (2023) Elon Musk Signs Open Letter Urging AI Labs to Pump the Brakes, *Time.*
https://time.com/6266679/musk-ai-open-letter/#lftvdfup8goooe30kuo

[30] Pasquale, F. (2015). *The black box society: The secret algorithms that control money and information.* Harvard University Press.

[31] Pasquale, F. (2015). *The black box society: The secret algorithms that control money and information.* Harvard University Press. p.3

[32] Heidegger, M. (1977). *The question concerning technology.* Garland Publishing, Inc. New York & London

research centers in the world belong to or are sponsored by private corporations. States aim to gradually reduce public expenditures, and public finances are withdrawing from investment in research centers[33]. This drives a high concentration of private ownership of technology research centres globally. Hence, most current tech creations are from the orders of investors and aimed at serving corporations. In several cases, as with the US and China, developed countries could invest in technology research, although this may not be any different since most technological inventions serve the purposes of the ruling parties.

If the interests of the public are disregarded or even appropriated, technological achievements cannot obtain the promised values of tech owners. The worship of technology is rooted in the public's fear and over-optimism in tech achievements considered scientific truths. These truths are manmade results which reflect the mentality of a certain phase of time. Scientific records or conclusions can change according to the consensus of society at certain periods, as the American physicist and philosopher Thomas Kuhn demonstrated for a series of "paradigm shifts" in the history of human science (Kuhn, 1970)[34]. Therefore, scientific optimism is a relative belief and we should perceive tech achievements as transitory developments. Moreover, there are various scientific conclusions that are manipulated and dominated by investors, the reason why the promised technological value or "current scientific truths" should always be taken into the consideration.

Taking a closer look at the reality of information technology abilities in the two years 2020 and 2021, at the peak of the ***COVID-19 pandemic, we see the gains and losses in the experimental period on the highly focused technology driven society***. In the emergency context, plenty of incomplete and even potential risky technologies were still in use. Governments, organizations, education committees, and businesses normally spend years making decisions, but during the pandemic, they decided to apply new technology within a few hours. The most common defense was that inaction would result in greater damage. There are intertwined pros and cons, advantages and challenges, and beliefs and concerns regarding technology throughout the pandemic.

In the early stages of the pandemic, with daily reports of severe illness and high mortality, people feared that the science of the day was powerless against the forces of nature. However, reality has shown that humans are not helpless; pandemics are not uncontrollable. While the virus can breed in and spread from the wild, science and technology have made global epidemics a manageable challenge (Harari, 2021)[35]. From first reports about a potential

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[33] OECD Science, *Technology and Industry Scoreboard*. OECD. 2015. p. 156. https://www.oecd-ilibrary.org/science-and-technology/oecd-science-technology-and-industry-scoreboard-2015_sti_scoreboard-2015-en

[34] Kuhn, T. S. (1970). Book and film reviews: Revolutionary view of the history of science: The structure of scientific revolutions. *The Physics Teacher, 8*(2), 96-98.

[35] Harari, Y. N. (2021) Lessons from a year of Covid, *Financial Times* https://www.ft.com/content/f1b30f2c-84aa-4595-84f2-7816796d6841

pandemic at the end of December 2019 to January 10, 2020, scientists had not only isolated the responsible virus but also sequenced its genome and published the information online. During the subsequent few months, health organizations introduced measures that would slow and stop the chains of infection. Several effective vaccines were placed in production in less than a year. In early 2021, COVID-19 vaccines were introduced into expanded vaccination programs in many countries. The world has never witnessed such a rapid response to a new pathogen. Although there were complaints about the side effects and sequelae of vaccines, one cannot deny the magic of science and technology that has brought people out of the dark-dead days of 2020 and 2021.

There were times when social communication had to entirely switch to cyberspace when the lockdown commands had been implemented in different areas. Many people had to work from home and communicate exclusively online for more than a year. Most universities and schools offered online classes in the same period. Information technology has proven its role in connecting communities, ensuring jobs and incomes for many employees who could switch to home office, maintaining the operation of organizations and businesses, and continuing their classes, training programs, and sociocultural activities.

New jobs on online platforms were born or developed during the pandemic period. The reduction of direct personnel due to the avoidance of mass infection sped up automated activities, such as automatic payment, shipment and check-in. To continue business activities in a situation of personnel instability, many companies invested in automatic machines to replace humans. In various fields, automation proved its efficiency; for example, with only 1.5% of personnel working directly on farms, the U.S. still provided enough domestic food, even becoming a leader in agricultural exports[36]. Another example, China has taken online shopping to a new level of development during the pandemic. With the unprecedented blooming of online sales, forecasting the future of e-commerce will profoundly affect our lifes. Automation will likely lead to job replacement, and fears of unemployment will persist alongside optimism about a future where people will be deprived of work.

Furthermore, the advantage of connectivity has also been accompanied by limitation of online activity, especially when physical contacts were almost completely eliminated due to the epidemic. International conferences, for instance, can be conducted across continents in a low-cost online format and still spread knowledge to many people, while elementary school students have struggled with their families and teachers with online learning and contactless education. The decrease in the quality of education during online semesters has been recognized widely in compulsory education schools or even in Universities. Online art exhibitions, live music shows on YouTube channels, or virtual museums seem to be only temporary compensation for the cultural needs of the population. Enjoying culture through

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[36] Harari, Y. N. (2021) Lessons from a year of Covid, *Financial Times*
https://www.ft.com/content/f1b30f2c-84aa-4595-84f2-7816796d6841

these online mediums can hardly replace real artistic sensational feelings for audiences. In addition, living in forced isolated situations has increased the level of depression and mental crisis for many individuals. The lack of physical connection has obviously created significant mental harm to society.

In addition, there are potential risks in the forms of high-tech surveillance of the population first examined and applied on a large scale in many countries during the Covid period. The applications for personal biological reports, security cameras, and facial recognition systems used for surveillance of the public in many countries, especially in China. By monitoring smartphones, using millions of cameras to identify people in public, and requiring people to declare their personal medical status, authorities could efficiently identify suspected Covid-19 cases and trace their movements and potential contacts whom they may have exposed. A series of mobile apps had also been deployed to alert people about the infected cases[37]. Similar surveillance technologies were also applied in East Asian countries, Vietnam, and even Israel – when the government used "specialized" anti-terrorist technologies to monitor patients infected with Covid-19[38].

In addition to the demographic, behavioral, and psychological data collected in cyberspace before, biometric data has also become an important target for governing during the pandemic. An individual's body temperature, heart rate, blood pressure, and medical history are compulsorily collected in many places, stored, and used without individual consent. When people have to choose between privacy and health, they have a tendency to prioritize "health", which is the reason why personal information was considered less important during the pandemic. People found themselves in situation where they had to select one of the twol; however, they should have access to both privacy and health. People have the right to request that their information be used only to help them prevent or cure diseases; at the same time, their information should not be a data product that serves other political or business purposes.

Regarding high-tech surveillance, people tend to regard technology as a tool that assists the government to monitor the public; however, in fact, technology can also help individuals to monitor their governments. While there is only one-way surveillance, from top to bottom, there is potential for totalitarian government. Therefore, it is necessary to reinforce individual supervision toward governments and large corporations. For example, during the pandemic crisis, governments were generating revenue and spending large amounts of financial resources. The process of allocating various types of funds could have been handled in a more transparent way. In a transparent environment, citizens would have access to a range of

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[37] Harari, Y. N. (2020). The world after coronavirus. *Financial times*, 20(03), 2020. https://www.ft.com/content/19d90308-6858-11ea-a3c9-1fe6fedcca75
[38] Harari, Y. N. (2020). The world after coronavirus. *Financial times*, 20(03), 2020. https://www.ft.com/content/19d90308-6858-11ea-a3c9-1fe6fedcca75

information regarding decision-making strategies, distribution of services, and expenditures of public funds. They should have the right to control public money and make certain it is not misappropriated in corrupt ways. However, the actual COVID situation went in different a direction. In Vietnam, for example, monitoring the roll-out of COVID-19 prevention and control services had little transparency, leading to serious problems in use of fake testing kits. This led to the resignation of the President, an unprecedented event, and two Deputy Prime Ministers,[39] and to the dismissal of the Minister of Health and three Deputy Ministers. Additionally, in 2022, various companies in Vietnam were criminally prosecuted. Hence, *surveillance should be balanced by a counter-surveillance*, and the pandemic context was the best testing environment for citizens in many countries over the world.

An extraordinary situation like the pandemic is a unique rehearsal of a potential social form, in which digital technology is applied in almost every aspect of social activities. In other words, this historical event is a special case study for analyzing the current cyber circumstances and verifying the future speculations of a human society in which technology maximizes its role.

Technology has changed the world, supported people to overcome obstacles and challenges, and helped people solve mysteries. However, people also face various consequences and problems arising with the application of various technologies. Behind artificial intelligence technology, Big Data, the Internet of Things and Cloud computing there are a series of environmental problems. For instance, to make the global internet connection system work, an enormous amount of electricity is needed to feed the server farms, data centres, network infrastructure, fibre optic systems surrounding the earth, and electronic devices. One single Google search consumes the same amount of energy as a standard LED light bulb in use for three minutes[40], and if one considers the number of Google searches requested in a typical day, week and year, multiplied by the number of half the world's population, the sum is extraordinary. Moreover, to run the entire digital industry, rare-earth metals such as lanthanum, cerium, neodymium, samarium, europium, terbium, and dysprosium have been mined exhaustively for the hardware manufacturing industry. Cobalt mining for lithium-ion batteries is a special example that raises concerns about environmental devastation in Congo[41]. On the one hand, digital technology created a simple and easy environment to connect people; on the other hand, it also pushed different social communities into various political, economic, cultural, and environmental crises.

Advanced computational technology contributed to the expansion of living space, and cyberspace became a new land for many individuals, offering new job opportunities, new

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[39] https://laodong.vn/thoi-su/cho-thoi-giu-chuc-vu-2-pho-thu-tuong-3-thu-truong-va-tuong-duong-1-chu-tich-tap-doan-trong-nam-2022-1137333.ldo
[40] Clouds (2020), *Connected: The Hidden Science of Everything*, Docuseries, Netflix
[41] Blood cobalt, *abc.net.au* https://www.abc.net.au/news/2022-02-24/cobalt-mining-in-the-congo-green-energy/100802588#:~:text=Beneath%20Congo's%20rich%20red%20earth,closest%20competitors%2C%20Australia%20and%20Russia.

study methods and new ways of entertaining. The optimism about an economy driven by technology, a future of accelerated product commercialization, and the efficient sales and delivery models of programmatic advertising, is accompanied by worries and doubts about excessive stress, the loss of identity, private rights, and the right to self-decision making.

New digital technology introduces contemporary people to utility worlds and the unprecedented intimate relationship between machines and humans. Face ID keeps users logged in on devices and apps, avoiding wasting time for multiple log-in activities, and that is how customers are maintaining a continuous digital profile and their active digital life in cyberspace. All user needs are recognized and responded to instantly by platforms. Virtual assistants are continuously there - in the car, in the house, in the pockets of numberless users to follow them, listen to their confidences and wish them goodnight daily. Is one able to forego the convenience and intimacy inherent in the technological world? One typical concern in communities is how ubiquitous monitoring of personal information deprives the user of control. The lack of transparency in the use of technology is a common phenomena. However, customers have a tendency to ignore the drawbacks and accept the manipulated situation created by tech owners, particularly through advertisements and propaganda messages, in exchange to use the free services and products of the platforms. Should people require both tech benefits and human rights? How can we solve the "tech dilemma" in the contemporary societies?

The ideological pressures of being unable to find solutions to social problems, and the idea that *"There is no alternative"* have led a large part of our society to nihilism and the tendency to normalize all problems in life. As Jean Baudrillard wrote: "The apocalypse is finished, today it is the precession of the neutral, of forms of the neutral and of indifference... all that remains, is the fascination for desert like and indifferent forms, for the very operation of the system that annihilates us. Now, fascination (in contrast to seduction, which was attached to appearances, and to dialectical reason, which was attached to meaning) is a nihilistic passion par excellence, it is the passion proper to the mode of disappearance. We are fascinated by all forms of disappearance, of our disappearance. Melancholic and fascinated, that is our general condition in an era of involuntary transparency." (Baudrillard, 1995)[42]

A universal sense of helplessness and impotency of ordinary people contributed to the capitalist advantages. In developing countries in East Asia especially, nihilism and hyper normalization are deepening. As a fundamental part of Buddhist philosophy, renunciation is the method to end suffering. The culmination of the path that the Buddha taught was nirvana, "a place of nothingness… non-possession and…non-attachment…[which is] the total end of

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[42] Baudrillard, J. (1995). *Simulacra and simulation*, "On Nihilism", trans. Sheila Faria Glaser, University of Michigan press. p.104

death and decay." (Pasanno, & Amaro, 2009)[43] Therefore, there is a common attitude of distancing reality and leaving the current situation to occur according to the nature of the outside world. Each individual is advised to bring an end to suffering by "self-cultivation". These ideas have contributed actively to the weakening of revolutionary ideas and criticism. In addition, the fear of change deeply rooted in the attitude of the postwar generations made them feel threatened by disillusionment with the aftermath of these revolutions. They are seeking stability that conditions them to accept social repression and unfairness. A major part of contemporary societies is facing the reality of hyper normalization.

All in all, in communities where everyone is frightened of change, it is that fear of change that actually feeds the power. In this day and age, in various places, people are forced to believe that "There is no alternative" (Fisher, 2022)[44].

4.2 Reconstruction after Deconstruction

New computing technologies have brought both faith and fear, satisfaction and anxiety to society. The previous parts of this study attempted to depict the complex reality of the political economy, and to analyse different social problems that have emerged in the age of artificial intelligence and automation. Instead of falling into confusion, disorientation, and neglectfulness, people should cross over the ideological crisis after the postmodern period and, as Luke Turner suggested in his *Metamodernist Manifesto,* go beyond "irony and sincerity, naivety and knowingness, relativism and truth, optimism and doubt,… we must go forth and oscillate!" (Turner, 2011)[45]. By concrete acts of resistance and struggle, we can make changes, find new alternatives, rebuild more sustainable values, and sustain the existence of humanity. Though we know that "The revolutions are brutal, and this is the thing that one has to go back to if you want change. If you really want to change the world, you have to tackle power." (Curtis, 2016)[46]

To make real change, we must revolutionize in different ways our methods and media; aside from the individual ones, collective actions are critical. In addition to guiding users to fair attitudes and lifestyles in cyberspace, we require a real change from legislators and executives and accurate actions from governments regarding the emerging issues in cyberspace. We may need to include radical acts, to force technology corporations to listen and communicate about existing issues, and soften the influence of consumerism on social culture. For more than a decade, many scientists, philosophers, sociologists, computer scientists, activists, and

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[43] Pasanno, Ajahn; Amaro, Ajahn (2009). "Knowing, Emptiness and the Radiant Mind" (PDF). *Forest Sangha Newsletter* (88): 5.

[44] Fisher, M. (2022). *Capitalist realism: Is there no alternative?*. John Hunt Publishing.

[45] Turner, L. (2011) Metamodernist Manifesto, http://www.metamodernism.org/

[46] Curtis, Adam (2016) Interview on 16/10/2016 about the documentary film HyperNormalisation
https://www.youtube.com/watch?v=tVx3lt8ZKHw&t=13s

journalists have been active in discussing, making proposals, as well as participating in various social projects to respond to these social issues.

Writing about the influence of social media, Jaron Lanier, a technologist, futurist, computer philosopher and a founder of the field of virtual reality, offers arguments for abandoning social media (Lanier, 2018)[47]. He expresses how reliance on social media platforms reduces the capacity for spirituality and that users become automated extensions of the platforms. Examples revealed in his narrative show how users of Twitter and Facebook have become cruder, more tribal and less empathetic.[48].

In an earlier book, *Who Owns the Future*? (Lanier, 2014) [49], Lanier argues that the middle class is disenfranchised from online economies. By convincing users to provide personal information in exchange for free services, companies are able to accumulate large amounts of data at no cost. He called these companies "Siren Servers", a reference to the Sirens of Ulysses. Rather than paying individuals for their contributions to the data pool, Siren Servers concentrates wealth in the hands of people who control the data center. As one solution to these problems, Lanier puts forth an alternative structure to the web based on Ted Nelson's Project Xanadu. He proposes a two-way linking system that would point to the source of any piece of information, generating an economy of micropayments that compensates online customers for original material posted to the web.

In addition to Lanier, other leaders in the tech world have stepped out of senior positions to focus on social change endeavors. Included among them are: Tristan Harris[50] - director and co-founder of the Center for Humane Technology, Timnit Gebru[51] - a computer scientist who run the Distributed Artificial Intelligence Research Institute (DAIR), Meredith Whittaker[52] - President of the Signal Foundation, director of the AI Now Institute, Joy Buolamwini - computer scientist and digital activist based at the MIT Media Lab, etc,.

They directly or indirectly became social activists. They have a profound contribution in responding to the social implications of artificial intelligence and related technologies. Although it is difficult to compare with the powerful acts of the technological, economic and political forces, these acts of resistance to the opposition have attracted great public attention and prepared the stage for a new development with much more consideration for human and moral values.

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[47] Lanier, J. (2018). *Ten arguments for deleting your social media accounts right now*. Random House.
[48] Click 'Delete' to Save Your Soul, *The New York Times*
https://www.nytimes.com/2018/06/13/books/review/jaron-lanier-ten-arguments-for-deleting-your-social-media-accounts-right-now.html
[49] Lanier, J. (2014). *Who owns the future?*. Simon and Schuster.
[50] https://en.wikipedia.org/wiki/Tristan_Harris
[51] https://en.wikipedia.org/wiki/Timnit_Gebru
[52] https://en.wikipedia.org/wiki/Meredith_Whittaker

In 2019, innovative ideas for the 5th Industrial Revolution were proposed by Pratik Gauri & Jim Van Eerden[53]. They provided a humanistic vision for the evolution of industrial revolutions and a continuation of the 4th industrial revolution.
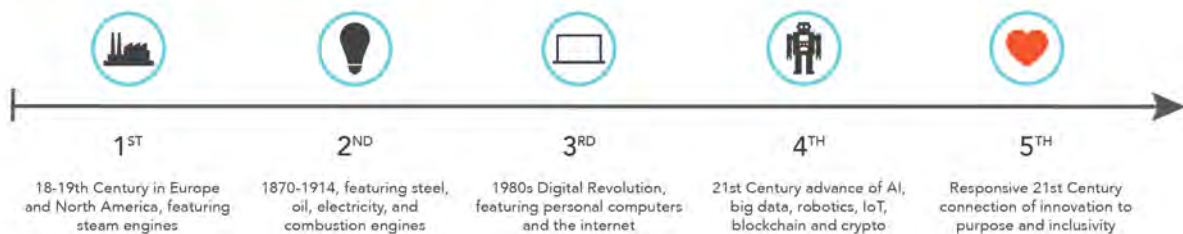
Industrial Revolutions. Foto: 5th Element ©europeansting.com

The first revolution began with the emergence of steam engines; the second revolution was characterized by the iron and steel, oil, electricity, and internal combustion engine industries; the third was the digital revolution that exploded with the advent of personal computers and the Internet; the fourth revolution was notable for advances in a series of automation technologies, super artificial intelligent machines capable of self-learning, automated communication, stratified data analysis based on Big data and IoT. The fifth industrial revolution is predicted to be a combination of machines and humans wherein advanced technology is formulated based on ethics, humanity, and social responsibility to solve the existing limitations of previous revolutions.

Broadly, the innovation associated with social responsibility or "sustainable development" has become a main concern to the international community in recent years. It is clearly expressed in the "Sustainable Development Goals" (The Sustainable Development Goals - SDGs[54]) of the United Nations Security General Assembly in in 2015, a set of 17 interlinked global goals designed to be a 'blueprint for achieving a better and more sustainable future for all'. The target for achieving the 17 SDGs is 2030.

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[53] What the Fifth Industrial Revolution is and why it matters, *europeansting.com*
https://europeansting.com/2019/05/16/what-the-fifth-industrial-revolution-is-and-why-it-matters/
[54] https://en.wikipedia.org/wiki/Sustainable_Development_Goals

The Sustainable Development Goals – SDGs ©Wikimedia Commons

Therefore, social development associated with technology today must be linked to sustainable development goals. In the digital environment, especially, morals and humanity, social inequality, the digital divide, responsible consumption and production should be the principal focus of all development.

Issues related to the ethics of AI and its decentralization have become emerging concerns in international forums where sustainable development based on technology is paramount. There are remarkable contemporary concerns indicated in the book *The Oxford Handbook of Ethics of AI* published by Oxford University Press in 2020 [55]. This book maps sharply the current production, application, and use of artificial intelligence in diverse spheres of individual, commercial, social, and public life by an interdisciplinary and transcontinental academic community. This handbook presents various approaches to the *Ethics of AI* conundrum. Nevertheless, the closest approach to the scope of this study is **human ethics toward AI**.

Since AI driven machines are entities capable of self-learning, self decision making, and even capable of expressing emotions, how will we relate to these machines? Should we treat them more like humans, or rather like animals? Should AI and machines have any moral status? With the posthuman approach, especially, these questions are among the main considerations. There are also countless issues generated through these questions. For example, should self-driving cars using AI be considered ethical agents? What kind of ethical competence should these AI machine have? How should AI be treated vis a vis moral status? Is artificial intelligence "just a machine"? Does it deserve ethical consideration? Should we treat it differently from a dishwasher or refrigerator? Should we just unplug and "kill" the machine when it poses a potential risk? According to the philosopher of technology, Mark Coeckelbergh, "Some argue that "mistreating" an AI is wrong not because any harm is done to the AI, but because our moral character is damaged if we do so" (Coeckelbergh, 2020)[56]. In another way, morality is a human idea and is about our attitudes.

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[55] Dubber, M. D., Pasquale, F., & Das, S. (Eds.). (2020). **The Oxford handbook of ethics of AI**. Oxford Handbooks.
[56] Coeckelbergh, M. (2020). *AI ethics*. Mit Press.

Conventionally, human attitudes in a community are very multidimensional, and problems of bias, discrimination, and inequality have always been present in society. However, AI–with its potential for impact–is predicted to perpetuate these problems and deepen their impact. Therefore, the early prognosis and actions to prevent profound social effects of AI technology are an essential responsibility of contemporary society, before it is too late. Above all, the programmers, who produce and apply AI, need to have the right ethical attitude regarding the products they create, and be aware of the negative effects and possible consequences of technology. As Fei-Fei Li, a senior computer scientist in AI and computer vision, reminded technology engineers: "There's nothing artificial about AI. It's inspired and created by people, and most importantly it impacts people. It is a powerful tool we are only just beginning to understand, and that is a profound responsibility." (Hempel, 2018)[57]

In addition, through explicit policies related to AI ethics, various social issues can be adjusted in time. Currently, the rapid growth of AI-generated art has left many artists concerned about a technologically advanced form of plagiarism. In early 2023, a group of San Francisco artists are taking legal action to reclaim copyright and consent by filing a class-action lawsuit against DreamUp, Midjourney, and Stable Diffusion[58]. They have discovered that an open-source AI-based image-generating tool called Disco Diffusion was using the work of many artists without their knowledge or consent. Similar issues need to be clarified and resolved in the context of legal regulations.

The transparency of AI and related new technology, in fact, has already been discussed to some extent in legislative bodies of several developed countries such as the US and the European Union. Examples of specific topics such as *Optimizing for Engagement: Understanding the Use of Persuasive Technology on Internet Platforms*[59] and *The Risk of Manipulation and Deception in the Digital Age* have been discussed in the United States Senate and House Of Representatives in the years 2019 and 2020. In April 2021, the EU Commission presented the *AI Issue Package*, including *Communication on Fostering a European Approach to AI*; a review of the *Coordinated Plan on Artificial Intelligence* (with EU Member States); and the proposal for a regulation laying down harmonized rules on AI (AI Act) and relevant Impact assessment[60]. These are considered the first actions for policies related to new technology issues and AI.

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[57] Hempel, Jessi (2018). "Fei-Fei Li's Quest to Make Machines Better for Humanity". *Wired*. ISSN 1059-1028.
[58] Theo Farrant & AFP, (2023) From lawsuits to tech hacks: Here's how artists are fighting back against AI image generation, *Euronews* https://www.euronews.com/culture/2023/03/27/from-lawsuits-to-tech-hacks-heres-how-artists-are-fighting-back-against-ai-image-generatio
[59] Tristan Harris - US Senate June 25, 2019 https://www.youtube.com/watch?v=WQMuxNiYoz4
[60] A European approach to artificial intelligence https://digital-strategy.ec.europa.eu/en/policies/european-approach-artificial-intelligence

However, there are plentiful complicated issues and obstacles in policy decision-making process related to AI. Firstly, the rapid development of technology and its complex applications create elusive limits for the lawmakers. Secondly, the involment of multiple factors makes it difficult to attribute responsibility for the rising problems. Thirdly, there is the limitation of conflictuous views on justice and fairness. For example, creating a positive action toward disadvantaged individuals or groups remains controversial. Should justice be blind and unbiased, and, therefore, should algorithms be blind to race, or is justice meant to create an advantage for those who are already marginalized, thus leading to bias and discrimination? And should policy in a democratic context prioritize protecting the interests of the majority or focus on the interests of minorities? [61] Therefore, in a new technologically influenced environment, there must be a continuous improvement of the legal framework and a common consensus on the ethical views on new technology, especially regarding AI ethics. The concepts of justice and democracy should be considered case-by-case and implemented in a particular context.

Moreover, to limit monopoly control and create opportunities for democratic dialogue and build equality of rights in cyberspace, society needs to promote decentralized AI, decentralized social media, and decentralized public media. Regaining control of the Internet and digital infrastructure is an important task ahead because it is the basic infrastructure of 21st-century society (Srnicek, 2017)[62]. In addition, it is necessary to activate policies that encourage and create conditions for small technology research centers, protect the interests of start-ups, limit the manipulative power of corporations, raise awareness against the exploitation in cyberspace, fight for the rights of users, and introduce and apply alternative trustful products and services. These are the initial practical actions aimed at decolonizing cyberspace, which reduces and eliminates the influence of *supranational platforms presently holding the overall control over the future of AI* (Webb, 2019)[63].

CryptoParties are forms of decentralized initiatives that gained prominence in the global online community in recent times; by joing this movement, users are able to learn how to improve their digital privacy and security (Monsees, 2020)[64]. CryptoParties introduce basic cryptography tools–such as the Tor anonymity network, public key encryption (PGP/GPG), and OTR (Off The Record messaging) - to the general public. There is a CryptoParty handbook–an open source document downloadable for free on many forums. Readers are able to access useful information such as tips for using email safely, how to prevent tracking when using

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[61] Coeckelbergh, M. (2020). *AI ethics*. Mit Press.
[62] Srnicek, N. (2017) We need to nationalise Google, Facebook and Amazon. Here's why, *The Guardian* https://www.theguardian.com/commentisfree/2017/aug/30/nationalise-google-facebook-amazon-data-monopoly-platform-public-interest
[63] Webb, A. (2019). *The big nine: How the tech titans and their thinking machines could warp humanity*. Hachette UK.
[64] Monsees, L. (2020). Cryptoparties: empowerment in internet security?. *Internet Policy Review, 9*(4), 1-19.

browsers, how to keep passwords safe, and how to safely circulate files on the network, a wide range of alternative applications with open-source codes are introduced.

Taking action on the copyright issues related to AI-generated art tools, a team at the University of Chicago introduced a free-to-use "Glaze" software in March 2023 to help protect original artworks (Theo & AFP, 2023)[65]. A layer of data invisible to the human eye has been added over images that "acts as a decoy" for AI. Theoretically, if generative AI encounters an image that has been protected by Glaze, it will be unable to accurately analyze and replicate its style.

In addition to the mentioned micro solutions, researchers and policymakers are interested in solutions at the macro level–predicting or forming new social paradigm scenarios. In the book *Superminds: How Hyperconnectivity is Changing the Way We Solve Problems,* Thomas W. Malone (Malone, 2018)[66] outlined a vision of a **cyber-socialism** in which he points to the social credit system that China has placed in trial applications in recent decades as an example (Zhong, 2019)[67]. By connecting it to the false legacies of historical socialism, he highlights that the problems of *information technology controlled social credit system* are being reproduced in Chinese experimental version. For example, there is a widespread deprivation of privacy; personal data is exposed to the public and manipulated by social regulators; individuals live without private ownership; all aspects of life are assessed through social value scales and ranking; and reputation and social contribution are the social measurement tools. It is a dystopian scenario of IT-enabled socialistic decision-making that Thomas W. Malone is trying to connect with the idea of cyber-socialism. Meanwhile, we continue to witness the loss of personal data, the loss of self-determination, the misleading value through rankings and ratings, and personal reputation within the IT products of the contemporary capitalist economic system.

Malone's model is not the only form of cyber socialism that the world could follow; the socialistic decision-making models of Nordic countries such as Estonia[68] could be mentioned as well. Another proposal towards the collectivization of ownership of social capital with emphasis on technological capital is introduced in the work *Inhuman Power - Artificial Intelligence and the Future of Capitalism.* Authors Nick Dyer-Witheford, Atle Mikkola Kjøsen, and James Steinhoff have made in-depth analyses of the ownership of AI capital, forecasting that AI will entirely unmake the old modes of productions, and automated methods will

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[65] Theo Farrant & AFP, (2023) From lawsuits to tech hacks: Here's how artists are fighting back against AI image generation, Euronews
https://www.euronews.com/culture/2023/03/27/from-lawsuits-to-tech-hacks-heres-how-artists-are-fighting-back-against-ai-image-generatio

[66] Malone, T. W. (2018). *Superminds: How Hyperconnectivity is Changing the Way We Solve Problems*. Simon and Schuster.

[67] Zhong, Yuhao (2019). "Rethinking the Social Credit System: A Long Road to Establishing Trust in Chinese Society" (PDF). *Symposium on Applications of Contextual Integrity*: 28–29 – via Privaci.info.

[68] Connected: The Hidden Science of Everything - "Clouds" - Directed by Alyse Walsh is a 2020 Netflix's docuseries

gradually take over the full economic system. The authors also mention as a suggestion: "A communist orientation to AI takes as its priority neither halting AI (Luddism) nor intensifying its development (accelerationism) but rather liquidating the structural dynamics of capital that have so far fostered its development….the most promising parts of postcapitalist/left-accelerationist programmes are not those that advance the automation of work within capital, but rather those that point to the expropriation of AI-capital, *the development of new forms of collective ownership of AI, and the application of AI to the collectivization of other sectors*." (Dyer-Witheford, Kjøsen, & Steinhoff, 2019)[69] They also believe that if realized the "fully automated luxury communism, or postcapitalism, envisages a transition to socialism by reducing or eliminating the need to work and supplying a universal basic income." (Dyer-Witheford, Kjøsen, & Steinhoff, 2019) [70] However, *Inhuman Power* also recognizes the limitations and difficult realities of achieving a model of technological communism. In conclusion, they wrote "AI-capital is an abyss, communism a bridge across, but a perilous, shaky one, partially in flames, and with an obscured arrival point on the other side: nonetheless, advance." (Dyer-Witheford, Kjøsen, & Steinhoff, 2019)[71]

John Perry Barlow, co-founder of the Electronic Frontier Foundation (EFF), published *A Declaration of the Independence of Cyberspace* (1996) in which he states, "These increasingly hostile and colonial measures place us in the same position as those previous lovers of freedom and self-determination who had to reject the authorities of distant, uninformed powers. We must declare our virtual selves immune to your sovereignty, even as we continue to consent to your rule over our bodies."[72] Technology will continue to be developed and applied following human existence, in order to to be a means of support, serving the common interests of all people. Technology should not be a tool of exploitation, oppression and manipulation by a small group. On a global level, contemporary society must take action, even radical revolutions, to achieve synchronous management of evolving technological issues.

4.3 The act of designing

"We are a designing species" - Victor Margolin[73]

Design applies a structured methodology in order to construct objects, situations, interventions and processes. In a broad understanding, a major part of human activities rely on a designing act. People usually form a sentence by thinking about the contents and

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[69] Dyer-Witheford, N., Kjøsen, A. M., & Steinhoff, J. (2019). Inhuman power. *Artificial intelligence and the future of capitalism*, Pluto Press.

[70] Dyer-Witheford, N., Kjøsen, A. M., & Steinhoff, J. (2019). Inhuman power. *Artificial intelligence and the future of capitalism*, Pluto Press.

[71] Dyer-Witheford, N., Kjøsen, A. M., & Steinhoff, J. (2019). Inhuman power. *Artificial intelligence and the future of capitalism*, Pluto Press.

[72] Barlow, J. P. (1996) A Declaration of the Independence of Cyberspace, Davos, Switzerland, February 8, 1996

[73] Margolin, V. (1998). Design for a sustainable world. *Design issues*, *14*(2), 83-92.

combining words; humans have undergone billions of experiments to make shelters or cover their body from the harshness of the natural environment. The diverse world of objects and complex social phenomena are mostly the result of the human design process. "Today we design not only architecture, interiors or accessories, but also systems, social thinking and design processes themselves."[74] Design has been involved in all aspects of life.

Therefore, in the present, design phenomena should be observed in interactive relationships between the different classical design fields[75] and between design and other disciplines[76]. A major part of contemporary design projects represents the combination of different forms of art and social activities; there are various social design activities including graphic design, web design, filmmaking, and even protests, occupations, or lawsuits. Art in general and design in particular are powerful medium to express the imaginations, thoughts, and creators' intentions, and a tool to satisfy human needs in everyday life. The relationship between art and life has been tightened throughout human history. Expanding the idea of art seems inevitable since social complexity is an obvious fact. Art increasingly requires its own involvement in questioning and answering for reality as well as liberating the artist from social limitations. As Guy Debord wrote in *Internationale Situationist (Paris), No. 1, June 1958*: "Art need no longer be an account of past sensations. It can become the direct organization of more highly evolved sensations. It is a question of producing ourselves, not things that enslave us."[77]

Facing social problems, artists, designers and creative workers make a significant contribution together with other field practitioners by drawing social attention to the emergent issues; they are the active agents for social change. Design deals with multiple tasks; it is no longer just a means to solve a single problem, a tool to create commercial products, but it is also a mechanism to understand society as a whole, a tool for manifesting, criticizing, negotiating, educating and prototyping the future of human beings. We can consider the most explicit social form of art. Taking the classical design processes, the contemporary design projects regularly show a blend of imagination, research, planning, experimentation, and decision-making to produce the design results. Indeed, this is the reason why research-based methods are a remarkable characteristic of design practice.

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[74] Research team of the Studio for Designing Interactive Spaces and Objects, *Signs of empathy in Contemporary Design – Research Team of the Studio for Designing Interactive Spaces and Objects* - The Eugeniusz Geppert Academy of Art and Design (Wroclaw, Poland) ISBN 978-83-66321-78-6

[75] Architecture, fashion, crafts, interiors, textiles, graphic, industrial design and product design are considered the classical designs.
Michl, Jan (2014). "Taking Down the Bauhaus Wall: Towards Living Design History as a Tool for Better Design". *The Design Journal. 17* (3): 445–453.

[76] The other disciplines in this context can include philosophy, sociology, cultural studies, media studies, and technological engineering.

[77] Guy Debord (1958) Internationale Situationist (Paris), No. 1, June 1958

In general, there are numerous social issues that have occurred among various design interest topics, from those related to democracy, autonomy, equality, feminism, and colonization, to consumption, trade, environment, and medicine. Contemporary design has several common approaches to problems, such as the depiction, evaluation and criticism of the current situation, proposal, test, and practice solutions to create positive social changes and increase social benefits.

Currently, the major part of socially engaged contemporary design works focuses on depicting, evaluating, and critiquing reality and experimenting and practicing micro-solutions. However, the need for macro-solutions has become more and more significant, since many social problems cannot be solved without systemic change. As Walter Benjamin elaborates in his article *The Work of Art in the Age of Mechanical Reproduction*

> "The transformation of the superstructure, which takes place far more slowly than that of the substructure, has taken more than half a century to manifest in all areas of culture the change in the conditions of production. Only today can it be indicated what form this has taken. Certain prognostic requirements should be met by these statements. However, theses about the art of the proletariat after its assumption of power or about the art of a classless society would have less bearing on these demands than theses about the developmental tendencies of art under present conditions of production. Their dialectic is no less noticeable in the superstructure than in the economy. It would therefore be wrong to underestimate the value of such theses as a weapon...They are useful for the formulation of revolutionary demands in the politics of art."(Benjamin, 2008)[78]

By embracing political action and social involvement, Social Design, Critical Design, and Design Activism are typical design activities most associated with social issues in recent years. These design practices initially belonged to the counter-design movement, alternative dialogue methods with various power forms; currently, these practices have gained a positive impact on the design mainstream. These socially oriented design dialogues have demonstrated globally the efforts of artists, designers, and creators. In particular, sustainable design is highlighted in the present design world. To briefly depict the picture of socially engaged contemporary social designs, the following part of this writing will introduce several related examples of exhibitions, art projects, artworks and art activities.

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[78] Benjamin, W. (2008). *The work of art in the age of mechanical reproduction*. penguin uk. p.1

Social Design
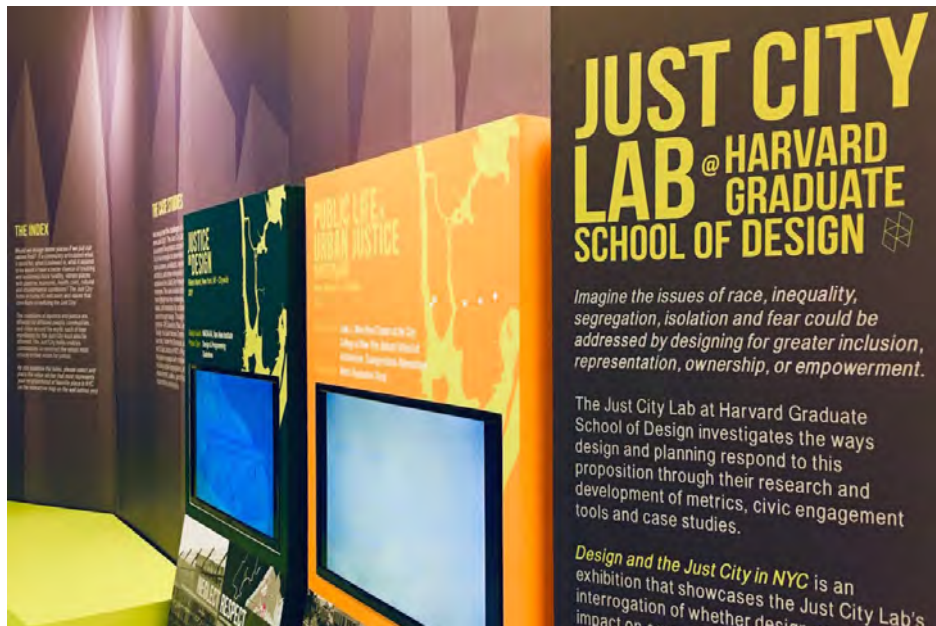
"Design and the Just City" ©gsd.harvard.edu

"Design and the Just City" [79] - Harvard Graduate School of Design, at AIA's Center for Architecture, USA 2018. The exhibition focused on how design and planning contribute to equitable and unjust conditions in cities, neighbourhoods, and public areas and asks whether design can have an impact on correcting urban injustices, inequalities, and disparities.

"Social Design" ©museum-gestaltung.ch

"Social Design" [80] at Museum für Gestaltung, Zürich, Germany 2019. The exhibition aimed to confront the rapidly growing imbalance of resources, means of production, and future opportunities. Solutions were considered relying on the new, equitable exchange between

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[79] https://www.gsd.harvard.edu/2019/01/taking-up-social-and-spatial-equity-in-new-york-design-and-the-just-city-exhibition-lands-at-aias-center-for-architecture/

[80] https://museum-gestaltung.ch/en/ausstellung/social-design/

individuals, civil society, the state, and the economy. Given that condition, many architects, designers, handicraftsmen, and engineers all developed various solutions through their works.

"Social Design Exhibition Asia" ©red-dot.cn

"Social Design Exhibition Asia" [81] at Red Dot Design Museum, Xiamen, China 2020. The Asia Social Design Expo featured more than a hundred the global social design units from 20 countries and regions. The exhibition theme included circular economy, disaster response, educational diversity, minority care, and urban innovation. The exhibition introduced the ways design energy solves social issues and creates a better society.

"Common objects. Local stories, global discussions" ©Tra Nguyen

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[81] http://en.red-dot.cn/index.php?a=show&m=Article&id=55

"Common objects. Local stories, global discussions" at Design Museum of Barcelona[82], Spain 2022. There was a Global Debates section which focused on the dialogue designs to reflect their social role as mediators. The exhibited works were persuasive objects that actively demonstrate their role in building a better society.

Critical Design

Dunne & Raby 'Evidence Dolls', illustration: Abäke, photo: Jason Evans ©e-flux.com

'Evidence Dolls' - Dunne & Raby was one of the artworks shown in the "No. 15 Designing Critical Design"[83] at Z33 House for Contemporary Art, Design and Architecture, Belgium 2007. This was an early critical design exhibition. The exhibited designers distanced themselves from the modern world of commercial design but they still use the mechanisms of that very world to question the discipline and technology, social and ethical questions.
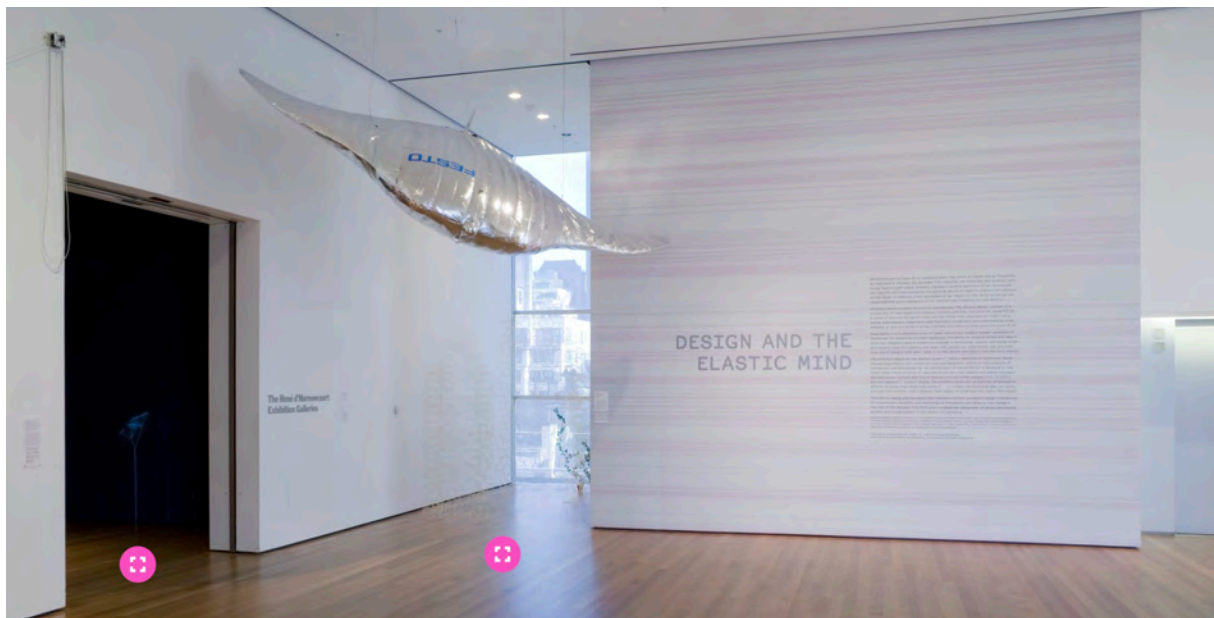
"Design and the Elastic Mind" ©moma.org

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[82] https://ajuntament.barcelona.cat/museudeldisseny/en/exhibition/common-objects-local-stories-global-discussions
[83] https://www.e-flux.com/announcements/40479/no-15-designing-critical-design/

"Design and the Elastic Mind"[84] at MoMA, New York, USA, 2008. The exhibition focused on momentous technology changes, science, and social mores. These changes were supposed to require major adjustments in human behavior and turn them into objects and systems that people understand and use. The exhibition included objects, projects, and concepts offered by teams of designers, scientists, and engineers over the world. It ranged in scale from nanodevices to vehicles, from appliances to interfaces, and from pragmatic solutions for everyday use to provocative ideas meant to influence people future choices.

Design activism and artistic activism

In addition to peaceful critical design or contributed social design, we also witness more radical design actions from tactical media and collective art. Design activism, also known as artistic activism, is a practice method with resistant actions such as protest, hacking, and occupying, in which graphic design is an early active involved form. With the traditional propaganda functions, graphic works are considered an important design form in initial artistic activism projects.

The Raised Fist, a symbol of solidarity, 1917 ©shillingtoneducation.com[85]

The Peace Symbol, the official logo for the British Campaign for Nuclear Disarmament, 1958 ©shillingtoneducation.com[86]

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[84] https://www.moma.org/calendar/exhibitions/58
[85] https://blog.shillingtoneducation.com/activism-design/
[86] https://blog.shillingtoneducation.com/activism-design/

Black Lives Matter Murals, 2020 ©shillingtoneducation.com[87]

Tactical media is a specific example of using interdisciplinary methods in art activist action. In tactical media projects, the role of art is emphasized (Lovink, 2003)[88]. Some prominent representatives of tactical media practice include The Yes Men, Critical Art Ensemble, and RTMark. The majority of tactical media projects include the use of design as a tool to denote resistance scenarios.

The Yes Men are a duo of culture-jamming activists and supporters network founded by Jacques Servin and Igor Vamos (Britt, 2010)[89]. One of the most famous jokes of The Yes Men was to put a "corrected" World Trade Organization (WTO) website at http://www.gatt.org[90] (General Agreement on Tariffs and Trade). The fake website began receiving real emails from confused visitors, including invitations to address various elite groups on behalf of the WTO, and they responded as if they were the real WTO (Connor, 2002)[91] At the WTO, in October 2000, the Yes Men gave speeches encouraging corporations to buy votes directly from residents. They then started a performative action, introducing a gold spandex body suit implanted with sensors. They declared that the wearing of this suit would improve worker productivity since managers would no longer need to personally oversee workers but could track them via screen images and the implanted sensors.

The Critical Art Ensemble (CAE) is another collective of five tactical media practitioners from many disciplines, including computer graphics and web design, film/video, photography, text arts, book arts, and performance.[92] The collective has written seven books and their works have been translated into 18 languages. Their books include: The Electronic Disturbance (1994), Electronic Civil Disobedience & Other Unpopular Ideas (1996), Flesh Machine: Cyborgs, Designer Babies, & New Eugenic Consciousness (1998), Digital Resistance: Explorations in

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[87] https://blog.shillingtoneducation.com/activism-design/
[88] Lovink, G. (2003). *Dark fiber: tracking critical Internet culture*. Mit Press.
[89] Britt, Douglas (2010). "The Yes Men infiltrate DiverseWorks". *Houston Chronicle*.
[90] https://web.archive.org/web/20001109222100/http://www.gatt.org/
[91] Connor, Michael (2002). "I Am the World Trade Organization ... Or Am I?"
https://www.austinchronicle.com/screens/2002-07-05/96023/
[92] https://web.archive.org/web/20100711073811/http://www.critical-art.net/TacticalMedia.html

Tactical Media (2001), Molecular Invasion (2002), Marching Plague (2006), and the project book Disturbances (2012). Regarding the topic of their activities, in the 1990s, CAE mainly focused on projects related to the interrogation of biotechnology; since 2006, they have changed the focus of their work towards a critique of US defence policy (Triscott, 2009)[93].

RTMark is a notable anti-consumerist activist collective whose main focus is to break the "Corporate Shield" that is "protecting" American corporations[94]. RTMark is a registered company that brings together activists who plan projects with sponsors who fund them. As a result, it operates outside the laws governing individual human beings and benefits from laws governing much looser corporations. RTMark claims their first prank was the "Barbie Liberation Organization"[95] in 1993.

Act of designing in the age of AI and automation

Reacting to new technological challenges, especially the rapid development of machine learning and automation, there are significant contributions of designers and art creators. In addition to applying AI as an aid to design and the making of art, some artists have considered AI and automation as a social phenomena, using design and art to interrogate, criticize, and offer solutions.

"Face to Facebook"[96] by Paolo Cirio & Alessandro Ludovico – Duo Italian artists - is one of the early projects that reacted to the data collecting problem. "Face to Facebook" is considered a form of art hacking that appeared in The Art Of Hacking of Juli Laczkó. According to Laczkó, in 2001, Cirio and Alessandro Ludovico copied one million Facebook profiles (profile pictures, names, locations), and then, with the help of an algorithm, by selecting and categorizing a quarter of a million identities with smiling profile pictures, they created the lovelyfaces.com dating site, inciting mass media coverage and public outrage, which Cirio and Ludovico documented with satisfaction as a Global Mass Media Performance. Over a five-day period, more than a thousand articles and reports had been published. Identical to Facebook's business model, the project had turned publicly and voluntarily shared user data into their interests. The work has left an open question about who has the legal right to exploit user data. The artists consistently identify the work as appropriation and awareness-raising (Laczko, 2021)[97].

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[93] Triscott, N., (2009) *Interfaces of Performance*, Surrey, Ashgate Publishing Limited, Chatzichristodoulou, M., Jefferies, J., and Zerihan, R. (eds.),

[94] http://archive.rhizome.org/artbase/1693/index.html

[95] https://sniggle.net/barbie.php

[96] http://www.face-to-facebook.net/press-coverage.php

[97] Laczko, J. (2021) *The Art Of Hacking*, The Hungarian University of Fine Arts Publisher, ISBN 978-963-9990-95-1

"Face to Facebook" by Paolo Cirio & Alessandro Ludovico ©paolocirio.net

"Technologies of Care" (2016) by Elisa Giardina Papa–an Italian artist based in New York documented new ways in which service and effective labour are being outsourced via internet platforms. It explored various topics such as empathy, precarity, and immaterial labour in the body of the work. One of its episodes, *Worker 7 - Bot? Virtual Boyfriend/Girlfriend* documented the real story of the three-month-long affair the artist had with an interactive chatbot.[98]

"Technologies of Care" ©elisagiardinapapa.org

"Algorithmic Justice League in the movement towards equitable and accountable AI"[99] is a projected initiated in 2016 by Joy Buolamwini, a digital artist activist based at MIT Media Lab. The movement aims to raise awareness of the impact of AI, equip advocates for empirical research, build the voices and choices of the most affected communities, and encourage researchers, policymakers, and industry practitioners to mitigate the harms and especially the biases of AI. The project activity has striven to build a movement to move the AI ecosystem to AI equitably and responsibly.

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[98] http://www.elisagiardinapapa.org/
[99] https://www.ajl.org/#join

"Algorithmic Justice League in the movement towards equitable and accountable AI" ©ajl.org

Joy Buolamwini also created several artworks related to AI and exhibited at *The Criminal Type*[100] (2019) Exhibition at APEXART, New York, NY, US; *Understanding AI*[101] (2019) Exhibition at Ars Electronica Center, Linz, Austria; *AI: More than Human*[102] (2019) Exhibition at the Barbican Centre, London, UK. Buolamwini is one of the most active contemporary artists in AI-related matters.

'AI Ain't I A Woman', Joy Buolamwini. Courtesy of The Barbican ©dazeddigital.com

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[100] https://apexart.org/breiner.php
[101] https://ars.electronica.art/center/en/exhibitions/ai/
[102] https://www.barbican.org.uk/hire/exhibition-hire-barbican-immersive/ai-more-than-human

Several art projects use algorithms to "hack" existing problems related to AI technology. This concept of "hacking" was first introduced by Francis Hunger (Hunger, 2019)[103] in his article, *How to Hack Artificial Intelligence;* by Janelle Shane in *Do Neural Nets Dream of Electric Sheep?* [104]; and by James Bridle in *Autonomous Trap and Perturbation*[105]; and by a group of artists, including Weili Han, Zhe Zhou, Di Tang, Xiaofeng Wang, Xiangyu Liu, and Kehuan Zhang in *Invisible Mask: Practical Attacks on Face Recognition with Infrared*[106]. All these projects have demonstrated the diverse approach of artists to the technological gaps, limitations of AI applications, and visual and auditory pattern recognition problems of current technology.

NeuralTalk2: A flock of birds flying in the air
Microsoft Azure: A group of giraffe standing next to a tree
Image: Fred Dunn, https://www.flickr.com/photos/gratapictures - CC-BY-NC

Do Neural Nets Dream of Electric Sheep? by Janelle Shane ©aiweirdness.com

"This is the Future" by the filmmaker and writer Hito Steyerl at the Portland Art Museum[107], Oregon, USA (Feb–Jun 2023). This exhibition introduced an imagined garden through an immersive environment of video projection, sculpture, and spatial intervention. Steyerl is one of the foremost artists offering critical reflections on the complexities of the digital world, global capitalism, and the implications of artificial intelligence for society, all reflected sharply in this exhibition.

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[103] Hunger, F. (2019). How To Hack Artificial Intelligence*, State machines: reflections and actions at the edge of digital citizenship, finance, and art*. Institute of Network Cultures.
[104] Janelle Shane, 'Do Neural Nets Dream of Electric Sheep?', AI Weirdness Blog, https://www.aiweirdness.com/do-neural-nets-dream-of-electric-18-03-02/
[105] James Bridle, 'Autonomous Trap 001', James Bridle, 2017, http://jamesbridle.com/works/autonomous-trap-001
[106] https://arxiv.org/abs/1803.04683
[107] https://portlandartmuseum.org/exhibitions/hito-steyerl/

Power Plants, Andrew Kreps Gallery, New York and Esther Schipper, Berlin. ©Hito Steyerl

Also reflecting on data mining issues, Jennifer Lyn Morone, a London based conceptual artist and designer established a fictitious company to store, buy and sell her own data. She turned herself into a corporation and brought together marketable goods and services. All of her biometric and intellectual data, or things she does such as learning, or creating, became the potential profit. Jennifer Lyn Morone™ [108] Inc began as a graduation project in Design Interactions that created an assumption for a society, namely that we reclaim our digital selves when we take more responsibility for what we are in the digital space. (Garrett, 2019)[109].
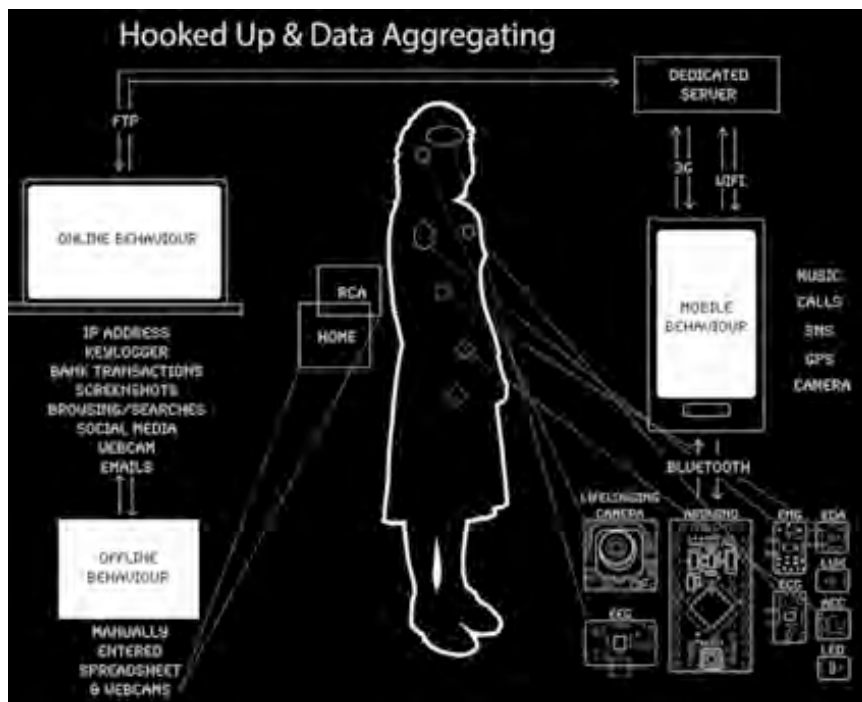
©Jennifer Lyn Morone™ Inc

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[108] http://jenniferlynmorone.com/

[109] Garrett, M., (2019). *Reclaiming The Corporate-Owned Self,* State machines: reflections and actions at the edge of digital citizenship, finance, and art. Institute of Network Cultures.

Collectivize Facebook[110] is one of the social projects ongoing from 2020, proposed by Jonas Staal–a Dutch artist working together with the Belgian lawyer, Jan Fermon. It consists of a class action lawsuit aimed at forcing Facebook to be recognized by law as a public domain owned and controlled by users. The project is composed of an indictment against Facebook[111], which demands that Facebook be recognized as a public domain and the ownership model of Facebook be transferred to its 3 billion users. The lawsuit does not aim to reform Facebook or nationalize it. Its purpose is to turn Facebook into a transnational cooperative under the common ownership and management of the users. Through "pre-trials" (preliminary tribunals) in theaters, cultural spaces, and online platforms, Staal and Fermon engage the public in a debate of the accusation and invite them to participate as co-complainants before filing the indictment at the United Nations Human Rights Court in Geneva. These trials also involve "witnesses of the future" testifying on how to manage a Facebook of three billion co-owners should the case be successful [112].

"Collectivize Facebook" ©jonasstaal.nl

Collectivize Facebook is one of the very few contemporary art projects that offers a concrete and professionally conceived social solution to the issue of human rights in cyberspace. Focused on bringing innovative solutions and ideas to life, indeed, Staal and Fermon have

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[110] https://collectivize.org/
[111] http://www.jonasstaal.nl/site/assets/files/2032/collectivize_indictment_eng_de_1.pdf
[112] http://www.jonasstaal.nl/projects/collectivize-facebook/

designed a new social model that adapts to the development of technology and serves the benefit of the community. Since it has not been completed it is hard to predict the outcome. It is clearly articulated and impressive hypothesis—apturing the interest of society and confirming the potential and profound impact of art on everyday lives.

Within the art world, we now witness a new wave of interest in AI and the social phenomena surrounding it. Several art forums and seminars with in-depth international discussions on the issue have already been held, such as Speculative Futures online symposium: Artificial Intelligence[113] Vancouver Art Gallery, University of British Columbia (UBC), 2022 or Futures Of Control: Ai In Criminal Investigation, Mozfest X Impakt - Curated by Rosa Wevers[114], 2022.

Several important art events related to the theme have also been held in the last three years. Among them are "Brave New Virtues - Shaping Our Digital World"[115] Vienna Biennale, Austria, 2019; "Uncanny Valley: Being Human in the Age of AI"[116], Fine Arts Museums of San Francisco, USA 2020-2021; "You and AI: Through the Algorithmic Lens"[117], Onassis Culture, Athens, Greek, 2021; "Seeing Stones and Spaces Beyond the Valley"[118] Biennale Warszawa, Poland, 2022.

Contemporary discussions, projects, artworks, and designs have contributed positively to raising social awareness and proposing solutions related to new social phenomena. In the flow of art and design, advertising design is also a powerful tool to confront the new problems created by the AI advertising technology itself. In previous sections of this study, one notes the tremendous economic benefits that the advertising industry provided. In an influencing position, if the design, production, and distribution of advertising aim at the true social benefits, it might generate improved scenarios for the future of our society. James Walter Thompson (1847—1928) stated that "Advertising is a non-moral force like electricity which not only illuminates but also electrocutes. In fact, its worth to civilization depends upon how it is used" (Doyle, 2016)[119].

In addition to the classic design tools (such as graphic activist works), we need new forms of design (such as video, interactive, and display or mobile ads) to participate in social media

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[113] https://www.artandeducation.net/announcements/454352/speculative-futures-online-symposium-artificial-intelligence

[114] https://impakt.nl/events/2022/event/futures-of-control-ai-in-criminal-investigation/?fbclid=IwAR2vU6agxlhqpBJvfZIpHRqYRNOid87UX6ZZkXs1VTDYBnOfHtMHtUIIfqE

[115] https://biennialfoundation.org/2019/06/vienna-biennale-for-change-2019-brave-new-virtues-shaping-our-digital-world/

[116] https://www.e-flux.com/announcements/320378/uncanny-valley-being-human-in-the-age-of-ai/

[117] https://www.e-flux.com/announcements/405036/you-and-ai-through-the-algorithmic-lens/

[118] https://www.e-flux.com/announcements/462889/biennale-warszawa-2022-seeing-stones-and-spaces-beyond-the-valley/

[119] Doyle, C. (2016). *A dictionary of marketing*. Oxford University Press. https://www.oxfordreference.com/display/10.1093/oi/authority.20110803104249372;jsessionid=A7C086B54AA5509631ACF1C970AD2960#:~:text='Advertising%2C'%20he%20stated%2C,upon%20how%20it%20is%20used.

campaigns, human rights and equality movements in cyberspace. Combined with live protests, posters, brochures, and flyers spread around the streets, we may also need to develop hacking methods on the Internet or use programmatic advertising modes for propaganda campaigns to fight against the meta forces. Even without identifying themselves as socially engaged design, the mentioned art projects and activist movements have more or less included the resistance design methods to which this study refers.

All in all, socially engaged design practice will soon become an international contemporary design action. This practical approach aims mainly at sustainable benefits for society. In the flow of socially engaged design, advertising design is a potential practice to record, impress, and generate solutions. Changing the function of design to minimize harm and increase its positive impact has become an urgent task to consider in our contemporary society.

Share file 9: "Horus Case"
Cyber performance, docufiction
Virtual exhibition space, webpage, e-book, video, duration: 2 minutes
2020
Première: Host and hostility, HUFA-online, Hungary, 2020
https://tranguyen.net/portfolio/horus-case/

Description
Horus Case is a cyber performance based on a fictional scenario. The video is a war declaration to the Union of Corporations and States (UCS) by Anonymous–a decentralized, international hacktivist collective. In this the atrocities of UCS are disclosed, and the top-secret document, "*Cyber Interrogation and Torture Manual*", of the UCS is revealed.

The piece refers to the lockdown situation during the COVID-19 pandemic, when personal life was more intensely influenced by the cyber world. The oversaturation with information, the threat of the news about deadly infectious diseases, and the overload of online working and communication generated terrible claustrophobia and crazy suppression around the world. The COVID-19 situation brought many of us to the state of feeling subjected to a real cyber-psychological torture.
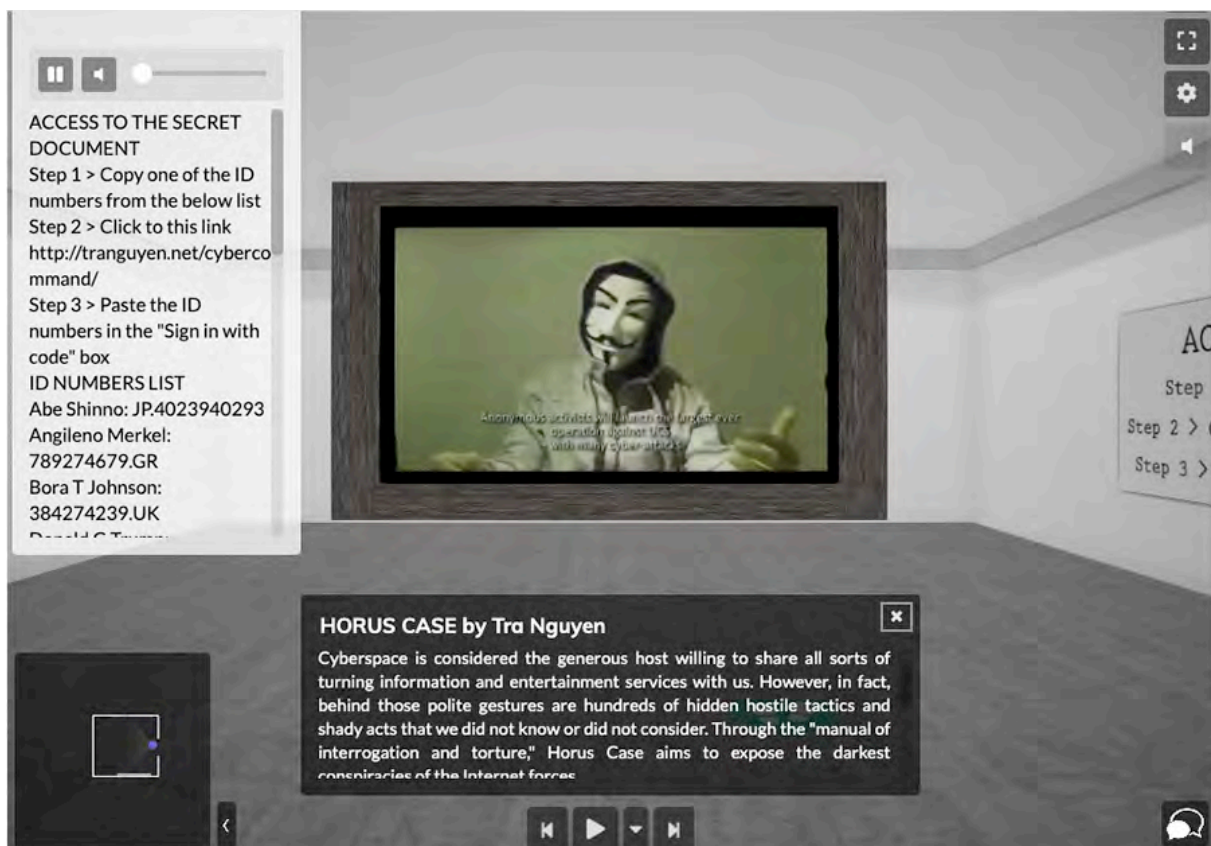
Horus Case ©Tra Nguyen

Horus Case ©Tra Nguyen
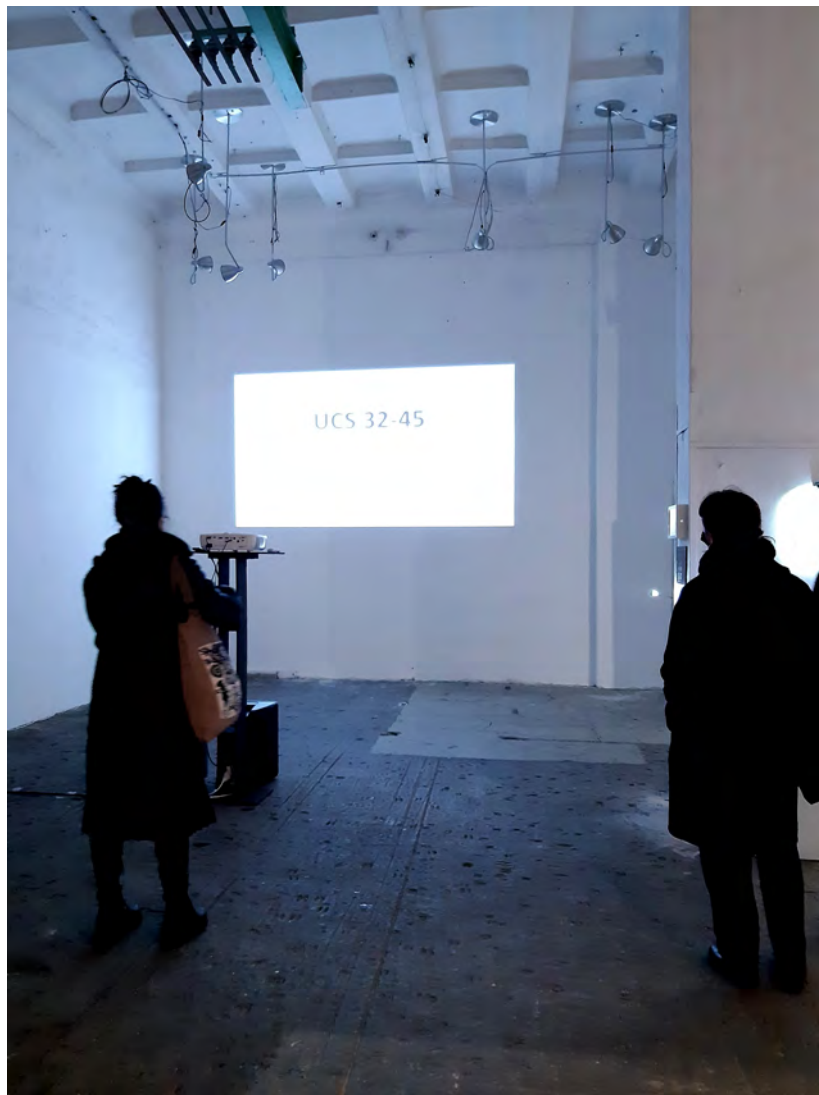
Horus Case ©Tra Nguyen

Share file 10: "Edward's Trash Bin"
Readymades
Found object, removed camera and microphone, dimensions: 2 × 3 cm
2022
Première: Crack, Artus Studio, Budapest, Hungary, 2022
https://tranguyen.net/portfolio/edwards-trash-bin/

Description
Edward Joseph Snowden (1983) is an American former computer intelligence consultant and president of the Freedom of Press Foundation, who as a whistleblower leaked highly classified information from the National Security Agency (NSA) in 2013, shedding light on the global surveillance apparatus of the institution. The American authorities have condemned his act, and he had to flee in exile because of the criminal charges brought up against him.

In one of his interviews (MSNBC, *The 11th Hour*, 9/17/2019) he disclosed that the recording capacity of a smart phone is operational even when the device is powered off, therefore he always removes the inbuilt camera and mic from his own devices, in order to "being able to trust our technology" again.

Edward's Trash Bin ©Tra Nguyen
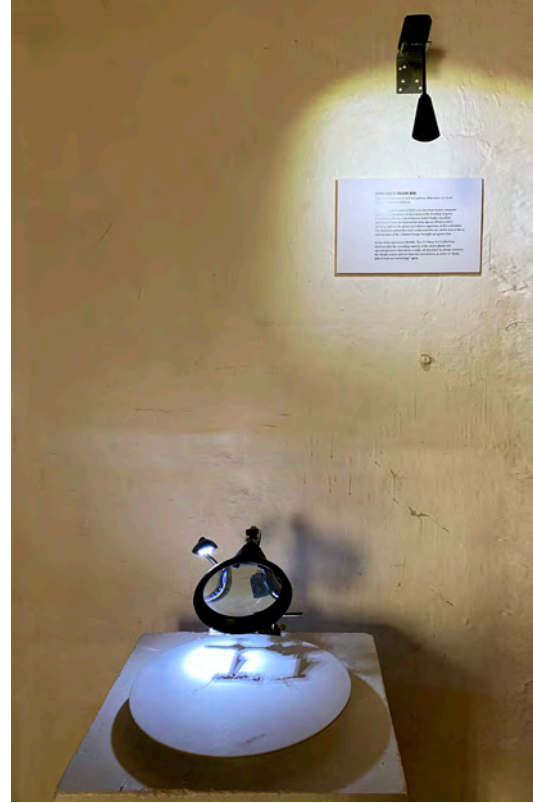
Edward's Trash Bin ©Tra Nguyen

Edward's Trash Bin ©Tra Nguyen

Share file 11*: "Pseudocide"*
Readymades
Found object, manipulated IPhone6, dimensions: 14 × 7 cm
2022
Première: Crack, Artus Studio, Budapest, Hungary, 2022
https://tranguyen.net/portfolio/pseudocide/

Description
The title means fake death, as the scratched text reads on the displayed phone. Likewise, it can be referred to as staged death, which means "the act of an individual purposely deceiving other people to believe the fallacy that the individual is dead, when the person is, in fact, still alive." (Wikipedia).

The piece refers to one of the lesser-known facts about the surveillance technologies. Tucker Carlson from Fox News in 2018 disclosed from an exclusive investigation that smart devices are able to collect and transmit harvested data from their environment even in airplane mode, lacking a SIM card and without any access to Wi-Fi networks.

Pseudocide ©Tra Nguyen

Pseudocide ©Tra Nguyen

Pseudocide ©Tra Nguyen

Share file 12: "Counter Ai Ads"
Interactive installation
video ads on screen and interactive control panel
dimensions: 150 × 90 cm
Ongoing project from 2022

The proposal description of the work.
Artificial intelligence and Big data have contributed significantly to the birth of neo-colonialism on a global scale[120]. The questions are: how does AI work, what is the purpose of collecting data, and why are AI's owners are so powerful? **There remains ambiguity about AI in society**, especially in developing countries and former colonies. Despite the fact people are fully surrounded by machine deep learning applications, AI is still a black box[121] for the "neo-colonized people". The project aims to reveal cyber-colonialization strategies, to observe black box society through a media installation, and to encourage "innocent users" to discover the problems of the contemporary world. The proposed work will focus on the critical discourse related to data mining and the advertising industry where AI and Big data are maximizing their abilities globally in order to serve economic and political goals.

There is a radical change in the global political economic structure in general, and the advertising industry in particular. Technology conglomerates dominate the global ads market; market; not only do they distribute targeted ads, but they also produce them. Basically, from three data sources (user data, ad sponsor data and ad design library), the deep learning machine automatically generates the relevant ad for the right sponsor and the right comsumer in the right time and context. Although, at the moment, AI ad-production tools are yet in their initial stage of development, the generated ads usually takes the form of a text, of a single image or slide shows. Nevertheless, very soon the video ads entirely generated by machine learning systems will be widely applied.

The artwork will take the form of an interactive media installation and will include: generated AI video ads projected on a screen; a machine learning system map running on a computer; and an interactive control panel for the audience to feed in their choices[122]. A small AI model-environment will be programmed running on the support of Max/MSP software. **This system will simulate the way data streams are inputed and processed in AI ad creation tools. However, instead of using the enterprise data, our system will make use of data from NGOs that deal with user's rights and data mining issues, resisting thus cyber-colonization and surveillance capitalism.** The project will research intensively how tech-giants categorize the demographic and psychographic characteristics of the users, as well as how they profile advertising sponsors/companies. The installation will build up a small-scale ad-design library

[120] Couldry, N., & Mejias, U. A. (2019). *The costs of connection*. Stanford University Press.
[121] Pasquale, F. (2015). *The black box society*. Harvard University Press.
[122] See the design plan 1,2,3,4

that will include a set of templates: scenarios, background videos, text designs, character videos, graphic elements and sounds. Through feeding the machine learning system with these three data sources, our proposed installation will automatically generate the relevant video ads.
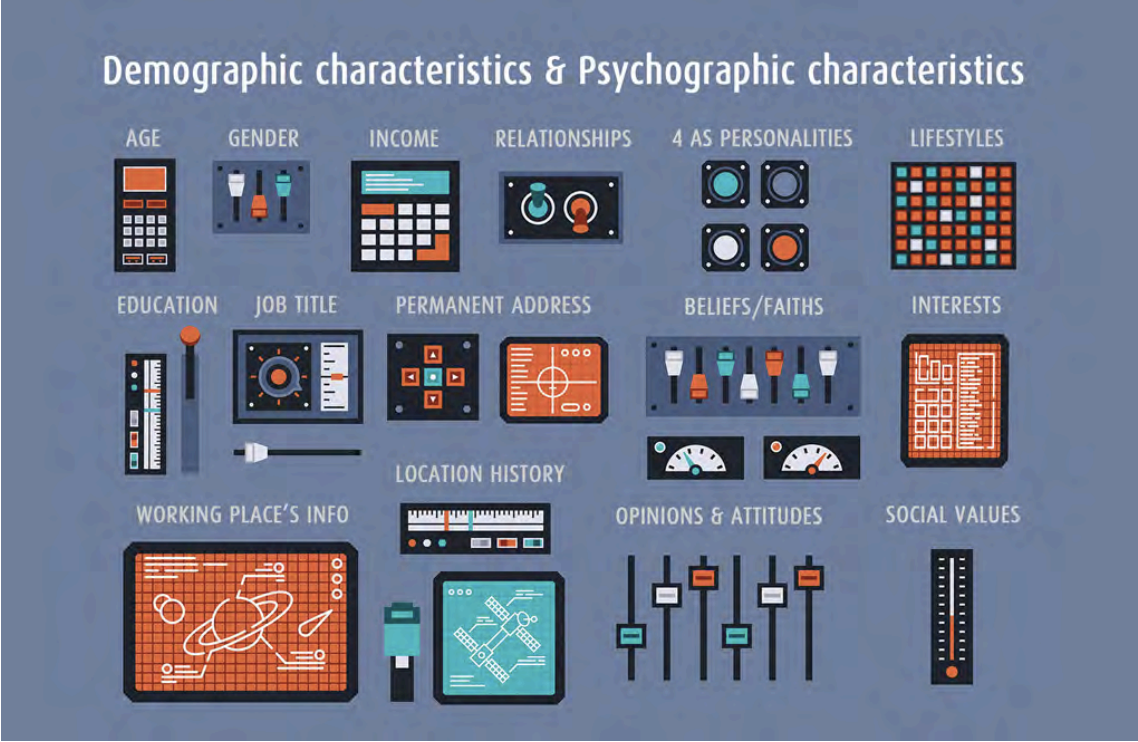
Counter Ai Ads, Design plan 1 ©Tra Nguyen
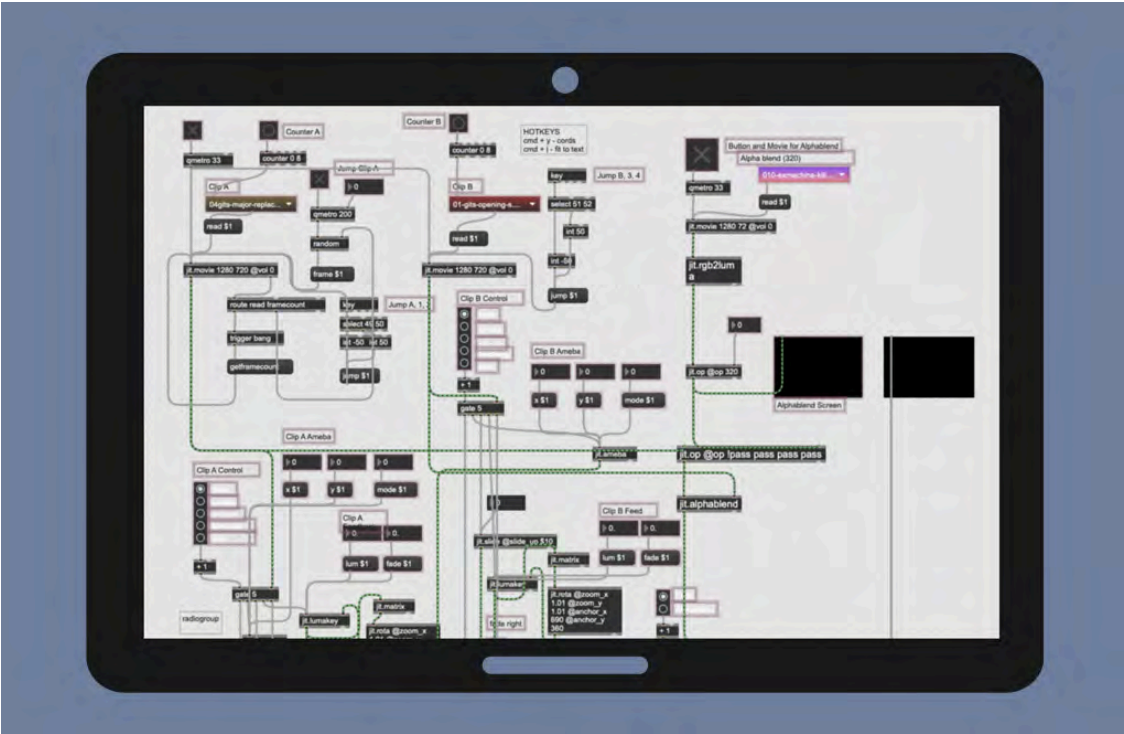
Counter Ai Ads, Design plan 2 ©Tra Nguyen

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Counter Ai Ads, Design plan 3 ©Tra Nguyen

Counter Ai Ads, Design plan 4 ©Tra Nguyen

POST 05

ALGORITHMIC GEOGRAPHIES

A "total" history of mankind is impossible and would lead to "chaos". "Insofar as history aspires to meaning, it is doomed to select regions, periods, groups of men and individuals in these groups and to make them stand out as discontinuous figures, against a continuity barely good enough to be used as a backdrop... It inevitably remains partial - that is, incomplete." (Lévi-Strauss, 1962)[1]
- Lévi-Strauss

Looking at advertising in the age of artificial intelligence and automation, one must consider not only the political and economic situations on a global scale but also the geographical and cultural environments. As it is known, sociocultural flows have different characteristics when they flow through different regions. Therefore, the political and economic situations under the influence of machine learning and automation technology also own specific features, in particular, geographical and cultural environments. To examine cyber colonialism in a typical context, the fifth post of this study provides an overview of the e-commerce condition in Southeast Asia and specific examples of marketing and advertising in Vietnam.

5.1 Southeast Asia's e-commercial hub

The optimistic dream

The dream of connecting with the world is a wish that is not unique to any one person in particular. For people with a lower standard of living and limited mobility, especially, the dream of knowing the *world beyond*, one different from the familiar, becomes even stronger. The Internet has brought high expectations to the citizens of developing countries, especially in Southeast Asia. While the Internet connects people to information, in itself the Internet is a promise that opens the user to new employment, new opportunities and new experiences. The global village - cyberspace - is expected to be the driving force for "flattening the world"[2]. Google, YouTube, Facebook, Instagram, What's App, TikTok, Amazon, Alibaba, Apple, and Samsung have given hope that new living conditions and international spaces will allow the populations of developing countries access to a living environment similar to the developed world.

Southeast Asia is a region in Asia that encompasses the countries located to the south and east of the Asian region, including Brunei, Cambodia, Timor-Leste, Indonesia, Laos, Malaysia,

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[1] Lévi-Strauss, C., (1962) *The savage mind*, Chicago, IL: University of Chicago Press. p.257
[2] "flattening the world" is another way of forming the notable concept "The World Is Flat" which appeared in the book *The World Is Flat: A Brief History of the Twenty-first Century* by Thomas L. Friedman.
Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first century*. Macmillan.

Myanmar (also known as Burma), the Philippines, Singapore, Thailand, and Vietnam. The region is known for its diverse cultures, tropical climates, beautiful nature, rich history, and vibrant economies.[3] Southeast Asia is considered the most accessible tropical region in the world since it is strategically located on the sea route between East Asia and the Middle East-Mediterranean world[4]. More than a thousand years ago, Southeast Asia was considered a Suvarnabhūmi (Sanskrit: "Land of Gold").[5] Hence, this has been the most frequently invaded area by people outside the region. Chinese, European, Japanese, and American colonization have had profound impacts on the cultural, economic, and political characteristics of the area.

From 111 BC to 938 AD, for more than a thousand years, Northern Vietnam was under Chinese rule (Bergreen, 2003)[6]. China has had a long history of cultural, economic, and political influence in the whole region. In the 19th and early 20th centuries, the Chinese influence in Southeast Asia became more intense; large numbers of Chinese immigrants arrived in the region, particularly in present-day Thailand, Malaysia, and Indonesia[7].

Various European powers also exerted their influence and control over Southeast Asia for hundreds of years, including the Portuguese, Spanish, Dutch, British, and French. The Portuguese were the first Europeans to arrive in Southeast Asia in the 16th century, establishing colonies in present-day Indonesia, East Timor, and Malaysia. The Dutch arrived in the region soon after and established their own colonies, including present-day Indonesia and parts of Malaysia. In the 19th century, the British established colonies in present-day Malaysia, Singapore, and Myanmar (Burma), while the French established colonies in present-day Vietnam, Cambodia, and Laos (Baten, 2016)[8]. These colonial powers brought Western ideologies and practices to the region which have had a profound impact on the economies, cultures, and politics of this area.

During World War II, Japanese Fascism invaded most of the former Western colonies under the concept of "Greater East Asia Co-Prosperity Sphere" (Dower, 1986)[9]. The Japanese occupation had significant consequences on the region, causing widespread suffering, displacement, and economic disruption. After Japan's defeat in the war, many of the former Western colonies in Southeast Asia became independent nations.

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[3] "Southeast Asia". *Encyclopædia Britannica*. Archived from the original on 24 April 2021.

[4] "Southeast Asia". *Encyclopædia Britannica*. Archived from the original on 24 April 2021..

[5] "Southeast Asia". *Encyclopædia Britannica*. Archived from the original on 24 April 2021..

[6] Bergreen, L. (2003). *Magellan's Terrifying Circumnavigation of the Globe*. HarperPerennial.

[7] Guotu, Zhuang, The Overseas Chinese: A long history, *Unesco* https://en.unesco.org/courier/2021-4/overseas-chinese-long-history#:~:text=By%20the%20beginning%20of%20the,them%20settled%20in%20Southeast%20Asia.

[8] Baten, Jörg (2016). *A History of the Global Economy. From 1500 to the Present*. Cambridge University Press. p. 286. ISBN 978-1-107-50718-0.

[9] Dower, John W. (1986). *War Without Mercy: Race And Power In The Pacific War* (1st ed.). New York: Pantheon Books. ISBN 978-0-394-75172-6.

The United States took the Philippines from Spain in 1898. Internal autonomy was granted in 1934, and Filipinos celebrated their independence in 1946 (Halstead, 1898)[10]. The US has had a remarkable political, economic, and military influence in the region throughout the 20th century and into the 21st century. During the Cold War, the US was involved in supporting anti-communist governments and military forces in Southeast Asia, most notably in the conflict in Vietnam that lasted from 1955 to 1975 and had a long-lasting impact on Vietnamese and the region[11].

The consequences of colonialism, independence struggles and wars left various enduring socio-cultural issues in each country in Southeast Asia. In the present, living conditions throughout Southeast vary dramatically from country to country and from rural to urban. In urban areas, the living conditions in Southeast Asia are convenient, with access to modern infrastructure such as shopping malls, hospitals, and international schools. However, in rural areas, the living conditions are often more modest, with limited access to basic services such as clean water, electricity, and healthcare. Based on economic situations, countries like Brunei, Singapore and Malaysia have a high standard of living, while countries like Myanmar, Cambodia and Laos have a lower standard of living[12].

Country	Currency	Population (2020)[18][147]	Nominal GDP (2020) $ billion[148]	GDP per capita (2020)[146]	GDP growth (2020)[149]	Inflation (2020)[150]	Main Industries
Singapore	S$ Singapore dollar	5,850,342	$337.451	$58,484	-6%	-0.4%	Electronics, Petroleum, Chemicals
Brunei	B$ Brunei dollar	437,479	$10.647	$23,117	0.1%	0.3%	Petroleum, Petrochemicals, Fishing
Malaysia	RM Ringgit	32,365,999	$336.330	$10,192	-6%	-1.1%	Electronics, Petroleum, Petrochemicals, Palm oil, Automotive
Thailand	฿ Baht	69,799,978	$509.200	$7,295	-7.1%	-0.4%	Electronics, Automotive, Rubber
Indonesia	Rp Rupiah	270,203,917[147]	$1,088.768	$4,038	-1.5%	2.1%	Coal, Petroleum, Palm oil
Vietnam	₫ Đồng	97,338,579	$340.602	$3,498	2.9%	3.8%	Electronics, Clothing, Petroleum
Philippines	₱ Peso	109,581,078	$367.362	$3,373	-8.3%	2.4%	Electronics, Timber, Automotive
Laos	₭ Kip	7,275,560	$18.653	$2,567	0.2%	6.5%	Copper, Electronics, Tin
Cambodia	៛ Riel	16,718,965	$26.316	$1,572	-2.8%	2.5%	Clothing, Gold, Agriculture
East Timor	US$ US dollar	1,318,445	$1.920	$1,456	-6.8%	0.9%	Petroleum, Coffee, Electronics
Myanmar	K Kyat	54,409,800	$70.890	$1,333	2%	6.1%	Natural gas, Agriculture, Clothing

Per Capital GDP in Southeast Asia ©Wikimedia Commons [13]

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[10] Halstead, M. (1898). *The Story of the Philippines and Our New Possessions*, Including the Ladrones, Hawaii, Cuba and Porto Rico (http://books. google. com/books? id= IIQcwt7g2wkC).
Proclamation 2695--Independence of the Philippines
https://www.archives.gov/federal-register/codification/proclamations/02695.html
[11] Ronald H. Spector, Vietnam War
https://www.britannica.com/event/Vietnam-War
[12] "World Economic Outlook (December 2020) – Nominal GDP per capita". IMF.
[13] https://en.wikipedia.org/wiki/Southeast_Asia

While the level of development in Southeast Asia varies by nation, in general, it is a region on the road to development with understandable economic and social limitations. Most inhabitants of the region share a common desire for improved living standards and economic conditions. Achieving the goal of a better life is a general human aspiration. Striving to overcome inferiority, weakness, and disadvantage is a socially appreciated effort. While the hope of a future characterized by a higher standard of living motivates Southeast Asians to dream, their common query is, "How can we realize that aspiration? Can the 'global village' fulfill its initial promises? Does the digital environment implement the expectations of ordinary people? Does the use of products and services of former mother countries carry one toward the same living standards as their former colonizers?"

Internet access in Southeast Asia has grown rapidly in recent years. As of 2021, the percentage of people in Southeast Asia with access to the internet fell into a range as low as 37% in Timor-Leste to a high of 93.8% in Malaysia. In general, internet penetration is highest in more developed countries like Singapore, Malaysia, and Thailand, and lower in less developed countries like Cambodia, Laos, Myanmar and Timor- Leste[14].
Image

Southeast Asia is considered to be a rapidly growing market for e-commerce, with countries like Indonesia, Thailand, Vietnam, and the Philippines witnessing a significant increase in online shopping. The region is home to over 650 million consumers[15], making it an attractive destination for both local and international businesses. The factors driving the growth of e-commerce in the region include the increasing availability of the Internet and mobile devices, the growing middle class, and a younger demographic that is mainly a digital native generation[16], who are familiar and comfortable with online purchases. In addition, improvements in logistics and delivery infrastructure make it more efficient for businesses to reach customers across the region. As a result, the e-commerce market in Southeast Asia is expected to continue growing with projections that it could reach over 200 billion dollars by 2025[17]. This is considered an emerging digital

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[14] Internet penetration in Southeast Asia as of July 2022, by country, *Statista*
https://www.statista.com/statistics/487965/internet-penetration-in-southeast-asian-countries/
[15] Southeast Asia's Retail Boom Fuels The Rise Of Logistics, *Forbes*
https://www.forbes.com/sites/tanyinglan/2019/01/18/southeast-asias-retail-boom-fuels-the-rise-of-logistics/?sh=3884346b7148
[16] The digital native term specifically applied to the generation that grew up in the "digital age," predominantly regarding individuals born after the year 1980.
Selwyn, N. (2009). *The digital native–myth and reality*. In Aslib proceedings (Vol. 61, No. 4, pp. 364-379). Emerald Group Publishing Limited.
[17] Value of the e-commerce market in Southeast Asia from 2019 to 2022 and a forecast for 2025, *Statista*
https://www.statista.com/statistics/958414/southeast-asia-e-commerce-market-value/#:~:text=In%202022%2C%20the%20e%2Dcommerce,approximately%20131%20billion%20U.S.%20dollars.

colonial market that is the targeted market of not only global digital empires but also local digital imperials. Former colonized peoples have become the new colonizers in their own region.

There is a mix of local and international e-commerce platforms operating in the region, most notably including Lazada, Shopee, Grab, Zalora, Tokopedia[18]. All the e-commerce platforms originate from Singapore and operate extensively throughout Southeast Asia, except for the Indonesian Tokopedia. The e-commerce platform Lazada was acquired by China's Alibaba Group in 2016. Alibaba's acquisition of Lazada exemplifies the efforts to expand its international presence in the area. There is serious competition between the regional and international platform companies. However, the regulatory restrictions and diverse cultural and linguistic differences across the region also create significant barriers for multinational corporations, giving opportunities to local platforms. The "cyber-neocolonial" situation in Southeast Asia has exposed numerous characteristics of classical colonial concepts, especially the emergence of new empires in the region.

With a rapidly expanding internet user base and increasing mobile penetration, digital advertising in Southeast Asia is a significantly growing industry. Key players in the region include Google, Facebook, Lazada and TikTok, and regional platforms such as Shopee and Tokopedia. There is not enough yet consideration of privacy issues and a lack of common regulations on how to handle personal data in the region (Beschorner, 2021)[19], the basis for targeted advertising to develop rapidly at the moment. Various local businesses make efforts to do business and advertise on social networking platforms such as YouTube, Facebook, Instagram, and TikTok. Purchasing ads on social networks is vital to the success of business owners. Selling products through live stream videos on social networks and the purchase of social network ads have currently become common business practices in Southeast Asia, especially in Vietnam.

E-commerce in Vietnam has also experienced remarkable growth in recent years[20]. Major e-commerce players in the Vietnamese market include Lazada, Shoppe, and Tiki (a local e-commerce platform), while social media platforms like Facebook and Instagram are also popular channels for online shopping. The key platforms in digital advertising in Vietnam include Facebook, Google, and Zalo (a prominent Vietnamese social media platform). Social media advertising, video advertising and mobile advertising are the dominant forms of digital advertising in this country.

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[18] Southeast Asia Tops Worldwide Ecommerce Growth, *practicalecommerce.com*
https://www.practicalecommerce.com/southeast-asia-tops-worldwide-ecommerce-growth
[19] Beschorner, N. (2021). The digital economy in Southeast Asia: Emerging policy priorities and opportunities for regional collaboration. *New Dimensions of Connectivity in the Asia-Pacific*, 121-156.
[20] Assessment of Current Buyer Behavior in Market, *Vietnam - Country Commercial Guide*
https://www.trade.gov/country-commercial-guides/vietnam-ecommerce

Globalization and integration with the international market system while reinforcing the growth of local businesses is the challenge of many developing countries, including Vietnam. This is especially pertinent for the fields of e-commerce and digital advertising. Multinational digital platforms have continuously adapted their products or services to meet the needs and preferences of local markets. They have focused on improving language functions and creating products and services suitable to Vietnamese cultural characteristics and tastes. In addition, the Vietnamese government has also issued policies to encourage the development of local digital platforms in the country.

Despite being a socialist country, Vietnam has operated a free market and multi-stakeholder economy since the late 1980s. The State currently plays the role of coordinating private sector and international trade through policies and laws. The State-owned companies that were established during the economic reforms period known as "Đổi mới"[21] (the 1980s) have largely been privatized or sold to the private sector. The Vietnamese government, however, implemented different policies supporting the development of information technology and e-commerce enterprises[22]. Tiki and Zalo are two typical representations deriving significant benefits from the incentives provided by this policy shift [23].

The rapid development of the e-commerce and digital media market in Vietnam has also created pressure and confusion in dealing with arising social issues related to this new phenomenon. As a general issue, the growing power of multinational corporations generates numerous difficulties in the enactment of law and policy (Klein, 2009)[24]. The situation has become more complicated and urgent with the profound impacts of multinational platforms. In the era of transnational digital connectivity, international political conditions play a crucial role. There is an urgent need to unify transnational policies because the major part of social problems related to the global platforms can only be solved through the alignment of international law.

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[21] "Đổi Mới" is the name given to the economic reforms initiated in Vietnam in 1986 with the goal of creating a "socialist-oriented market economy". The term "đổi mới" itself is a general term with wide use in the Vietnamese language meaning "innovate" or "renovate". https://en.wikipedia.org/wiki/%C4%90%E1%BB%95i_M%E1%BB%9Bi

[22] Policy supporting development the digital economy in Vietnam, *Vietnam - Ministry of Planning and Investment* https://fia.mpi.gov.vn/en/Detail/CatID/1c9dee34-6455-4d73-8b8c-71a35a99b8ae/NewsID/6ccb38b8-7290-416a-9b43-d806eb4fc49b

[23] Nhiều ưu đãi thuế dành cho doanh nghiệp công nghệ thông tin, Luật Việt Nam https://luatvietnam.vn/thue-phi-le-phi/uu-dai-thue-cho-doanh-nghiep-cong-nghe-thong-tin-565-24815-article.html#:~:text=Thu%E1%BA%BF%20su%E1%BA%A5t%20thu%E1%BA%BF%20thu%20nh%E1%BA%ADp,%C4%91%E1%BA%A7u%20ti%C3%AAn%20c%C3%B3%20doanh%20thu.

[24] Klein, N. (2009). *No logo: No space, no choice, no jobs*. Picador.

As a matter of fact, harmonization of laws is certainly difficult, especially in Southeast Asia–a region of cultural diversity, language, and political institutions. Furthermore, remnants of patriotism from the period of liberation revolutions have made the unifying process more complex. Various currents of conservative nationalist thought continue to play a decisive role in numerous parts of this region (Duara, 2018)[25]. Facing the social technological challenge, instead of trying to coordinate regulations, many countries choose to solve their problems locally. In an effort to control this situation, several governments have employed algorithms to impose cyber fences and walls within their countries.

5.2 Algorithmic walls and fences

For the former colonial countries on the road to development, their optimistic dreams about "the flat world"[26] are, in fact, simply colorful and fragile soap bubbles. The ideas of non-boundary connectivity exist together with the algorithmic barriers; the dreams of an ideal cyber life go along with the possibility of being exploited again in another way; the promised equality cannot bridge social distances between regions; the collaborative opportunities show the tendency to becoming a new method of domination; the free market involves various dependent and controlling factors. The inequality between the capital owners of AI and users becomes deeper and deeper.

Digital censorship
To some extent, cyber-colonialism has spread globally with an intense concentration in developing countries, and obviously in Southeast Asia. Control, manipulation, and exploitation are practiced by different power sectors. Cyberspace boundaries have been erected by algorithmic barriers to create digital censorship. Imposed by governments, private companies, or other entities, digital censorship is normally claimed with various reasons, such as protecting national security (Danezis, 2014)[27], preventing the spread of harmful or offensive content, or suppressing dissenting opinions (Sartor, & Loreggia, 2020)[28]. Common examples of digital censorship include the blocking of social media platforms like Facebook or Twitter, the removal of specific websites or content from search engines, and the use of filters or firewalls to prevent access to certain types of information or websites. While digital censorship can be used to protect individuals or society from harmful content, it can also be used as a tool of oppression, limiting freedom of expression and restricting access to information. Clearly, digital censorship might

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[25] Duara, P. (2018). *Nationalism and development in Asia* (No. 2018/95). WIDER Working Paper.
[26] "the flat world" is another way of forming the notable concept "The World Is Flat" which appeared in the book *The World Is Flat: A Brief History of the Twenty-first Century* by Thomas L. Friedman.
Friedman, T. L. (2005). *The world is flat: A brief history of the twenty-first century*. Macmillan.
[27] Danezis, George (2014) *The dawn of Cyber-Colonialism*, Conspicuous Chatter
[28] Sartor, G., & Loreggia, A. (2020). *The impact of algorithms for online content filtering or moderation*. Upload filters.

generate negative effects on individuals and societies, including the limitation of critical thinking, stifling creativity, and impeding the development of a free and democratic society.

In parallel to corporate censorship, state censorship also maximizes efficiency in cyberspace through the use of high-tech automated systems. The practice of restricting or suppressing online information is seen in many geographic areas, especially in the Global South. Although the censorial algorithms are theoretically designed to identify and remove content without human review or oversight, the major part of digital censorship formulas is initially programmed and governed by specific groups or individuals that are likely motivated by specific political or ideological attitudes. Therefore, the subjective limitations are the obvious characteristics of censorial algorithms.

In addition, similar to the hidden agenda underlying the mining of personal data, lack of public transparency over digital censorship in cyberspace is widespread. With thousands of hidden facts, contemporary media only reveals to the public what they want users to know. In developing countries, especially, the ability to participate in social decisions related to technology-based governance systems is fairly limited. Surveillance cameras, sensory networks, and cookie protocols are continuously present in our daily life, but there are various barriers for the users to understand how they really work and, therefore, how to change the inequalities associated with the digital world.

Narrowing the gap between ordinary people and tech owners is significantly obstructed by a biased legal system. As Pasquale wrote in *The Black Box Society*

> "The law, so aggressively protective of secrecy in the world of commerce, is increasingly silent when it comes to the privacy of persons… While powerful businesses, financial institutions, and government agencies hide their actions behind nondisclosure agreements, 'proprietary methods', and gag rules, our own lives are becoming increasingly open books. Everything we do online is recorded; the only questions left are to whom the data will be available, and for how long." (Pasquale, 2015)[29]

As a matter of fact, human rights in cyberspace are an important issue, which has not received enough attention in various parts of the world and, most notably, not in Southeast Asia.

Digital states

Globally, multinational technology corporations are gradually establishing various powerful digital states. At the present, Alphabet, Meta, Amazon, and Alibaba own billions of active accounts, a number much larger than the population of many countries around the world. In the

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[29] Pasquale, F. (2015). *The black box society: The secret algorithms that control money and information*. Harvard University Press. p.3

Southeast Asia region, there are over 400 million internet users[30] and, among them, young people between the ages of 16 and 24 are spending an average of 10 hours a day in cyberspace[31].
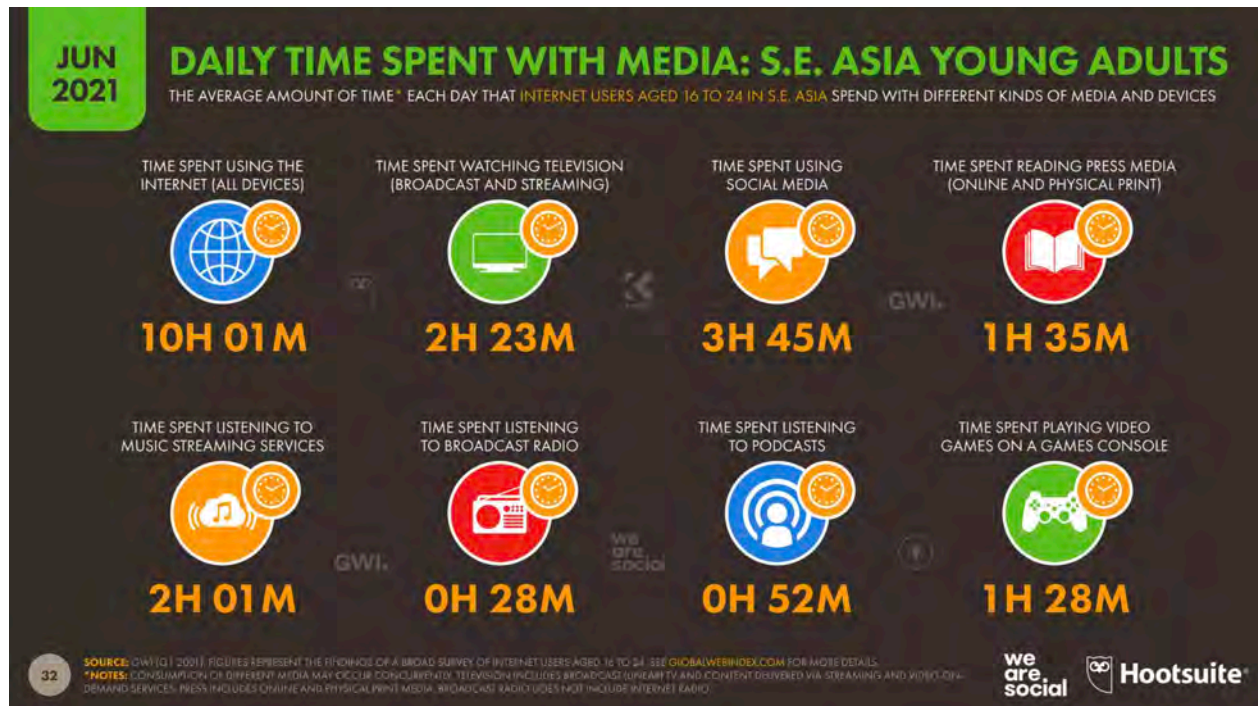
Daily Time Spent With Media: S.E. Asia Young Adults. ©datareportal.com

With a large number and active participation, platform corporations have made a profound impact on society and especially on young people. Therefore, a single activity on any given platform can cause an immediate effect on a large population. For example, changes to Facebook's algorithm that decides how content is prioritized in newsfeeds of individual users can have a major impact on user perceptions. Similarly, changes to privacy settings or data collection policies can significantly limit the use of features on the platform. The operating regulations of platforms play a similar role to governing regulations of states. By agreeing on the user contracts, we might say that customers have applied for immigration to these digital states.

From user perspective, these types of digital states also generate similar feelings of belonging or personal identity within communities. For example, many people who regularly use Instagram might have a clear sense of identity concerning the Instagram community. "Instagrammers" commonly share various social and cultural norms such as women's beauty standards. Feelings of dependency on platforms can be fleeting or deep; however, they are common sense.

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[30] Internet usage in Southeast Asia - statistics & fact
https://www.statista.com/topics/9093/internet-usage-in-southeast-asia/#topicOverview
[31] The Social Media Habits Of Young People In South-East Asia, *datareportal.com*
https://datareportal.com/reports/digital-youth-in-south-east-asia-2021

Furthermore, platform corporations also emphasize their state characters in their imperialist act of annexation. At the present, Google, Facebook, and Amazon are the dominant empires in the West[32]. Baidu, Alibaba, Tencent, and Xiaomi of China are trying to expand their dominance in the Eastern Region[33]. These companies are constantly expanding their power by acquiring smaller companies, especially as it becomes public and a potential threat. Google itself is among the most prolific acquirers of start-up companies; at some stages, it has purchased a new venture weekly [34]. Facebook has also swallowed Instagram ($1bn), WhatsApp ($19bn), and Oculus ($2bn) and invested in drone-based internet, e-commerce, and payment services[35]. In 2016, Alibaba acquired a controlling stake in Lazada–a leading e-commerce platform in Southeast Asia, for $1 billion[36]; in 2018, it also acquired Daraz–an e-commerce platform in South Asia that operates in Pakistan, Bangladesh, Myanmar, Sri Lanka, and Nepal[37].

The takeover of other companies has become a common strategy of technology corporations. These acquisitions mostly aim to achieve economies of scale, expand into new markets, acquire new technologies or intellectual property, and diversify their product or service offerings. The most important reason, however, is to eliminate threats from rivals and strengthen the power of the empire. Intensive competition is now observed between platform corporations, international technology companies, and local ones. It seems inevitable that small, local companies that do not transform into multinationals and acquire rivals will become the targets of the next acquisition.

There is a large technological capital gap between developing and developed countries, especially in AI capital ownership. In Southeast Asia, currently, the distribution of access to and use of digital technologies such as the Internet, computers, and smartphones is no longer as difficult as it was in prior decades. However, the ability to access and own AI capital remains a distant prospect. There is a requirement for a massive and advanced digital infrastructure to nurture AI and exploit Big data on the Internet through algorithms. Meanwhile, most server farms–the brains of AI, and technologies related to machine learning applications are the property of platform corporations.

[32] "The Economics of Big Tech". *Financial Times*. March 29, 2018. Retrieved June 6, 2019. https://www.ft.com/economics-of-big-tech

[33] From Alibaba and Huawei to Tencent and Baidu, these are China's biggest tech firms, *ns-businesshub.com* https://www.ns-businesshub.com/technology/biggest-chinese-tech-companies/

[34] Srnicek, N. (2017) We need to nationalise Google, Facebook and Amazon. Here's why, *The Guardian* https://www.theguardian.com/commentisfree/2017/aug/30/nationalise-google-facebook-amazon-data-monopoly-platform-public-interest

[35] Srnicek, N. (2017) We need to nationalise Google, Facebook and Amazon. Here's why, *The Guardian*

[36] Alibaba Invests $378.5 Million Into Its Southeast Asia Arm Lazada, *Forbes* https://www.forbes.com/sites/yessarrosendar/2022/05/09/alibaba-invests-3785-million-into-its-southeast-asia-arm-lazada/?sh=5128b5d468db

[37] Alibaba expands South Asia footprint, CNBC https://www.cnbc.com/2018/05/08/alibaba-buys-rocket-internet-backed-daraz-in-south-asia-expansion.html

Even the US government must spend public money to rent cloud computing services from the clouds of Amazon or Microsoft[38]. Clearly, owning such a progressive infrastructure is much more difficult for developing countries. AI has become a target of the race among tech giants. As Amy Webb mentioned that "The supranational flatforms are the most control over the future of AI" (Webb, 2019)[39]. The potential for big tech empires to monopolize cyberspace into the future is strong, limiting the opportunity for developing countries to own of AI technology.

Furthermore, in developing regions, public information technology systems have now become outdated and inefficient. Non-commercial organizations (such as political parties, associations and religious organizations) cannot rely totally on classical public media to advertise their propaganda as in the past. Media systems of global platforms have gradually subsumed the market share, influencing public communication significantly. Reacting to this loss, plenteous governments have introduced new laws and policies to control the platforms and convert privately owned social networking spaces into national online spaces. Likewise, several governments have attempted to establish their own digital communication systems and social network infrastructure. They normally require or even oblige citizens to use this infrastructure. For example, China banned the operation of global platforms operating on their territory[40], and the Chinese government now restricts their population to the use of only national applications.

Digital inequality in cyberspace has also been reflected in labour peculiarities in the information technology industry. There is a contrasting picture between the "tech elite" and the slavery working group in the technology industry. Generally, the tech elite are are typically highly educated and experienced in the fields of science, technology, engineering, and mathematics (STEM), and they often hold leadership positions at major tech companies or venture capital firms. The majority of tech-elite individuals live and work in developed countriesm, and they are known for their high salaries, access to exclusive networks and events, and influence over the direction of the technology industry. In the humorous words of Lovink, "The tech elite—the group of (usually young, white and male) developers as a 'pure' medium; an abstract mathematical environment, untouched by society, neutral of class, gender or race, capable of 'routing around' the problems caused by the dirty old world outside" (Lovink, 2009)[41]. The social impacts of the tech-elite are enormous in the digital era. Many machine decisions are influenced by their

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[38] Amazon launches new cloud storage service for U.S. spy agencies, *The Washington Post* https://www.washingtonpost.com/news/business/wp/2017/11/20/amazon-launches-new-cloud-storage-service-for-u-s-spy-agencies/

[39] Webb, A. (2019). *The big nine: How the tech titans and their thinking machines could warp humanity*. Hachette UK.

[40] The List of Blocked Websites in China, *saporedicina.com* https://www.saporedicina.com/english/list-of-blocked-websites-in-china/

[41] Lovink, G. (2009). *Dynamics of critical internet culture (1994-2001)* (Vol. 1). instituteofnetworkcultures.

creators of various algorithms. For example, at present, the right of decision-making on blocked information, target audience, and government loans is mostly based on programming formulas. As Tristan Harris stated during the Congressional Hearing in the US on January 8, 2020: "Never before in history have 50 designers made decisions that would have an impact on two billion people."[42]

Meanwhile, many workers serving in the technological industry are based in low-wage regions such as nations in the southern hemisphere and developing countries. These worker positions are often "shaped by implicit ideas that such populations don't need—or are less deserving of—livable wages and economic stability." (Hao, 2022)[43] The lives of low-wage workers are impacted by the precarious living standards of the localities where they reside. To some extent, low-income tech workers suffer from a new form of slave exploitation. At present, we do not see large-scale labor exploitation through slavery, which often requires spreading racist beliefs that dehumanized entire populations in the last centuries (Hao, 2022)[44]. Neo-slavery developed on the background of cheap and precarious exploitative labor practices (Hao, 2022)[45]. Regularly, low-income tech workers are assigned to simple jobs that serve the system processes and are paid according to the practice of piece work.

For example, to learn about this job market, Elisa Giardina Papa, an Italian artist, worked remotely for several North American "human-in-the-loop" companies that provide "clean" datasets to train AI algorithms to detect emotions[46]. Among the tasks that the artist performed were categorizing emotions, annotation of facial expressions and recording her own image to animate three-dimensional characters[47]. The purposes of this work are used either to identify the moods of consumers or to detect potentially dangerous citizens who pose a threat to the state. Numerous tech workers in developing countries received similarly small tasks, working 15 to 18 hours a day to earn a small amount of income. Various tech companies are pushing these people into slave working conditions. Naomi Klein claimed that "Job cannot call a real job when it does not provide the workers with the proper working conditions, working benefits for a sustainable living."[48]

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[42] https://www.youtube.com/watch?v=gDL9z_lof3Q

[43] Hao, K. (2022). Artificial intelligence is creating a new colonial world order. *MIT Technology Review. Retrieved July*, *10*, 2022.

[44] Hao, K. (2022). Artificial intelligence is creating a new colonial world order. *MIT Technology Review. Retrieved July*, *10*, 2022.

[45] Hao, K. (2022). Artificial intelligence is creating a new colonial world order. *MIT Technology Review. Retrieved July*, *10*, 2022.

[46] Elisa Giardina Papa website http://www.elisagiardinapapa.org/

[47] Elisa Giardina Papa website http://www.elisagiardinapapa.org/

[48] *No Logo: Brands, Globalization, Resistance* (Featuring Naomi Klein) - Documentary film, 2023, Media Education Foundation
https://www.youtube.com/watch?v=oeTgLKNb5R0&t=215s

The situation of this labour inequality tends to increase with the development of technology. The automation era will first affect precarious technology worker groups. Automatic programming software that offers the similar performance of IT engineers has now become more popular. With limited access to advanced training, tech workers in developing countries are considered basic-skill working groups that are most likely to be replaced by machines. Although digital states are identified as Virtual World entities, their geography is still interpreted in many ways, one of which is the specificity of the technological labour force.

In addition, technology corporations also pay attention to geographical aspects when considering the possible technologically experimental or trial markets. In 2017, Facebook launched its online shopping platform, Marketplace, in several Asian countries, including India, Indonesia, and Thailand[49]. In 2019, Amazon began to test its cashier-less convenience store concept, Amazon Go, in Mexico City[50]. In the article "*South Africa's Private Surveillance Machine is Fueling a Digital Dpartheid*"[51] Karen Hao and Heidi Swartz specifically described how tech corporations in South Africa have been using AI surveillance tools to monetize their private security surveillance business. Tracking population movement and facial recognition systems to trace individuals is being done through thousands of private cameras in Johannesburg[52]. Public data has been stored by private companies and commercialized freely on the market. This surveillance application is considered to be the initial trial for the further surveillance systems of the other continents.

Testing new IT applications in developing countries is a simple, inexpensive, and efficient investment. From a different perspective, however, this can be considered an inhumane act directed toward those disadvantaged groups that doesn't hold the tools, abilities and legal conditions to defend themselves.

Digital and nondigital
The combination of different technologies has currently submerged people in the mixed world of real and virtual. The actual actions of users confirm the effectiveness of advertising messages on the Internet, and partisan propaganda verifies the level of influence in each administrative region.

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[49] Facebook launches Marketplace in Thailand; it's now in 25 countries, *aimgroup.com*
https://aimgroup.com/2017/11/07/facebook-launches-marketplace-thailand-now-25-countries-2/
[50] Amazon Go, the cashierless retail store of the future, has some new competition, *CNBC*
https://www.cnbc.com/2019/11/12/amazon-go-cashierless-store-of-the-future-has-some-new-competition.html
[51] South Africa's private surveillance machine is fueling a digital apartheid, *MIT Technology Review*
https://www.technologyreview.com/2022/04/19/1049996/south-africa-ai-surveillance-digital-apartheid/
[52] South Africa's private surveillance machine is fueling a digital apartheid, *MIT Technology Review*

Tracking users with devices such as personal phones, security cameras, and automatic audio receivers, digital providers easily monitor and control the real-time actions of users. The actions of tagging people and locations on social media are an example of effective methods for tracking and collecting information. An additional efficient method for locating users is the 'location tracking feature' on mobile devices. Placing a virtual assistant like Amazon's Alexa in customer homes is a deceptive way to harvest private information on intimate relationships, and the use of electronic payments through payment platforms such as PayPal or Wise is a form of tracking personal financial situation.

To confirm the effectiveness of advertising and propaganda messages in digital space, the current machine learning methods are able to connect personal information in physical and virtual spaces instantly. Using a typical tracking process as an example, the AI system notes user interests through search engines, and then sends targeted advertising. When the customer initially views an advertisement, a first-time fee is paid to the publisher by the advertiser. Subsequent and additional fees are paid as users click on various embedded links. This complex process of manipulation connects individual pieces of data regarding how the user interacts with published advertisements with data regarding user geolocation, time, electronic payment and electronic election transactions.

At the moment, users in general and, specifically, those in developing countries are controlled and exploited using multiple strategies, ranging from simple devices to more advanced AI technology, from global to local forces, from both physical and mental influences. For economic benefits, digital owners apply various tactics and strategies. Ironically, even Google recognized its own influence when it began to use the slogan Don't Be Evil in 2000s[53]. As Coeckelbergh warned, "AI may lead to new forms of manipulation, surveillance, and totalitarianism, not necessarily in the form of authoritarian politics but in a more hidden and highly effective way" (Coeckelbergh, 2020)[54].

Southeast Asians have been eager to find a new horizon and to undertake an emotional, mental, and physical migration to the digital world. However, the reality may lead them to consider what they need to face and solve. They should navigate the digital native generations especially, to an equal path. Decolonizing cyberspace is a crucial action. Raising the awareness of existential problems to the public is a current focus. Technology skills education for the younger generation is essential. The overall community retains responsibility for limiting the negative effects of the platform economy. Taking radical actions to stop AI surveillance, data collection, and targeted

[53] Montti, Roger (2018). *"Google's "Don't Be Evil"* No Longer Prefaces Code of Conduct". Search Engine Journal.
[54] Coeckelbergh, M. (2020). *AI ethics*. Mit Press.

economics will be the hope to free people in former colonial regions and arrest new forms of exploitation.

In Southeast Asia, a limited number of community actions focused on these issues have been launched, the forthcoming Asia-Pacific Digital Rights Festival[55] being one of them. The week-long festival in May 2023 in Chiang Mai, Thailand aims to promote and protect digital rights in the Asia-Pacific and is expected to be the largest-ever gathering focused on this region. The 3rd ASEAN Digital Ministers' meeting, which took place on February 2023, was also organized to conduct general discussions on new policies related to artificial Intelligence technologies, leading towards an innovative, responsible and secure ecosystem in the region[56].

Southeast Asia is an experimental, data, consumer, advertising and labour market for AI capitalist corporations. AI is considered to be the foundational infrastructure of 21st-century society (Srnicek, 2017)[57]. Are developing countries in Southeast Asia able to own AI capital without the revolution that would turn it into public ownership? This question might not be answered with a conservative-nationalist approach. Moving towards regional and global integration is essential for securing an equal future for the global population in general, and for the people of Southeast Asia region in particular.

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[55] Digital Rights Asia-Pacific 2023, *engagemedia.org* https://engagemedia.org/
[56] The 3rd ASEAN Digital Ministers' Meeting and Related Meetings
https://asean.org/wp-content/uploads/2023/02/Endorsed-3rd-ADGMIN-JMS.pdf
[57] Srnicek, N. (2017) We need to nationalise Google, Facebook and Amazon. Here's why, *The Guardian*
https://www.theguardian.com/commentisfree/2017/aug/30/nationalise-google-facebook-amazon-data-monopoly-platform-public-interest

Share file 13 "The Keys"
Installation
info graphics, digital print, plexiglass, dimensions: 68 × 68 × 500 cm
2020
Première: Parallel Hungary, Aula HUFA Budapest, 2020
https://tranguyen.net/portfolio/the-keys/

Description

The Keys depicts how strangers living 8,000 kilometers away, eastward, on another continent, visualize or conceptualize Hungary. What information are they most interested in, which images become representative symbols, what are the first impressions of Hungary's people, culture and politics? The answers to all of these questions seem obvious if one regards statistics readily available through the use of search engines.

This project began with personal experiences coming from two different worlds (the cyber and the real), when the information has been shaped by the interaction between searching keywords and real key-concerns. The research has discovered several factors that affect the information results seen in online media and the culturally different elements that lead to personal culture shocks.

In order to record the images of Hungary reflected through the Internet on the one hand, and the real impressions of a Vietnamese person on the other, the work uses an installation infographic. The information printed on a long roll of paper is divided into two parts. The first part is elevated and passed through three filters that search engines use to manipulate information (search engine vendors, local government censorship, and the online action-history of the users). The second part, on the floor, shows the real-life impressions of personal experiences in Hungary.

The Keys ©Tra Nguyen
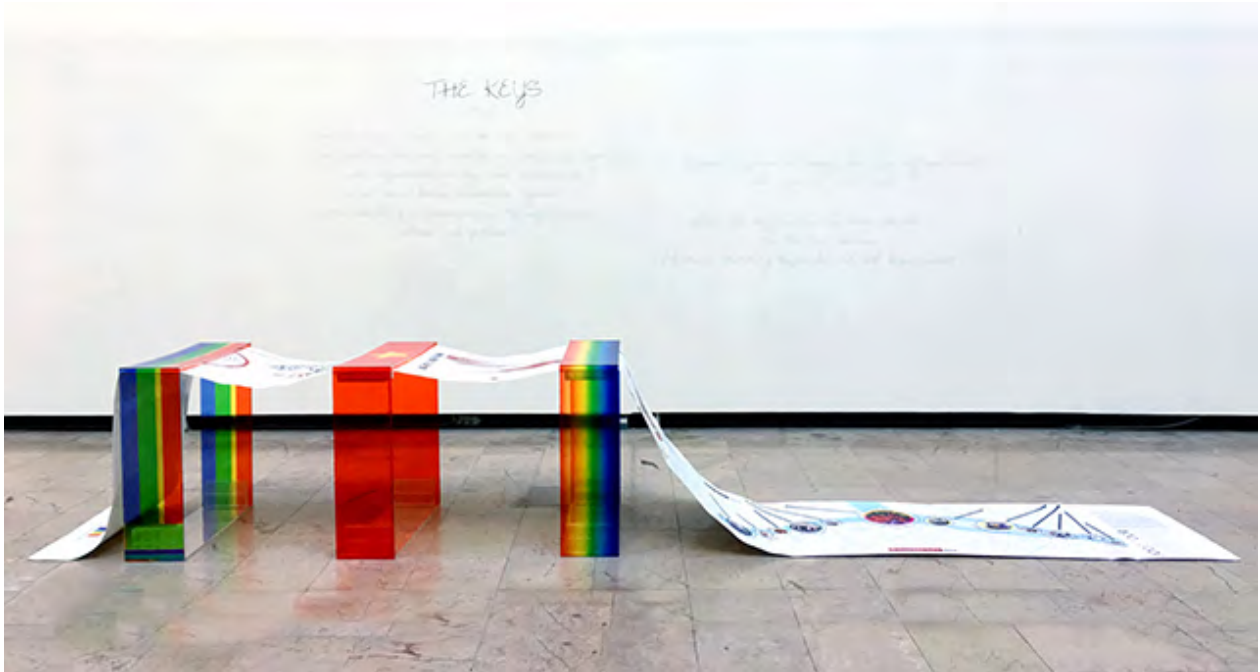
The Keys ©Tra Nguyen

The Keys ©Tra Nguyen

Share file 14 "Cyber-colonialism"
performative lecture,
video, duration: 13 minutes
2021
Première: Bucharest Biennial (RO), 2021
https://tranguyen.net/portfolio/cyber-colonialism/

Description
The performance enacts a traditional Vietnamese storyteller who shared her concerns and warnings on data privacy with her villagers while outlining the short history of how technology and colonialism have been tied together throughout the centuries. The tone of the narration intentionally fluctuates between an academic presentation and an entertaining fable.

The work was inspired by an actual elderly storyteller image in Vietnam; even today, a female village leader still circulates traditional stories, telling legends to the people of her village every night. Collective awareness and memory formed through oral retelling is the most primitive form of human communication, and it remains a precious and important form of social communication in some places.
The elderly story teller – Bà… in Ta Oi, Hue, Vietnam.[58]

The structure of the presentation is divided into three parts. While the first part describes the historical context of colonialism, the second part explains cyber-colonialism appropriating data resources, and the third part introduces how technology corporations are connecting the real and virtual worlds to control the personal lives of their residents in the global village. The performance refers to principal forms of communication in human history: oral communication, written communication, internet communication, social network communication, and communication with virtual characters through electronic devices.

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[58] Nữ già làng kể chuyện cổ dưới chân núi Târ-Coong https://www.youtube.com/watch?v=eBVl2zk7n4U

Cyber-colonialism ©Tra Nguyen

Cyber-colonialism ©Tra Nguyen

Share file 15 "Protect21 – Decolonizing Cyberspace"
42 posters, digital print, various authors, various sizes
& Introductory video - duration: 10 minutes
2021
Première: Bucharest Biennial 2021
https://tranguyen.net/portfolio/protect21st-decolonizing-cyberspace/

Description

This campaign entitled *Wiping Digital Footprint* is part of the *Protect21*, a wider social design project that aims to contribute to solving several prominent life issues recognized in the early decades of the 21st century: the threats of the digital world and new technology, the issues of urban environment and food safety, primarily focusing on Vietnam.

Initiated by artist and designer Tra Nguyen in early 2021, the project's activities are largely based on the support of the media art language that through creative cultural campaigns contribute to raising public awareness, to changing everyday habits and inspiring new behaviors for a better and more sustainable life.

Project's website: https://protect21.net/?lang=en
List of the authors:
Nguyen Thi Khanh Thu – Hue, Vietnam
Hoang Mi Bao Tram - Hue, Vietnam
Bui Thanh Tam – Soctrang, Vietnam
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Vo Quang Phat - Hue, Vietnam
Le Trong Hoang - Hue, Vietnam
Nguyen Thi Lam Khue - Hue, Vietnam
Phan Thi Hong Ha – Quangtri, Vietnam
Nguyen Van Du - Hue, Vietnam
Dang Nguyen Khoi – Hanoi, Vietnam
Nguyen Thi Minh Nghi – Ho Chi Minh, Vietnam
Doan An Nhien – Nhatrang, Vietnam
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Dang Minh Phuong – Danang, Vietnam

Le Trung - Hanoi, Vietnam

Dinh Cam Van – Soctrang, Vietnam

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Le Thuan Long – Quangbinh, Vietnam

Ly Thi Kim Anh – Khanhhoa, Vietnam

Nguyen Le Thuy Tien - Danang, Vietnam

Tran Minh - Danang, Vietnam
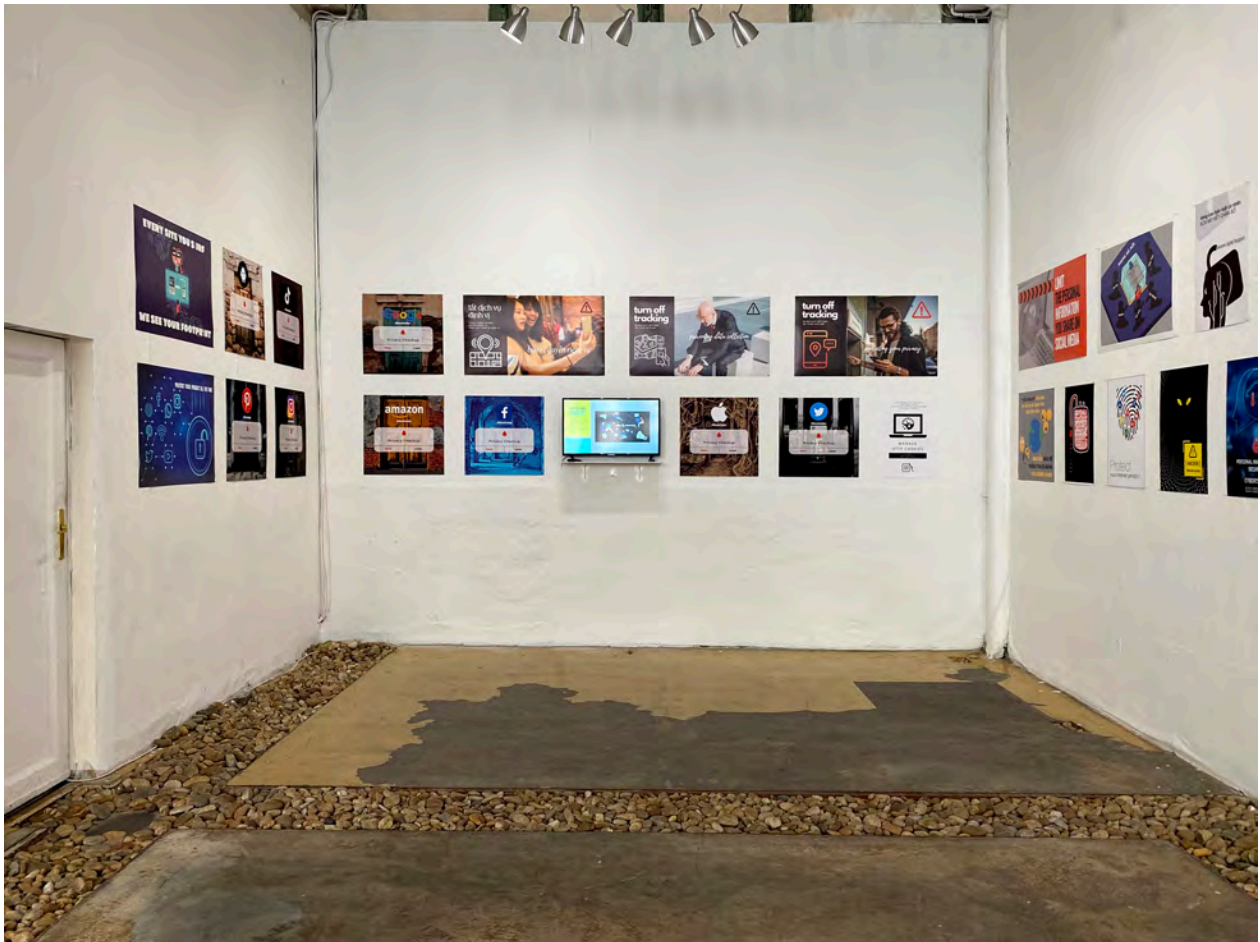
Protect21 – Decolonizing Cyberspace ©Tra Nguyen

Protect21 – Decolonizing Cyberspace ©Tra Nguyen

Protect21 – Decolonizing Cyberspace ©Tra Nguyen
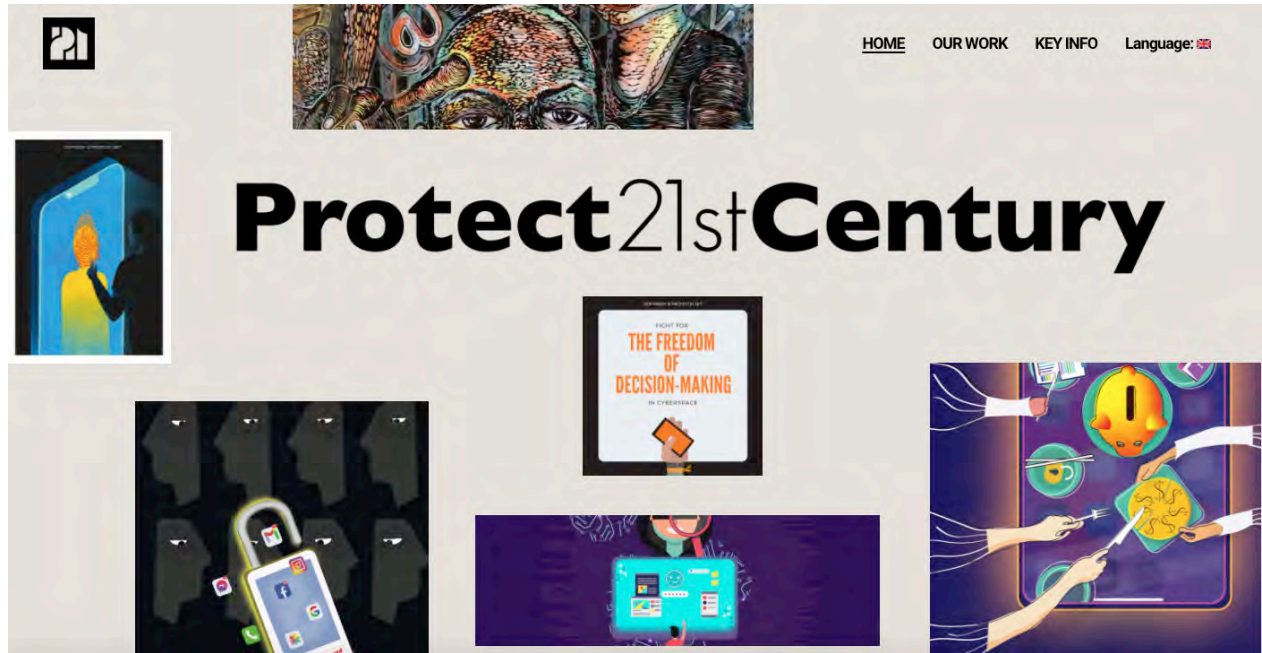
Protect21 – Decolonizing Cyberspace, website ©Tra Nguyen

Protect21 – Decolonizing Cyberspace at Bucharest Biennale 9 © Bucharest Biennale

CONCLUSIONS

"Crack" is a Doctor of Liberal Arts (DLA) masterpiece exhibition and it is considered a set of conclusions of this study that showcased the majority of artworks and projects that I worked on during the period of conducting this research. The exhibition included fifteen pieces of art. The exhibition was held in the exhibition hall of Artus Studio, Budapest, Hungary, from the 1st to the 8th of February 2022.

The exhibition reflected on the emerging problems of the advertising industry in the age of AI and automation. By addressing the new social phenomena caused by these, the artist presented a critical analysis of the undergoing changes in the structure of contemporary society, with special regard to global political economies.

The fifteen artworks in the exhibition revealed the hidden tactics of surveillance capitalism and cyber colonialism, describing the social dilemma of living in a world fully dominated by digital technologies, and attempting to outline some possible solutions for the future.

In the terms of art media, the exhibition made a metaphorical use of various historical forms of communication and technics: oral, handwriting, analog print, photography, digital print, telephone, television, computer and smartphone in order to address the inherent characteristics and classical marketing strategies, as well as to highlight the new factors and current master plans of the contemporary media world.

The details of the artworks are from *Share File One* to *Share File Fifteen* of this book.
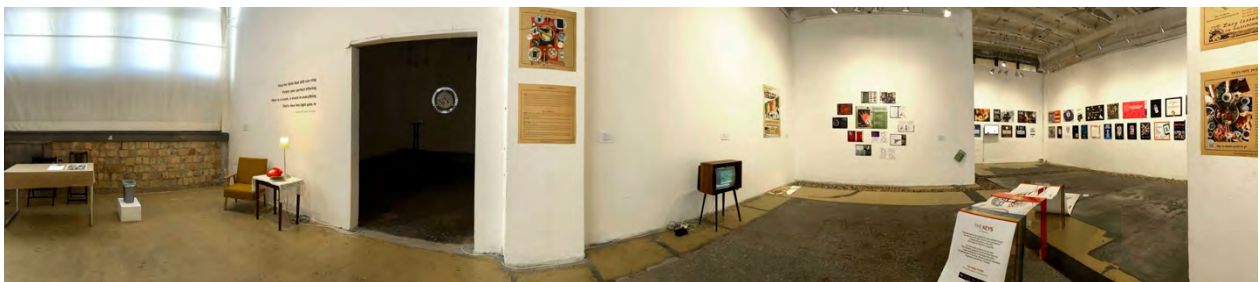
https://tranguyen.net/portfolio/crack/

Crack exhibition ©Tra Nguyen

Crack exhibition ©Tra Nguyen
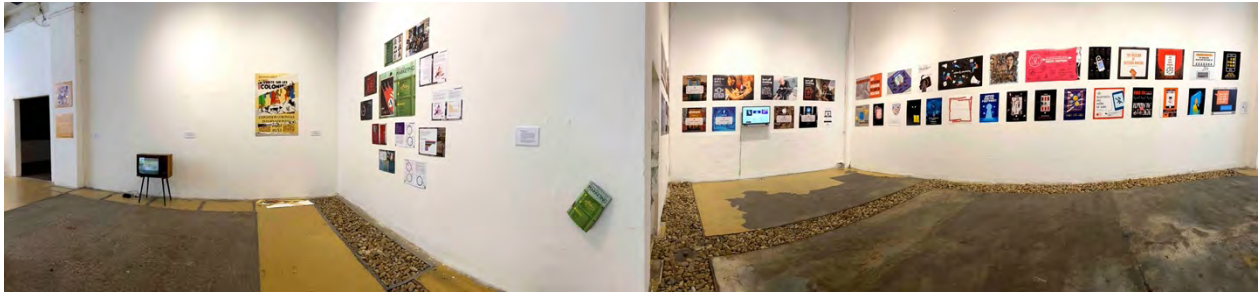
Crack exhibition ©Tra Nguyen

Crack exhibition ©Tra Nguyen

Crack exhibition, Courtesy of Hanan Saif

Crack exhibition, Courtesy of Pallavi Majumder

Crack exhibition, Courtesy of Pallavi Majumder

Crack exhibition, Courtesy of Zékány Dia

Crack exhibition, Courtesy of Andrea Bánóczy Varga
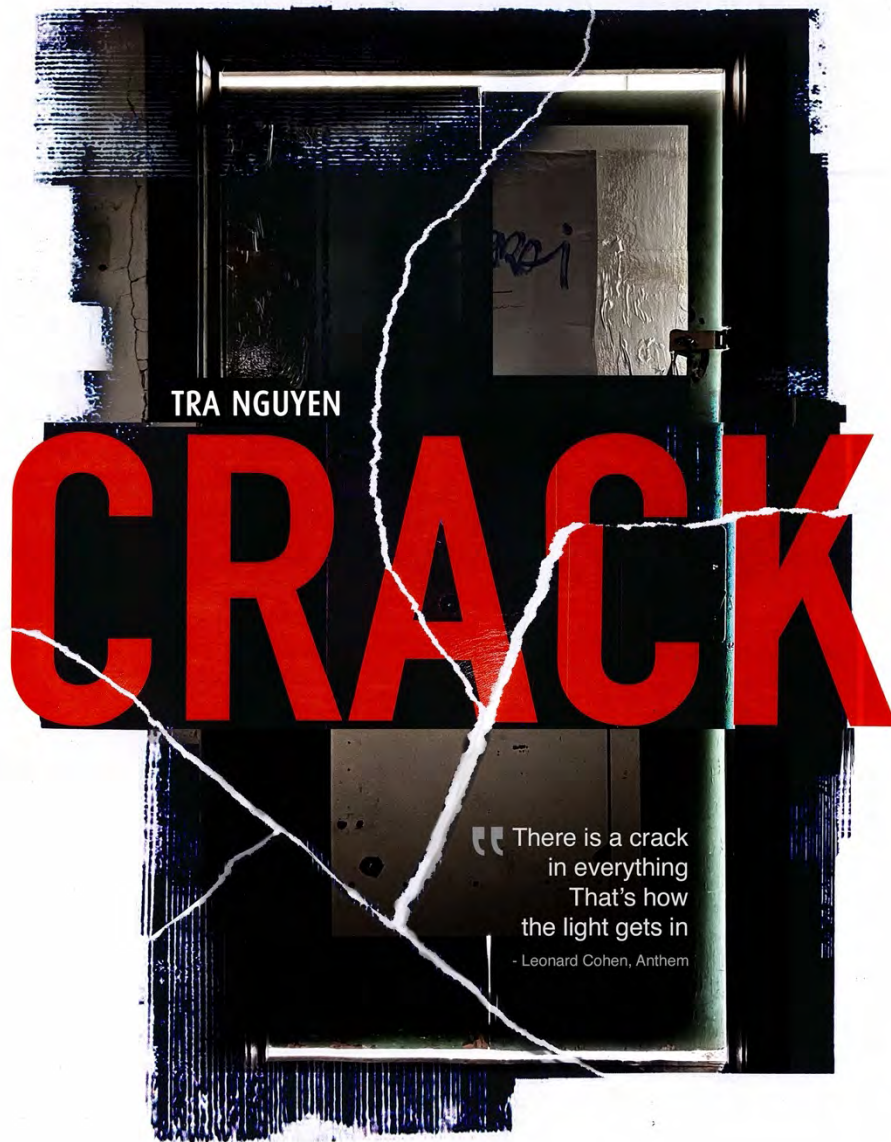
"Crack" poster ©Tra Nguyen

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SHOULD WE DO IT DIFFERENTLY?

Abstract

The first twenty years of the 21st century have witnessed important changes in many fields, including art. New social phenomena were born, new theoretical attitudes were announced, and new forms of artistic practice appeared. However, the academic models of artistic research seem to remain conservatively unchanged. The "paradigm paralysis" of artistic research has revealed numerous limitations in examining, analyzing, interpreting and expressing new realities. The attachment of artistic research to other sciences has framed artistic research within rigid concepts and methods, while inhibiting the creativity of artist-researchers. Moreover, the division between art practice and artistic research has reduced the opportunities of their sublimation. Therefore the break of the arts' ideological anchorage should be considered, artistic research encouraging creativity should be initiated, and directions of the research-based artistic practice should become a widely applied methodology. In order to contribute to these necessary changes, this article formulates a group of statements and proposes an example of a possible artistic strategy. Not surprisingly, the format of this publication is a significant example of reform as well.

Body texts

Let's start playing the game!

(available for the desktop interface)

Click on this link (http://tranguyen.net/the_differences/) or Scan this QR code

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Notes

This article is presented as an artwork in the form of a mini-game. Through the structure and interactive elements of this game, players will receive the art message which is the significance of the article itself as well. Both the form and content of this writing aim to assert that if research is liberated from academic stereotypes, conducting artistic research will be the same experience as playing a game. The result will be always the unknown that needs to be disclosed. The process of discovery will help players expanding their knowledge and developing their skills; and they will also find many hints shortening the path to the findings.

Core issue

Each scientific paradigm is defined by the context of a certain period of time. It is appreciated in a particular historical phase but will be replaced by a different appropriate paradigm. According to Thomas S. Kuhn, the successive transition from one paradigm to another is often done through a revolution (Kuhn, 2013). Likewise, in order to change the artistic academic paradigm, we need to consider a revolution in artistic research and practice. Through several proposals and experiments contained within this article, I would like to contribute to this process.

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Explanation
Through the game, the reader can approach the contents of the article.

THE DIFFERENCES

Hoover on the diagram to reveal the four meaningful positions that lead you to the content.

This circular diagram contains five types of colour points. The white spots will have no content value. The article contents only appear if you move to the correct groups of colour spots.

Enjoy!
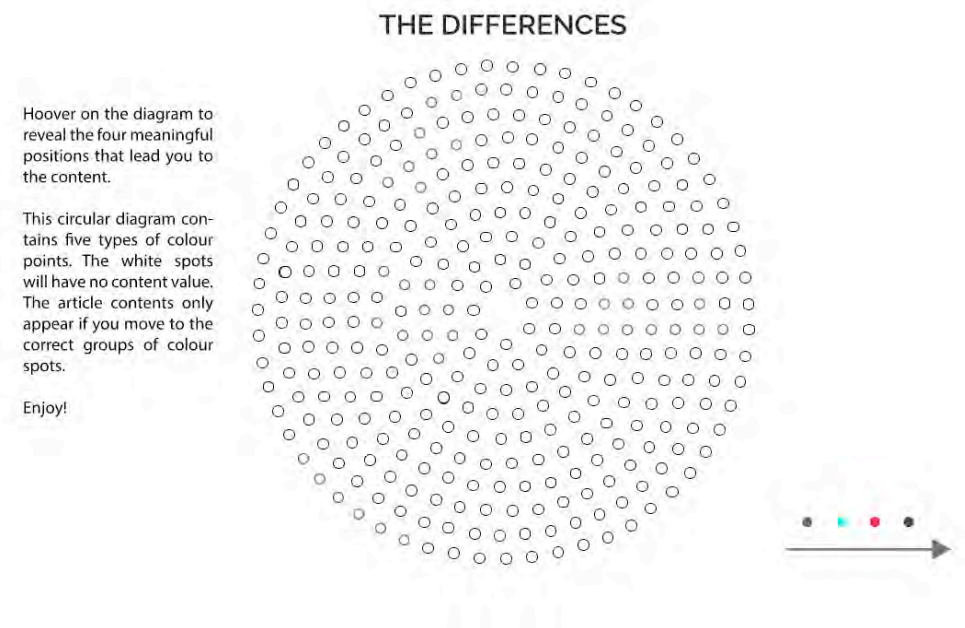
The article has four parts, including:
A different research direction
Research as art
Visual practice as research
Application

A DIFFERENT RESEARCH DIRECTION

"The 'Enlightenment,' which discovered the liberties, also invented the disciplines."

— Michel Foucault

There is no doubt that the *Age of Reason* has created great revolutions to liberate people from the oppression of dictatorial monarchies and harsh religious laws. It also motivated the development of science and technology, solving many problems related to human life. However, the process of "scientization" has been causing significant obstacles to development in many fields, including the arts. The academic arts models, the framed art research methods have significantly limited the creativity of both teachers and learners in many parts of the world. Art schools seem to exist in the paradigm of prison, as Michel Foucault in Discipline and Punish (Foucault, 2012) points out: "Schools serve the same social functions as prisons and mental institutions – to define, classify, control, and regulate people."

Therefore, liberating the creative energies of academic models has become an urgent need for the new generation. The different ways of artistic research and new forms of artistic expression should be encouraged and developed with no delay. In the past two decades, many art educators and researchers have mentioned reconsidering the concept of artistic research, especially at higher level education (Elkins, 2005; Seago, & Dunne, 1999; Slager, 2015; Michelkevičius, 2018). Several propositional ideas about the new concept and orientation of artistic research and practice on the doctoral level have been published. Among these writings, I have been particularly impressed by the research orientation introduced by James Elkins: **"The research dissertation can be intended to be read as art, and the visual practice as research."** (Elkins, 2005). However, this argument seems to have some limitations, especially in the diversification of research communicational means. In order to include more genres of research communication, I have transformed Elkins's claim into a new one: **"The research dissertation can be intended to be read, watched or participated in as art, and the visual practice as research."** It means that the research finding can be presented in different forms of arts such as a novel, video, film, performance, etc. The visual practice should involve collecting, organizing, and analyzing information in order to enhance our understanding of a topic or an issue. It should also include the proposal for new solution models. I strongly believe that if the artistic research and practice were to be liberated in this manner, it would become an endless pleasure for the artist (Slager, 2015).

Generally, artistic research at a higher level should accept the variety of ways of approaches. Each working strategy has different strengths and weaknesses. Remarkably, the experimental process is the way researchers expand knowledge and develop their skills based on their achievements and mistakes. Researchers explore various issues from an **artist's perspective** when other scientific methods disappear or merge into an improvisational artistic narrative. The artworks form impressive and meaningful pieces of communication based on **creative practices**. Through **curatorial strategies,** authors have more opportunities to make a remarkable interaction with society than other scientific fields. It can be said that, with the power of the current education industry, research formulas can only *reproduce the artist's mind and art products* (Adorno, & Horkheimer, 2007). Nevertheless, in order to *extend the artist's mind,* research needs to reinvent the different approaches and forms of artistic expression.

RESEARCH AS ART

In the publication "The three configurations of practice-based PhDs", Elkins mentions John Berger's PhDs thesis (who mingles poems and art history) as a fusion of text into creative work (Elkins, 2005). This is a good example of "artisticization" of the research findings. However, with this example, Elkins seems only to refer to the reform of the medium itself. In order to offer the opportunity of transforming research into artistic acts, institutions need to implement much more radical changes in the different concepts related to artistic research.

-        First of all, instead of text-based presentations or hundred-pages long theses, the public needs different media forms, which are more creative, meaningful, and attractive. The work of artistic research will bring more social impact when it gets closer to the public. Therefore, we can enhance the effect of artistic research by specific actions. These can be the transformation of a thesis book into a short story, a video book, a documentary, etc. The doctoral defending can become an art event. The conference presentation can transform into an art performance (as in Henk Slager's proposal[1] for Bucharest Biennale 9). The publication can be a game, a video clip, an animation, etc.

-        The next step for change is renewing different artistic research concepts such as research topics, research purposes, art messages, art actions, or art mediums.

Instead of framing research topics in the context of art-related issues, research can focus on other fields as well. Beyond the concepts of inter- or multidisciplinarity, artistic research

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[1] https://www.biennialfoundation.org/2019/03/henk-slager-appointed-as-the-curator-of-bucharest-biennale-2020/

allows the creation of a unique space, where the boundaries between other sciences are blurred and merged. In this way, artistic researchers diversify sources of knowledge, and their artwork may convey multiple contents.

Instead of just focusing only on the aesthetic, art also needs to be associated with everyday life, to raise public awareness, and to offer solutions to various social problems as well. Artistic research should focus on the useful aspect, or in other words, useful art should play an essential role in contemporary art. I believe that this change might motivate the public to return to art, and could reconstruct the social position of art, which has been weakened in many contexts.

Instead of formalizing it through mediums, art should focus more on the message and action. Generally, the genres of art are defined with a close reference to their medium, such as painting, sculpture, music, or film. However, nowadays we are witnessing the blurring of the mediums' boundaries in contemporary art practices. Hence, identifying the categories of artworks has become more difficult. One solution that could be applied is: concentrating on the art topic and considering art message and action as key elements. There is no doubt that art messages are crucial elements in altering the public perception while art actions can serve as solutions for various social problems. Focusing on art messages and actions will contribute to enhancing the social role of art in general and for each artwork in particular.

Nevertheless, through what means do artists shape art messages and construct art action? Undoubtedly, art research is a fundamental element in the process of articulating messages and formulating strategies. Creating artworks through intensive research is a potential experimental direction for contemporary artists. In other words, the "research-based artistic practice" should soon become a widely applied methodology in arts.

Instead of using just only one art medium to communicate with, artists can use various media to convey their messages and actions. Each art medium has different values and metaphorical functions. Therefore each art research finding can be combined with an appropriate art medium. In this way, the artwork can become a united entity in both aspects: content and form.

Overall, it may not be easy to implement the fundamental changes mentioned above. In the systematic educational institutions, changing a small element always affects a series of related transformations, and nobody wants to complicate their works. Nevertheless, we should not accept this standstill inertia and conservatism of contemporary art education. A revolution in art education should be considered in the near future.


VISUAL PRACTICE AS RESEARCH

In the artistic revolution mentioned in this article, the "research-based artistic practice" is considered a potential art methodology, as it contributes to blurring out the boundaries between art and research. It also formulates the creative works that are the results of the encounter between art and other sciences. Although this practice direction requires multiple skills and wide knowledge from the artists, it will offer more opportunities to them in discovering emerging issues and developing new artistic strategies.

The diversification of the artistic material is one of the most prominent advantages when the divide between research and art is being eliminated. In other words, when the artistic practice has been conducted as research, the collected findings will become **art materials** both literally and figuratively. A case study image or an interview audio recording, an artefact or an algorithm can all become artistic materials and can be constructed into different combinations that classical art has not fully discovered yet. Besides, the combination of various sources of knowledge can also create new artistic contents. In other words, the diverse research materials taken from different fields can be constructed into unique, meaningful, and powerful messages of contemporary art.

If the artistic practice is based on research, the creation of artwork may have a direction from the beginning. The practical orientation might play the same role as a hypothesis; it can be right or wrong; it can bring some successes or failures. But the most important thing is to help practitioners not fall into a state of confusion, disorientation in their working process. Each artist will draw his or her way to their practice according to the case study. The personal research strategy can also be an artist's creative work.

Take my research design as an example.

Personally, my artistic strategy is developed in close relation to "research-based artistic practice". Research and visual practice are conducted simultaneously. The research findings exist within the visual works themselves. The two diagrams below serve as models of this artistic strategy.
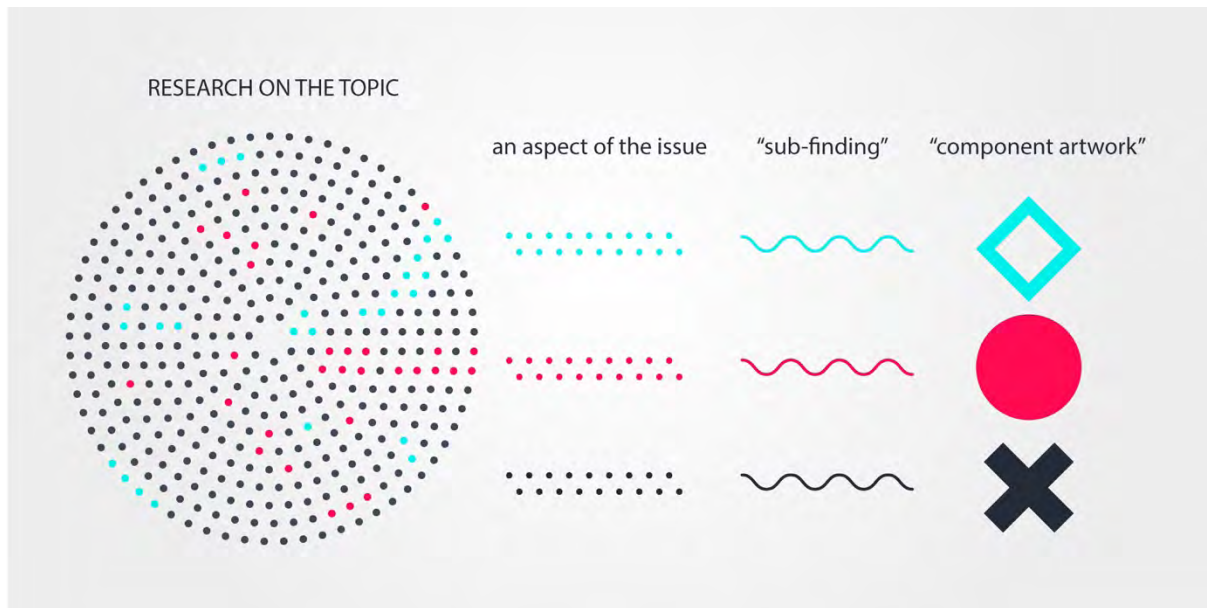
Research design graph 01

The graph 01 provides an overview of my research and artistic practice. The process starts with theoretical research related to the art topic or case study. The topic is examined from different points of view and aspects. The diverse research aspects open up numerous small research findings - what I call "sub-findings." Each "sub-finding" conveys an artistic message in itself. Those artistic messages are expressed or exposed via an appropriate art medium and the outcome of the sub-process is to introduce a "component artwork" (sub-artwork).

The process of discovering art topics and expressing them through the artworks is implemented continuously throughout the research progression. The final work is the synthesis of various "sub-findings" and "component artworks". Graph 02 below illustrates the last stage of the process.

Research design graph 02

I consider this second graph the context of "**after *my* research turn**". The graph represents the synthesized results of my artistic research and practice. The "sub-findings" and "component artworks" intertwine to create the final full "*picture*" of the process itself. Specifically, this *picture* is often represented as the final publication or exhibition. No matter what format it takes, the final *picture* must be a fusion of the complex and comprehensive results.

It can be said that following this artistic strategy requires more complex theoretical and practical work. However, it might contribute to many outstanding results. There are two main reasons that motivated me to apply this research strategy:

Firstly, the interleaving of theory and practice creates many opportunities to verify and experiment on "sub-research findings". Through this continuous verification process, the final research results will be adjusted and developed appropriately - as nothing can be perfect, especially at first.

Secondly, the problem needs to be examined from many aspects and analyzed based on different theoretical foundations. Because the phenomena and problems exist in a state of constant movement, being strongly influenced by various factors. Studying from multiple perspectives will make the phenomena or problems more explicit, and the results of the research more convincing.

All in all, the "research-based artistic practice" can become an ideal methodology for doctoral students in Practice-based PhD or Doctoral of Liberal Art programs. It can establish a strong interconnection between art practice and research; it can generate numerous new experimental opportunities for artists-researchers. This methodology could contribute with certainty to the potentially productive novelties in art creation.

APPLICATION

In order to turn the proposal related to the art revolution mentioned in this article into real actions, I have implemented several radical transformations in my doctoral studies. This part of the writing will present briefly my research topic and some of the findings that I have concluded so far in my own doctoral research program.

Overall, theoretical research is my starting point where I discover social phenomena through observation, data collection, and analysis. Next, the collected "analysis results" have been used artistically to create a series of "component artworks". Finally, the collection of "analysis results" and "component artworks" are considered the decisive result.

My current art topic or case study is related to an emerging social phenomenon: "**Advertising in the Age of AI (Artificial intelligence) and Automation"**. The research has been implemented in the following conceptual framework:
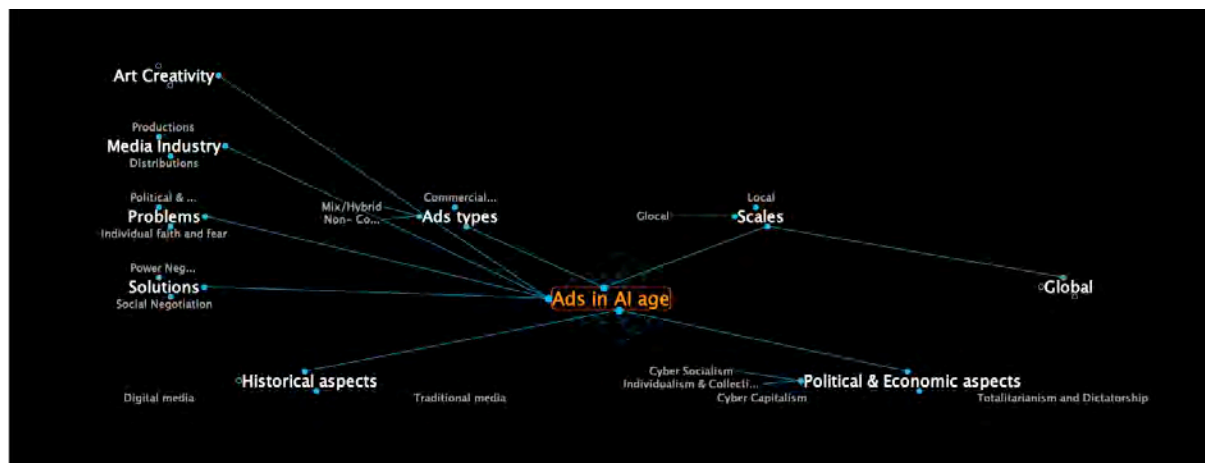
The conceptual framework of research

Advertising is an artistic medium that has undergone plenty of transformations through a long history course. Each new advertising form reflects sharply the social changes in general and in the political economy in particular. Obviously, since the early 20th century, advertising has become the pure representation of social power (Adorno, & Horkheimer, 2007). Right now

we are witnessing the overall dominance of the force of the cyber world; online-advertising has become an undeniable social phenomenon. For the most part, we consider online advertising as a normal and harmless form of marketing. However, behind these familiar advertisements, there are several abnormal and conspiratorial industries. Within online marketing strategies, there are thousands of hidden tactics and shady acts that we do not know or care about. Plenty of social ethical and human rights issues are being ignored for the sake of benefits and profits of advertising sponsors. It can be said that the contemporary advertising industry has tremendous consequences beyond economic issues.

In each moment internet users are being exploited as living resources for economic and political purposes around the world. More seriously, with the help of advanced digital technologies, the dominant governments, corporations, and organizations control, manipulate, and exploit users at different levels. In particular, the rise of AI in the past decade has increased the threats of digital tactics on personal integrity. Generally, the future can hardly be brighter. Nearly all companies, global corporations and countries have been constantly investing in and exploiting the transcendence of information technologies to pursue their hidden conspiracies. In addition to giant mechanisms that can improve themselves automatically through their own experiences, many leading educational programs have been training the real human the conspiratorial ability to create more and more explicit algorithms - that ultimately can fully dominate the user's psychology and behavior. Therefore, the automatic system not only can send the right targeted advertising messages to the users, but it can also completely dominate the entire society by controlling their thoughts, predicting their actions and ultimately manipulating their perception of reality. In the main, the vast expansion of cyber-capitalism has become an essential global concern in this day and age.

Nevertheless, the cyber-influencers do not act on the global scale and aren't limited to commercial sectors only. "Netizens" exist in a controlling network of different scales and multiple sectors. In almost all countries, cities or even small towns, the digital-based automatic controlling systems are being applied widely. Companies, corporations, non-commercial organizations and even political parties are fully exploiting the advantages of algorithms. Taking a wider look, there are dire competitions between global and local forces, between commercial and non-commercial entities; that all aims to occupy the power ranks over the controlling rights.

We cannot completely deny the benefits that technology brings to modern people, but at the same time, we need to see clearly the limitations it creates in order to have the appropriate perceptions and actions. Artificial intelligence has replaced people in many fields, including the arts. Especially in advertising design, a number of algorithms have been created to replace human design work by modeling creativity. This replacement enhances productivity and

generates more profit for the advertising industry. However, modeling creative work is actually in contradiction to the nature of creation. The result of creative mechanization can not go beyond the reproduction or repetition of already existing artwork. Taking a closer look, automatic creation machines normally operate based on different models - which are programmed through algorithms. The creative modules work by connecting groups of information. Thus, the digital models of artistic styles, colour tones, characters, scenarios, etc. generated by information systems will soon become popular. In the near future, we will definitely receive video advertisements produced by automatic mechanisms. **Algorithms will not only selectively deliver, but they will even construct personally targeted video ads based on personal data. People will only receive the right, precisely targeted advertisements, specially designed for them, and suiting best their present and their future psychographic model**. Moreover, this personalization of information received by internet users will take place in all types of communication in the future. Without new policies and actions against this process, the person's entire worldview will be constrained into a narrow, poor and monopolar space. That will inevitably lead to extremeness and contradictions in the world. Peaceful opportunities seem to be just an illusion.

Nowadays, we tend to have the opposite feelings of faith and fear related to artificial intelligence technologies. In general, modern people seem to be too dependent on technology and the cyber world. Although they can see the negativity within this world, they cannot get out of the social community that contains almost all of the matters related to the digital world. **That is a social dilemma!** Several scholars have proposed different solutions to solve this problem. For example: exiting from the technology environment, deleting social media accounts (Janzen, 2019); building a new social system - cyber socialism (Malone, 2018), creating legal corridors to protect personal information (McNamee, 2018), etc. From my point of view, each proposal has its advantages and disadvantages. It seems that we did not reach the most effective solution by far. The question of how people can survive in the super-automation world still needs to be answered. We need to generate social attention in all the different fields, and to create new proposals and ideas to solve this continuously worsening social problem.

It can be said that this research process has helped me to deepen my insights into the problems related to automatic advertising and cyberspace. It has also generated plenty of artistic inspiration. These following artworks are the results of my experimentation on this particular topic and case study.

01. Brave New Chapter
(*the link to the project*) http://tranguyen.net/portfolio/the-brave-new-chapter/
Readymade objects + Historical reenactment + Intervention

"Garage Europa" exhibition
5UN7 Art Institution, Bordeaux, France
Dec 2019

02. *The keys* (*the link to the project*) http://tranguyen.net/portfolio/the-keys/
Installation Infographics
"Parallel Hungary" exhibition
Aula exhibition hall, Hungarian University of Fine Arts, Budapest
Feb 2020

03. *Dialectic of Cyber-Enlightenment*
(*the link to the project*)
http://tranguyen.net/portfolio/dialectic-of-cyber-enlightenment/
Found objects + Intervention
"From Fake Mountains to Faith + The Colonial Warehouse" exhibition
Archives Bordeaux Métropole, Bordeaux, France
Jan to May 2020

04. *BB9 plan for the conference*
(*the link to the project*) http://tranguyen.net/BB9-CONFERENCE-PLAN.pdf
Performance
Suppose to be part of the Bucharest Biennial, Romania in Jun 2020

05. *BB9 plan for the research lab*
(*the link to the project*) http://tranguyen.net/BB9-LAB-PLAN.pdf
Performance + *Social activist*
Suppose to be part of the Bucharest Biennial, Romania in Jun 2020

06. *Horus Case*
(*the link to the project*) http://tranguyen.net/portfolio/horus-case/
Cyber-docufiction
"Host and hostility" exhibition
Virtual Exhibition at *hostandhostility.com*
May 2020 to April 2021

CURRICULUM VITAE

Name   Ms. Nguyen Thi Thanh Tra
Date of Birth   27th December, 1985
Email   thanhtrapixel@gmail.com

Education Background
2018-2013   DLA (Doctoral of Libral Arts)
                                  Doctoral School,
                                  Hungarian University of Fine Arts, Hungary

2010-2012   M.A. in Media Arts and Design
                                  The Graduate School
                                  Chiang Mai University, Thailand

2003-2008   B.A in Graphic Design
                                  Faculty of Applied Arts
                                  Hue College of Arts, Hue University, Vietnam

Scholarships
2018-2022   Stipendium Hungaricum Scholarship for full time
                                  studies of doctoral degree in Hungary,
                                  Hungarian Government Scholarship

2016   Vietnam Scholarship Program for "Training lecturers of
                                  Doctor's Degree for universities and colleges",
                                  Vietnamese Government Scholarship

2010-2011   Scholarship for Honorary Student
                                  Media Arts and Design Department
                                  The Graduate School, Chiang Mai University, Thailand

2004-2007   Scholarship for Honorary Student
                                  JBAV & Japan Business Federation

2003-2008   Scholarship for Excellent Student,
                                  Hue College of Arts, Hue University, Vietnam

Award

2020   Prize in The Product Design Contest
                                      in Thua Thien Hue province, Vietnam

2015   Top 30 Creative Women Award in Vietnam Women
                                      Innovation 2015

2014   Prize in The 3nd Vietnamese National Grand
                                      of Applied Arts 2014

2014   Prize in The Product Design Contest
                                      in Thua Thien Hue province, Vietnam

2009   Encourage Award in The 2nd Vietnamese National
                                      Exhibition of Applied Arts

Working Experiences

2008 up to present   Lecturer
                          Faculty of Applied Arts
                          Hue College of Arts, Hue University, Vietnam

Research Outputs

2021   Nguyen, T.T.T., 2021. Sustainable Development In The Age Of
       Artificial Intelligence And The Contributions Of Media Design,
       The international conference of Vietnamese young scientists.
2020   Nguyen, T.T.T., 2020. Should We Do It Differently?.
       MaHKUscript. Journal of Fine Art Research, 4(1), p.6.
       DOI: http://doi.org/10.5334/mjfar.70
2019   The invention of tradition, Sharing Borders Symposium,
       Institute of Advanced Studies UCL and at Slade School of
       Fine Art London, Budapest, May 2019
2018   Visual languages in branding and advertising,
       Graphic Design Conference, Hue, Vietnam.
2017   Interactive technologies in creative art and design in Vietnam
       Vietnam National Arts and Cultural Conference
2016   Partnership & Cooperation - a reforming approach to education
       and training activities for Design in Hue University of Arts.
       Vietnam National Education Conference
2015   Recommended solutions for preservation and development

of handicraft products in Hue, Vietnam,
The Associate of Handicrafts and Tourism Market Conference,
UNESCO, ILO & Thua Thien Hue Province, Vietnam, Oct 2015

2014   Application trend of typography in Graphic design,
Research Projects, College of Arts, Hue Universisty.

2014   De-sign-er and the art of decoding, Hue University Journal

2012   Cultural symbols of Tet in the urban lifestyle of the Vietnamese
on video advertising, Thesis Master,
Chiang Mai University Thailand 2012.

2012   Cultural symbols of Tet of Vietnamese on video advertising
The 3rd Chiang Mai University Graduate Research Conference,
Thailand, November 23, 2012

Exhibitions

2022   Parallel Hungary II, HUFA, Budapest

2022   Crack, Solo Exhibition, Artus Studio, Budapest, Hungary.

2021   Research Lab, 9th Bucharest Biennale: Farewell to Research,
Romania

2021   Contemporary Cosmopolitan Cookbook, Virtual Exhibition
in COVID19's time, Budapest, Hungary

2020   Host and Hostility - International Group exhibition,
Virtual Exhibition in COVID19's time, Budapest, Hungary

2020   From Fake Mountains to Faith + The Colonial Warehouse,
Archives Bordeaux Métropole, Bordeaux, France

2020   Parallel Hungary, Aula, HUFA, Budapest

2019   Garage Europa, 5UN7 Arts Institution, Bordeaux, France.

2019   Phase shift, Artus Studio, Budapest, Hungary.

2018   InternationalArtist Book Exhibition, Vietnam

2017   Innovative Crafted Design Products Exhibition, Hue, Vietnam

2016   Established Date Exhibition, Hue University of Arts, Vietnam

2016   "Gieo 02" Exhibition, Hue University of Arts, Vietnam

2016   Hand-Craft Innovative Products of Thua Thien Hue, Vietnam

2015   National Creative Women Exhibition in
Vietnamese Women Innovation Day 2015

2015   Women Creativity Products, Hue University, Vietnam

2014   The 3nd Vietnamese National Exhibition of Applied Arts 2014,
Vietnam

2014   "Gieo01" Exhibition, Hue University of Arts, Vietnam

2012   Madifesto 04, Blend, Chiangmai Art Center, Chiangmai, Thailand

2011   Madifesto 03, Fall, Chiangmai Art Center, Chiangmai, Thailand

2011   Video Slum, Pong Noi Arts Gallery, Chiangmai, Thailand

2010   Madifesto 02, Push, Chiangmai Art Center, Chiangmai, Thailand

2010   Electronic Sound Arts, Chiangmai Art Center, Chiangmai, Thailand

2009   The 2nd Vietnamese National Exhibition of Applied Arts 2009, Vietnam

2006   Exchange Student Thailand – Vietnam 2006, F.A, Chiangmai, Thailand