

**Miroslav M. Popović**



# BIOPOLITICS, SOCIAL SCIENCES, HUMANITIES, TRANSHUMANISM AND AI

*Considering research on biopolitical aspects in contemporaneity*



# NDIZIK

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# INTRODUCTION

The theoretical propositions of biopolitics are in constant development and evolving; similarities and differences between thinkers, continuities and discontinuities in phenomena and interpretations can be observed, and they are closely related to the development of global-political events, social and cultural changes, the sudden rise of new technologies, above all digital, biotechnology and artificial intelligence. Theories related to the notion of biopolitics can be applied to scientific research from all spheres of social sciences and humanities, to political relations and political philosophy, bioethics, research into globalism and modern capitalism, analysis of historical and contemporary political and social processes, such as nation-building through producing the norms and standards that include and exclude certain groups and individuals; population management; administration, management, protection and care-taking of human bodies and intertwining of biopower with psychoanalysis and gender issues; foreign policy and demarcation between liberal democracy and totalitarianism; influence of biopolitics on art, fashion and popular culture. In brief, biopolitics may be defined as: “An apparatus of control exerted over a population as a whole, citing the ratio of births to deaths, the rate of reproduction, the fertility of a population, and so on, in justification. Others characterize biopolitics as the political application of bioethics; the sociopolitical consequences of the biotech revolution; the administration and regulation of human and non-human life at the levels of both the population and the individual body” (Mathew [2024]).

As an example of the multitude of issues biopolitics puts in front of an educated reader and of the complexity of the matter, evident in everyday life, perhaps it is adequate to cite Majia Holmer Nadesan, a professor of communication:

“However, understandings and problematics of life have varied significantly across time, reflecting divergences in liberal governmentalities and distinct historical circumstances. Take, for example, the current cultural preoccupation with genetics. Genetic engineering and genetic-based pharmaceuticals, among other biotechnological pursuits, share an approach aimed at identifying and engineering what are seen as the most basic components of life. The molecularization of life accords with neoliberal rationalities by transforming complex phenomena (e.g., human diversity and disease) into biological assets and costs that can be represented and manipulated within marketized calculi of value. Accordingly, complex conditions such as depression, anxiety, and substance abuse are coded as social and economic risks with calculative costs for industry and the state that must be administered. Expert market authorities trained in molecular psychiatry offer pharmaceutical

solutions. Older liberal frameworks of knowledge, such as psychoanalysis and social anomie, lose credence among the public, insurers, and the state, their experts marginalized or retrained. How has this shift in perspective and protocol been achieved? The answers to this question are myriad because shifts in the 'conduct of conduct' reflect a vast array of new technologies, new subjectivities, and new calculations. And yet, across disparate, heterogeneous, and decentralized transformations in problem-solution sets, one can also discern a particular regularity, a particular frame, focus, or reduction on the 'elements' of life and their market capitalization. Foucault argued that efforts to understand and administer the life forces of the population have persisted since the eighteenth century, although formulations reflect changing liberal governmentalities producing historically distinct problem-solution frames" (Holmer Nadesan 2008, 2).

Considering a notion *biopower*, Vernon W. Cisney, professor of interdisciplinary studies and philosophy, and Nicolae Morar, professor of environmental studies and philosophy, say:

"'Biopower,' a phrase coined by Michel Foucault, is timely in the sense that it characterizes what Foucault calls the 'history of the present' (which is always, at the same time, a thought of the future). Biopower exposes the structures, relations, and practices by which political subjects are constituted and deployed, along with the forces that have shaped and continue to shape modernity. [...] What comes to mind when we think of power? Traditionally power was conceived as a commodity or a badge of honor supervening on life and the living, something one either has or lacks. Operating in a top-down manner, the bearer of power dictates, on possible penalty of death, what those *not* in power may and may *not* do. In other words, power is strictly delimiting, the conceptual model being that of the sovereign who rules over his (or her) subjects with greater and lesser degrees of legitimacy and severity. To guarantee its legitimacy, power must produce its own bodies of knowledge, its *truths*" (Cisney, Morar 2016, 1).

There is a need to mention one more definition of other notions that are in the title of this book, though they will be elaborated in particular chapters, and put together in context with biopolitics and the development of social sciences and humanities. They may be summarized in this introduction in the following, simplified, manner. First to define, "artificial intelligence (AI) [is] the ability of a digital computer or computer-controlled robot to perform tasks commonly associated with intelligent beings. The term is frequently applied to the project of developing systems endowed with the intellectual processes characteristic of humans, such as the ability to reason, discover meaning, generalize, or learn from past experience. Since their development in the 1940s, digital computers have been programmed

to carry out very complex tasks—such as discovering proofs for mathematical theorems or playing chess—with great proficiency” (Copeland [2024]).

The book before us does not claim to present a new scientific contribution to the theories of biopolitics and their applications. The goal is to present a kind of a overview on the basis of which students of social sciences and humanities, as well as all other interested educated readers, would be informed about contemporary scientific trends when it comes to biopolitical theories and their scientific use. In the first part of the book, an attempt was made to define the concept of biopolitics, as it was seen and conceived by thinkers from Michel Foucault, French historian of ideas and philosopher who was also an author, literary critic, political activist, and teacher, until today, with an emphasis on the theoretical aspects of biopolitics after 2000. In the second part of the book, the author dealt with the issue that is perhaps the most attractive and interesting for him, and extremely current, socially provocative and intellectually inspiring. It is about the permeation of biopolitics with the development of the phenomena of artificial intelligence and transhumanism, which is a topic that fascinates researchers from the spheres of natural and social sciences. Around these phenomena there are scientific and public-social engaged polemics, the result of which is a diversity of opinions and attitudes. The complexity of the phenomena related to biopolitics is difficult to explain in a simple language, because due to the multidisciplinary nature of the topic itself, the terminology is complicated and its understanding requires prior knowledge from various fields of social, humanistic and natural sciences. That is why the author sometimes stuck to formal scientific expressions, so as not to fall into the trap of simplifying or misinterpreting the conclusions of the original authors and their interpreters.

There is an extensive list of references on the topic that is the subject of this book in all world languages, in our country and the region. It is almost impossible to follow everything, and to accommodate the different interpretations and attitudes in a limited, balanced and readable scope of the review. An attempt was made to make a good selection of relevant and contemporary authors and their interpretations, foreign, domestic and from the region (meaning the territories of the former SFRY). The goal was clarity and transparency, accessibility to the readership and to make another comprehensive attempt to present contemporary theories of biopolitics, such as the existing work of Bogdana Koljević Griffith, Serbian political philosopher, editor, and politician.

Three published articles by the author of this book served as the basis of the book before us,<sup>1</sup> and during the writing of them an interest in biopolitical topics and aspects was born. Also, the author tried to go through the variety in the spectrum of main ideas and interpretations connected with biopolitics, but

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1 Popović, Kulenović 2024; Popović 2025; Popović 2025b.

without taking sides or entering their deeper analysis, which is utterly complex to be a work of one person. It may seem that the text of the book is overloaded with quotations, but the author is not a philosopher, sociologist, or anthropologist by basic education, but only a historian with an interest in social theories and their application in understanding historical and social processes of the past and the present. Because of the aforementioned and also considering there are certainly many authors who have profited and gained renown by researching the field of biopolitics, the historian behind this work decided that this form is suitable for an overview that introduces the reader to the views of recent foreign and domestic theoretical literature.

# THEORETICAL FRAMEWORKS OF BIOPOLITICS AND ITS APPLYING IN SOCIAL SCIENCES AND HUMANITIES: CONTEMPORARY RESEARCH<sup>2</sup>

## *Defining biopolitics: Foucault and contemporary theorists*

The transformation of repressive and the emergence of productive social mechanisms of power led to the creation of a “new biological order” in modern society. French scholars, historian Fernand Braudel and philosopher Michel Foucault explored the way in which the biological order “broke down”, though each of them wrote in a specific context. Foucault<sup>3</sup> analyzed the transformation of technologies of power/knowledge and the disciplining of the body that make it possible to regulate the population in a modern society. The context of historical chronologies and genealogies given by Foucault (the age of the *legal*, the *disciplinary age* and the *age of security*)<sup>4</sup> are not the only ones in which changes and transformations of power

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2 The fundament for this chapter are papers Popović 2025, Popović 2025b..

3 Foucault's biography in short: “French philosopher Michel Foucault (1926–1984) was widely admired for his innovative approach to concept and technology of power, and for inclusion of nontraditional methodology of research about historical and social topics. However, Foucault cherished for all his intellectual career strong affinity and interest in psychology, psychiatry, and a wide range of topics around mental health and disorders. [...] Namely, beside philosophy, Foucault held bachelor's degree in psychology (1949), and diploma in psychopathology (1952) received at the Institute of psychology which was part of the university now known as Paris Descartes University. [...] History of mental health was the subject of his state doctorate thesis entitled *Folie et déraison: Histoire de la folie à l'âge classique* from 1960 at the École normale supérieure in Paris, or in French category *thèse principale*. Translated in English as *Madness and Civilization: A History of Insanity in the Age of Reason*, Foucault's doctorate became one of his most popular studies, which is widely introduced in the humanities curricula of numerous disciplines and courses. Next important Foucault's research focused on medical history was rounded in a book in 1963 – *The Birth of the Clinic: An Archaeology of Medical Perception* (*Naissance de la clinique: une archéologie du regard médical*), and this time primary focus was on the history of hospital as institution. Finally, in the tenth chapter of his most popular study from structuralist phase, *Order of Things* (*Les Mots et les choses*, 1966), Foucault thoroughly analyzed position and disciplinary relations between ethnology and psychoanalysis, as well as their virtues and restrictions as a part of the ‘human sciences’” (Vasiljević 2022, 48–49).

4 Foucault explains it in the following way: “You are familiar with the first form, which consists in laying down a law and fixing a punishment for the person who breaks it, which is the system of the legal code with a binary division between the permitted and the prohibited, and a coupling, comprising the code, between a type of prohibited action and a type of punishment. This, then, is the legal or juridical mechanism. I will not return to the second

and knowledge can be analyzed. In fact, according to some authors, one mechanism does not replace the other, but new series of mechanisms appear and new, complex layers and social practices multiply, within which there is a change, improvement, or complication of power relations. The 18th century represented a major turning point. Then, together with the sovereign system of power, *death* entered the historical stage, since disciplinary mechanisms “introduced” the *body*, but, on the other hand, regulatory dispositifs “introduced” *life*, and, at that time, the development of the organization of power over life occurred (Marinković, Ristić 2019, 10). According to Fernand Braudel, during the 18th century in Europe and China there was a “breakdown” of the biological Old Order, and Braudel believed that then, despite mass deaths, diseases and crises, life managed to “overcome death” (Braudel 2007, 55–58). According to Foucault, power over life has been developing since the 17th century, through disciplinary mechanisms that interpreted the “body as a machine” and the emergence of the population as a “body” imbued with the mechanics of life that represents the basis for biological processes, such as birth, death, health, life expectancy. In this way, according to Foucault, biopower and the organization of power over life were developed by disciplining the body and regulating the population (Marinković, Ristić 2019, 10–11). While conceiving history of sexuality (Braudel 2007, 55–58), Foucault pictured it as research of modern biopolitics, and for him this notion implied forces that “brought life and its mechanisms into the realm of explicit calculations and made knowledge–power an agent of transformation of human life.” Sexuality was of crucial significance for bio-politics because it embraced some elements most important for the development of the power over life, such as access to both the individual and the social bodies (Bernauer, Mahon 2005, 154). American philosopher Arnold I. Davidson analyzes Foucault’s work on the history of sexuality. In the first volume of Michel Foucault’s *The History of Sexuality*, published in 1976, the back cover announced the titles of the five volumes that would complete Foucault’s project: Volume 2: *The Flesh and the Body* (about the prehistory of our modern experience of sexuality, concentrating on the problematization of sex in early Christianity); Volume 3: *The Children’s Crusade* (analyzing the sexuality of children); Volume 4, *Woman, Mother, Hysteric*, (discussing the specific

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mechanism, the law framed by mechanisms of surveillance and correction, which is, of course, the disciplinary mechanism. The disciplinary mechanism is characterized by the fact that a third personage, the culprit, appears within the binary system of the code, and at the same time, outside the code, and outside the legislative act that establishes the law and the judicial act that punishes the culprit, a series of adjacent, detective, medical, and psychological techniques appear which fall within the domain of surveillance, diagnosis, and the possible transformation of individuals. We have looked at all this. The third form is not typical of the legal code or the disciplinary mechanism, but of the apparatus (*dispositif*) of security, that is to say, of the set of those phenomena that I now want to study” (Foucault 2007, 20).



Michael Foucault

(1926–1984)

ways in which sexuality had been invested in the female body); Volume 5, *Perverts* (investigating the person of the pervert, present in nineteenth-century thought). The 6th volume, *Population and Races*, was “to examine the way in which treatises, both theoretical and practical, on the topics of population and race were linked to the history of what Foucault had called ‘biopolitics’” (Davidson 2005, 125).

Professor of Law and social history, scholar Edwin Greenlee, analyzing Foucault’s writings, stands out that Foucault’s early work, (*Madness and Civilization*, *Birth of the Clinic*, and *The Order of Things*, the emphasis of which is in the *Archaeology of Knowledge*) represents the interpretation of some unique cultural phenomena and critical reflection upon contemporary society. Through these interpretations Foucault developed and refined his approach to discourse analysis. According to Foucault, discourse may be posited at the points of intersection between networks for the exercise of power and networks for the production of knowledge. Knowledge and the structures of power are in a close connection, and the structures of power are in relation with the exercise of supervision and control functions (Greenlee 1991, 80). Greenlee continues observing Foucault’s influential work *Discipline and Punish* about the modern prison development, which, in a broader sense, considers the ‘rituals of power’ and techniques of social control. Foucault associates these two aspects with the development of the modern prison and other key institutions and areas of contemporary society – the factory, the hospital and the school (Фыко 1997, 137–145) and names these rituals and control mechanisms as disciplinary technologies (Фыко 1997, 163–164, 172–173). Also, in the work *Discipline and Punish* Foucault rethinks the relationship of the body to power. He analyzes the process in which the “natural” body of the modern period is created socially and culturally, and this was achieved through disciplinary techniques and connected into networks of power and knowledge (Фыко 1997, 131–165). Actually, the discussion is about power based upon the perspective of

knowledge/truth, disciplinary techniques, normalization and discourse. Through genealogical analysis and the model of discourse Foucault integrates a wider range of perspectives, for example political economics, the social construction of culture, and the investigation of the politics and practices of Western biomedicine. He uses them for understanding diverse phenomena: creation of the subject; macro-level political, social and economic processes; and the development of contemporary biomedicine (Greenlee 1991, 80).

Greenlee simplifies Foucault in two summarizing graphs:

**Figure 1 (Greenlee 1991, 81)<sup>5</sup>**

TOTAL DISCURSIVE AND NON-DISCURSIVE STRUCTURE

|                                |                     |                    |
|--------------------------------|---------------------|--------------------|
| DISCOURSE                      |                     |                    |
| NON-DISCURSIVE ENVIRONMENT     |                     |                    |
| social relations of production | political processes | mode of production |
| institutions                   |                     |                    |
| rules of knowledge formation   |                     |                    |
| social control requirements    |                     |                    |

**Figure 2 (Greenlee 1991, 81)**

|                                                        |                                       |
|--------------------------------------------------------|---------------------------------------|
| DISCOURSE                                              |                                       |
| Erudite Knowledge                                      | Subjugated Knowledge                  |
| elite texts                                            | forgotten/ignored knowledge           |
| dominant institutions controlling knowledge production | diverse sources of knowledge creation |
| specialist knowledge                                   | popular/minor knowledge               |

5 For the understanding of these two graphs see Фyкo 1998, 25–44, 70–84.

Lectures delivered by Michel Foucault in the years 1978/1979 at the Collège de France (see Fuko 2005) represent the moment when the topic of *biopolitics* emerged for the first time as a philosophical concept. A thread related to the notion of biopolitics runs through most of Foucault's works, which refers to questions of the market, economy, techniques of governance, prisons, madness, sexuality, rights, sovereignty, life and death (see Фyкo 1997, Fuko 2009, 2013). In these various phenomena, biopolitics is reflected as, called by Foucault, the *practice of truth* or the *regime of truth* (Foucault 2008, 18–22)<sup>6</sup>, and by the term *biopower* Foucault implies the forms of power that are exercised over individuals and subjects within a certain population. In the 1978 lectures, the term *biopower* (Foucault 2004, 1–28)<sup>7</sup> Foucault connects with the theme of *governmentality*<sup>8</sup> (see

6 Regimes of truth is a term coined by philosopher Michel Foucault, referring to a discourse that holds certain things to be “truths”. Foucault sought to explore how knowledge and truth were produced by power structures of society.

7 „A form of political power that revolves around populations (humans as a species or as productive capacity) rather than individuals (humans as subjects or citizens). The focus of much of his late work, biopower was conceived by Michel Foucault as a distinctively new form of political rationality. ... It viewed the population of the state as a resource and developed knowledge about its people accordingly: on the one hand, it wanted to learn about humans as a species and come to know their biological secrets, and on the other hand, it wanted to develop the capacity of humans as machines by disciplining their bodies. Foucault termed this new kind of political rationality biopower because it concerned itself with every aspect of life, right down to its most minute parts, though only in the abstract. It was interested in the health of the people in statistical terms, not existential terms—it cared about how people live and die, but not who lives and dies“. Buchanan, Ian, *A Dictionary of Critical Theory*, <https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095507415> (accessed 12 December 2024)

8 “Introduced in the later work of Michel Foucault as a more refined way of understanding his earlier idea of power/knowledge. Government refers to a complex set of processes through which human behaviour is systematically controlled in ever wider areas of social and personal life. For Foucault, such government is not limited to the body of state ministers, or even to the state, but permeates the whole of a society and operates through dispersed mechanisms of power. It comprises both sovereign powers of command, of the kind that figure in traditional political science and political sociology, and disciplinary powers of training and self-control. Sovereign power is coercive and repressive, involving exclusion through external controls and inducements. Disciplinary power, on the other hand, concerns the formation of motives, desires, and character in individuals through techniques of the self. Disciplined individuals have acquired the habits, capacities, and skills that allow them to act in socially appropriate ways without the need for any exercise of external, coercive power. Disciplinary power developed in the modern period through such means as schools, hospitals, military barracks, and prisons, and a particularly important focus is the family itself. It is through the disciplinary agency of the family that selves and bodies are regulated at the most intimate level. Foucault traces the emergence of a whole array of ‘experts’, based in scientific ‘disciplines’ and involved in the disciplining

Foucault 2004, 87-134; Koljević 2015, 31-32). Foucault's "analysis of a certain 'regime of truth', liberalism as a possibility of modernity and its way of realizing the relationship of knowledge/power, and criticism of biopolitics as a counter-politics that opens up a new possibility of rethinking the concept of political is important. For Foucault, biopolitics emerges as a series of historical practices and techniques of management derived from the discourse of liberalism. [...] Genealogy, for Foucault, is always a genealogy of power, and the genealogy of power as an analysis of biopower that determines [...] the phenomena of biopolitics, the discontinuity of time and context, as well as the different fields in which it occurs. From this, however, it does not follow that power should be equated with biopolitics, because although every genealogy is a genealogy of power, not all genealogies are biopolitics, but only those that are placed in a certain context of modernity as a historical form [...]. The specific possibility of the relations between knowledge and power is localized in different ways through the body, the dominant form of power in Western societies" (Koljević 2015, 32-33).<sup>9</sup>

According to Alpar Lošonc, philosopher and corresponding member of the Serbian Academy of Science and Arts, Michel Foucault believed that the backbone of biopolitics is represented by political economy, changes in the management of the family and society. Lošonc cites a quote from Lazzarato: "biopolitics is the strategic coordination of these power relations in order to extract a surplus of power from living beings. Biopolitics is a strategic relation; it is not the pure and simple capacity to legislate or legitimize sovereignty. [...] According to Foucault [...] biopower coordinates and targets a power that does not properly belong to it, that comes from the 'outside.' *Biopower is always born of something other than itself* (Lošonc 2008, 163-164; Lazzarato 2002, 10). According to Bogdana Koljević Griffith, "[...] it is also about total control of economic processes, i.e. the ultimate goal of modern political economy is population regulation in practically all aspects – especially economic growth, migration and health. Or, more precisely, given that the power exercised over populations relevantly includes the control and regulation of biological processes – birth, death, disease, food and living conditions in general" (Кољевић Griffith 2022, 1233).

Monica J. Casper, a sociologist whose scholarly and teaching interests include gender, bodies, health, sexuality, disability, and trauma, with particular expertise in reproductive health and politics, and Lisa Jean Moore, distinguished professor of sociology and gender Studies, state that in *Biopolitics: An Advanced*

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of individuals. It is through all these means that governmentality takes place", John Scott, Gordon Marshall, *A Dictionary of Sociology* (3 ed.), 2015, <https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095901877> (accessed 12 December 2024).

9 For brief account of Foucault's interest in state power, the ways in which it is exercised, and the forms of its logic see Hocero 2022, 16-18.



Thomas Lemke (born 1963)



Agnes Heller (1929–2019)

*Introduction*, Thomas Lemke, acknowledged contemporary theorist of biopolitics, “[...] offers the first scholarly introduction to the idea of biopolitics. The book is, in his words, ‘a general orientation’ designed to present a historical overview of the concept of biopolitics, while also exploring the term’s relevance to contemporary theoretical conversations and debates” (Casper, Moore 2011, VIII). Lemke gave his interpretation of the works of Michel Foucault, Giorgio Agamben and Antonio Negri, Italian philosophers, Michael Hardt, an American political philosopher and literary theorist, Agnes Heller, a Hungarian philosopher and lecturer, Ferenc Fehér, a member of the Budapest School of Gyorgy Lukacs along with his wife Agnes Heller, Anthony Giddens, an English sociologist who is known for his theory of structuration and his holistic view of modern societies, considered to be one of the most prominent modern sociologists, Didier Fassin, a French anthropologist and sociologist, Paul Rabinow, a professor of anthropology at the University of California (Berkeley), director of the Anthropology of the Contemporary Research Collaboratory (ARC), former director of human practices for the Synthetic Biology Engineering Research Center (SynBERC), and Nikolas Rose, a British sociologist and social theorist, with illustrating examples (among others, he discusses Germany during World War II). He dedicated the final chapter to some aspects of biopolitics which were not in the main focus of the researchers, considering the work of Rudolf Goldscheid (an Austrian writer and sociologist, co-founder of the German Sociological Association), vital politics, the Chicago School of human capital, and bio-economics (Casper, Moore 2011, IX).

Vanessa Lemm, an active researcher and philosopher who explores the relationship between the human being and its natural and social environments, and Miguel Vatter, professor of political science, point out: “The idea that biopolitics is somehow the core issue of governmentality is in many ways a contribution



Paul Rabinow (1944–2021)



Giorgio Agamben (born 1942)

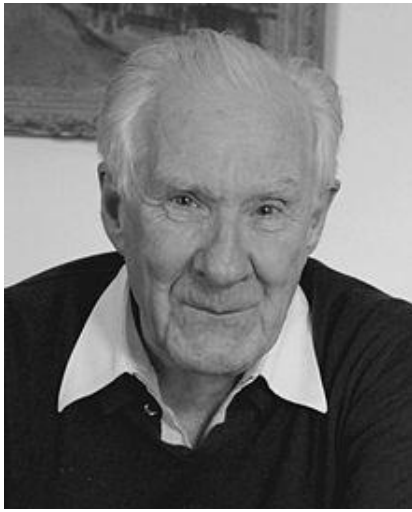
of recent Italian theory, from Antonio Negri and Giorgio Agamben to Roberto Esposito [an Italian political philosopher, critical theorist, and professor, notable for his academic research and works on biopolitics]<sup>10</sup> (Lemm, Vatter 2014, 2). In contemporary philosophical discussions, the works of Giorgio Agamben have contributed to the importance of topics related to the concept of biopolitics and the discourse of biopolitics. Agamben's reflections on biopolitics are an integral part of (post)political theory, and, according to Agamben, the most important concepts in the context of biopolitics and politics are, among others, *bare life*, *camps*, the *state of exception* and the *paradigm*. Agamben was influenced by Carl Schmitt, a German jurist and political theorist who wrote extensively about the effective wielding of political power, Foucault, Walter Benjamin, a German-Jewish philosopher, cultural critic, media theorist, and essayist, Hannah Arendt, a German and American historian and philosopher, one of the most influential political

10 “*Bíos* - his first book to be translated into English - builds on two decades of highly regarded thought, including his thesis that the modern individual - with all of its civil and political rights as well as its moral powers - is an attempt to attain immunity from the contagion of the extra individual, namely, the community. [...] Esposito applies such a paradigm of immunization to the analysis of the radical transformation of the political into biopolitics. *Bíos* discusses the origins and meanings of biopolitical discourse, demonstrates why none of the categories of modern political thought is useful for completely grasping the essence of biopolitics, and reconstructs the negative biopolitical core of Nazism. Esposito suggests that the best contemporary response to the current deadly version of biopolitics is to understand what could make up the elements of a positive biopolitics - a politics of life rather than a politics of mastery and negation of life”<https://www.amazon.com/Bios-Biopolitics-Posthumanities-Roberto-Esposito/dp/0816649901>. See also Campbell 2008, VII–XLIII and Esposito 2008.

theorists of the twentieth century, Martin Heidegger, a German philosopher known for contributions to phenomenology, hermeneutics, and existentialism, Jacques Derrida, a French Algerian philosopher who developed the philosophy of deconstruction, Jean-François Lyotard, a French philosopher, sociologist, and literary theorist, and J.-L. Nancy, a French philosopher (Koljević 2015, 69). Events from the sphere of biopolitics, such as September 11, 2001, are considered by Agamben to be a point of transition from the modern to the contemporary paradigm, and that the USA and the West have since then begun to create “a previously unseen event of establishing a state of exception as a rule.” With this change, according to Agamben, politics is transformed into biopolitics, and such a change refers to the techniques of control and surveillance over citizens, the creation of different and new camps. “This argumentation, in a provocative, original and decisive way, calls into question the usual, almost standardized differences between totalitarian regimes and modern democracies.” Scholars who interpret Agamben, such as Thomas Lemke, believe that his political vision is pessimistic, with a catastrophic outcome in politics and that it does not provide opportunities for a different upshot (Koljević 2015, 76). Koljević also states that Hardt and Negri „emphasize that the power of biopolitics is contained in that moment in which ‘not only are working conditions becoming more and more common throughout the world’ but ‘production tends to be biopolitical’, which means that it ‘includes the production of knowledge, affects, communication, social relations, in short, the production of common social forms of life.’“ (Koljević 2015, 111).

Agamben distinguishes between two terms, *bios* and *zoe*, known since the time of ancient Greece. The term *zoe* meant the simple fact of living, and the term *bios* meant the way of living specific to an individual or a group (Agamben 1998, 9–13, 43). As stated by Dušan Marinković and Dušan Ristić, Serbian sociologists, “Agamben explores the ‘hidden points of interweaving of the legal-institutional and biopolitical model of power’ and claims that ‘the inclusion of bare life in the political sphere represents the original – albeit hidden – core of sovereign power.’ Furthermore, the author believes that the basic categorical pair of Western politics is not friend-enemy, [...] but bare life-political existence, *zoe-bios*, exclusion-inclusion. The ‘main hero’ for Agamben’s *bare life*, i.e. the life of a holy man (*homo sacer*) which may be taken but not sacrificed (Agamben 1998, 45–68). The *camp*, according to the author, is a biopolitical paradigm of modernity (Agamben 1998, 69–105), and he tries to explain how the space intended for *bare life* and which was initially placed on the margins of the order, begins to progressively include and overlap with the political space“ (Marinković, Ristić 2019, 14–15).

Marijan Krivak, professor of philosophy at the University of Osijek, analyzes the philosophy of Alain Badiou, a French philosopher, formerly chair of



Alain Badiou (born 1937)



Jacques Rancière (born 1940)

Philosophy at the École normale supérieure and founder of the faculty of Philosophy of the Université de Paris VIII with Gilles Deleuze, stating that in his work Badiou follows Foucault, and in some respects is very close to Giorgio Agamben, putting in the first place Badiou's definition of life as a universal pattern of the philosophical search for truth. Badiou, on the path of the new political philosophy, wrote his most important and most systematic work, *Being and Event* (*L'Être et l'événement: L'Ordre philosophique*, 1988). Badiou summarized this book in his other work *Manifesto for Philosophy* (*Manifeste pour la philosophie*, 1989), which is a manifesto as equally for philosophy as for politics (Krivak 2007, 72-73). Also, Krivak concludes that Badiou does not explicitly mention biopolitics in his work, but the importance of his philosophical consideration of the phenomenon of the political is in Badiou's generic procedures that lead to the truth. Krivak has an opinion that Badiou is the best link to the political philosophy of Jacques Rancière, a French philosopher, Professor of Philosophy at European Graduate School in Saas-Fee and Emeritus Professor of Philosophy at the University of Paris VIII: Vincennes—Saint-Denis (Krivak 2007, 82). Krivak states that Rancière's book *Disagreement* (*La mésentente*, 1995) gives a new and very useful set of terms in a complex discussion concerning political efficiency and the end of politics (Krivak 2007, 83). According to Krivak's interpretation of Rancière's philosophy: "Political philosophy examines the relationship between the individual and the political order, and the nature of the individual's obligation to that order. Then, it deals with the coherence and identity of the political order from the point of view of the nation and groups within the nation, as well as the role of culture, language and race as its aspects. Finally, political philosophy deals with questioning the

foundations of various general political ideologies and positions such as conservatism, socialism and liberalism, and the nature of basic concepts such as state, individual, rights, community and justice, through which we understand and discuss politics. Since it is preoccupied with legitimizing and criticizing existing and possible forms of political organization, a good part of political philosophy is normative – it seeks to find the foundations of a special conception of right and good in politics” (Krivak 2007, 84). Also, Krivak states: “Rancière perhaps most seriously approaches the biopolitics founded by Giorgio Agamben in *Homo sacer* (1995)” (Krivak 2007, 99). Krivak continues with the statement that one of the basic questions of every political theory is that of *community*. Community is equally a question of any relevant political philosophy, and this question was considered by the French philosopher of the middle generation Jean-Luc Nancy, which he discusses in two of his books *The Divided Community* (*La communauté désœuvrée*, 1986) and *On the Singular Plural Being* (*Être Singulier Pluriel*, 1996) (Krivak 2007, 101). In his research, Jean-Luc Nancy dealt with the concept of “world creation” or *mondialisation* (*La création du monde ou la mondialisation*, 2002 – *The Creation of the World or Mondialisation*), and the issue of sovereignty (in the appendix of this book under the title *Ex nihilo summum*) (Krivak 2007, 107– 111; 112–116).

Koljević Griffith rightly considers Rancière’s work as a continuation of Foucault’s writings. She analyzes how Rancière, following Foucault, reconsiders the relation between knowledge and power. Rancière insists on equality as true democracy, on the one hand, and awareness of the relevance of competence, on the other, because the lack of competence is a characteristic of quasi-democratic societies (Koljević Griffith 2019, 79). Koljević Griffith stands out that “both Foucault and Rancière, therefore, demonstrate how the relation between politics and philosophy unveils itself as the question of truth and as the question of the power of the people. In this light, in both cases, we are dealing with fundamental theoretical and practical opposition to the practices of the politics of consensus which characterize neo-liberal post-democratic societies” (Koljević Griffith 2019, 79–80).

Trying to philosophically explain the possibility of the constitution of a (political) community, Marijan Krivak starts from the point of view of biopolitical philosophy, first of all Robert Esposito’s thoughts on the common root of the terms *communitas* and *immunitas* and Esposito’s effort to bring democracy and community together. Roberto Esposito rethinks community through the term *communitas*. According to the Italian thinker, the debt or obligation that binds individuals and in a way, “forces” them to give gifts has the role of some kind of an original drawback, for all members of the community. The same drawback affects the impact of reciprocal gifting to individual identity, which can be disastrous.



Roberto Esposito (born 1950)



Didier Fassin (born 1955)

Accepting the gift, the individual directly reduces his ability to self-determination and can only be defined as a part of the community. The one who is freed from communal obligations, or the one who enjoys the original autonomy, or the one who is consequently freed from previously contracted indebtedness – can enjoy the state of *immunitas*. Immunization implies how the individual is protected from the ‘expropriating (depriving) effects’ of the community. According to Esposito, the effort should be directed towards the attempt to construct “positive biopolitics”. In it, biopolitics, as the politics of life, would have to replace biopower as politics over life. Furthermore, Esposito says that project of “affirmative biopolitics” is only possible through a peculiar de(construction) of the interconnection of politics and biology, which has its origins in the category of immunization. Immunizing phenomena from the history of philosophy, and civilization in general, that Esposito deconstructs, are those of sovereignty, ownership and freedom; freedom understood in its liberal sense, i.e. the liberalist break, which is proving to be limiting for horizons of the concept of ‘freedom’ outside the dominant paradigm of the new world order (Krivak 2010, 119–120; Esposito 2008, 45– 47; Esposito 2011, 21–51). Krivak concludes rethinking of Esposito’s concept of political community: “Affirmative biopolitics’ is constituted ‘somewhere in between’, in the intermediate space around which there are communal, communitarian and totalitarian policies. [...] In the community (*communitas*) the rift between life and death becomes pacified in realization of the essential connection. [...] And only in such, ‘affirmative biopolitics’ should be able to achieve what not only Esposito but also many contemporaries long for. Namely, the *community*” (Krivak 2010, 135).

Giorgio Agamben, Michael Hardt and Antonio Negri in their works contributed the most to a reformulation of Foucault’s concept of biopolitics, giving a

strategic role to demarcation and delimitation (Lemke 2011, 6). Agamben emphasized the basic separation of 'bare life', considered as the form of existence reduced to biological functions, and political existence as a pillar on which Western political history lies upon since antiquity. „He argues that the constitution of sovereign power requires the production of a biopolitical body and that the institutionalization of law is inseparably connected to the exposure of 'bare life.'“ According to Hardt and Negri, a new stage of capitalism is marked by the dissolution of the boundaries between economy and politics, production and reproduction. “Whereas Agamben criticizes Foucault for neglecting the fact that modern biopolitics rests on a solid basis of a premodern sovereign power, Hardt and Negri hold that Foucault did not recognize the transformation of modern into postmodern biopolitics“ (Lemke 2011, 6). Agnes Heller and Ferenc Fehér analyzed a regression of politics because of increasing significance of biopolitical issues, while Anthony Giddens presented a concept of life politics, not completely referring to Foucault. Didier Fassin represents an idea of biolegitimacy<sup>11</sup> (Lemke 2011, 7).

Collection of papers *Government of Life: Foucault, Biopolitics, and Neoliberalism* consists of the contributions that critically engage reception of Foucault made by Italian theorists. These papers offer different and sometimes opposite approaches to the meaning of Foucault's notion of *biopolitics*. All of them being centered on the biopolitical core of the question of governmentality, showing the connection between biopolitics and governmentality that is often not obvious, the contributions in this volume consider various philosophical and political projections (Lemm, Vatter 2014, 2). Lemke and Maria Muhle, professor of Philosophy and Aesthetic Theory at the Academy of Fine Arts in Munich, consider governmentality as a radical modification and deepening of standpoints about power and knowledge presented by Foucault. Their approach applies interests in the history of systems of thought and epistemology to the sphere of biological life and how it may be used in the social sciences. Judith Ravel, a French philosopher and translator, Roberto Nigro, professor of philosophy at the Leuphana University Lüneburg, and Francesco Paolo Adorno, professor of moral philosophy at the

11 For Fassin, biolegitimacy refers to a “shift of legitimacies in the politics of life”: the shift from a political life to a biological life (of bios to zoé). „In his formulation of the concept of biolegitimacy Didier Fassin begins from the recognition that the right to life has gained priority on the human rights agenda in relation to social and economic rights. [...] There was an inversion of priorities in the contemporary moral and political field, in which the right to life would become more important than social and economic rights, and would impose itself in detriment to the others. He calls this difference between the two perspectives ‘the conflict of two ethical communities that have an unequal legitimacy’“, Maluf 2015, „Biolegitimacy, rights and social policies: New biopolitical regimes in mental healthcare in Brazil“, *Vibrant: Virtual Brazilian Anthropology* 12 (1), <https://www.scielo.br/j/vb/a/tvW9PwscBZzX37DCGq5MZTb/?lang=en#> (accessed 21 May 2024)



Theodor W. Adorno  
(1903–1969)



Nikolas Rose  
(born 1947)

University of Salerno, contrast Negri's, Agamben's and Esposito's interpretation of biopolitics with their considerations of what Foucault may have intended with his concept of biopolitics. The Anglo-American reception of late Foucault sees the problem of government as a way of understanding the reasons for the domination of liberal political philosophy. Frédéric Gros, a French philosopher, a specialist in the work of Michel Foucault and an editor of Foucault's papers, Simona Forti, an Italian philosopher and academic, whose main interests are in political philosophy and contemporary ethics, and Vanessa Lemm connect Foucault's stands on the government problem with Greek philosophy (Lemm, Vatter 2014, 2–3).

Examining and comparing the work of Theodor W. Adorno, a German philosopher, musicologist, social theorist, and Michel Foucault, Deborah Cook, a Canadian philosopher specialized in phenomenology, existentialism, critical theory, and post-structuralism, thinks that their critiques of current predicament are complementary in important aspects. These critiques focus on the historical forces. While Adorno's focus is on the economic forces, Foucault's is on the political. In the time of the rise of racist and authoritarian tendencies in the West, they answered very similarly to the question what should be done about it. Adorno focused on exchange relations and capitalist economy, while Foucault was dedicated to the studies of power relations in the West. They had very different ideas about the impact of Christianity on the formation of the individual. Foucault had an opinion that resistance to power is widespread, while Adorno claimed that it was just sporadic and weak, mostly ineffective when it occurred. Adorno thought



Michael Hardt (born 1960)



Antonio Negri (1933–2023)

that political action should be deferred and both Adorno and Foucault agree that the world can be apprehended through a prism of concepts (Cook, 2021, 9–11).

Paul Rabinow and Nikolas Rose consider that the concept of biopower is more general than the concept of biopolitics. According to them, it includes all specific strategies that affect the collective phenomena of human vitality, disease and mortality. “In other words, biopower refers to knowledge, governance regimes, and intervention practices that are desirable, legitimate, and effective.” The concept of biopower, according to these authors, contains three elements: “one or more true discourses (knowledge) about the ‘vital character of human beings’”; strategies through which the collective existence is influenced, for life and health reasons; modes of subjectivization (subjugation), which are used to convince individuals to work on themselves or others (Marinković, Ristić 2019, 15–16; Rabinow, Rose 2006, 195–217). Nikolas Rose asks an important question: how did the biological existence of human beings become political? Considering biopolitics as a “new configuration of control”, he argues that risk is a key aspect of biopolitics. Rose believes that life today is subject to shaping and reshaping at the molecular level, through precise interventions, that the distinction between cure and enhancement is constantly shifting. In this way, life is managed and improved not only by individuals, but also by their doctors, who are in contact with scientists, entrepreneurs and corporations. In this way, according to Rose, “biopolitics merges with ‘ethopolitics’ insofar as the ethos of human existence (sentiments, morals, beliefs, etc.) is placed at the service of the individual’s ‘self-management’ over life and how he should live” (Marinković, Ristić 2019, 16; Rose 2001, 1–30). Michael Hardt and Antonio Negri believe that today biopower is expressed through machines,

bodies and minds of citizens, thanks to communication systems, information networks, social protection systems, and monitored activities. The new form of power, according to Hardt and Negri, is control, and “Empire appears in the form of a ‘highly technical machine’, and the source of its normativity is a new economic-industrial-communicative or, in other words, ‘globalized biopolitical machine’” (Marinković, Ristić 2019, 18; Hardt, Negri 2013, 215 –236).

### *Research aspects connecting biopolitics, bioethics and biotechnologies*

This chapter will follow some of the most important trends that are dominant in the research field of recent social science theories that permeate biopolitics, bioethics and biotechnologies, but only briefly. In the second part of the book, within the chapter about transhumanism and bioethics, these research will be presented in a more detailed manner, together with religious aspects in connection. Also, in the chapter where it is discussed how biopolitics theories may be applied and the variety of problems in solving which researchers use these theories, some space will be given to the aspects of bioethics and biotechnologies.

Edwin J. Greenlee pointed out, already in 1991, that “concern with the political-economic context of medical practices, the critical evaluation of biomedicine, and the phenomenological illness experience of the patient are all hallmarks of present-day critical medical anthropology. [...] A number of medical anthropologists have examined the way in which biomedicine can function ideologically” (Greenlee 1991, 79). Greenlee continues developing his stands: “Critical medical anthropology has also looked to research on the cultural construction of knowledge. [...] Knowledge, along with science and medicine, is a socially constructed phenomenon. As such, within the setting of contemporary western society, knowledge reflects existing social class divisions. In this instance, positive knowledge, science, and medicine are hegemonic, yet not monolithic. Alternative, non-dominant types of knowledge and science offer alternative models and solutions” (Greenlee 1991, 80).

The emergence of biotechnologies and bioethics are mutually conditioned. Anthropologists deal with considerations of research ethics and the moral implications of applying actions to the human body such as reproductive technology or the use of stem cells.<sup>12</sup> The ultimate goal of discussions on bioethics is the adoption

12 According to Zorica Ivanović and Predrag Šarčević: “although it was always present in anthropology, the body was not always a problem. Its emergence from ‘theoretical anonymity’ is particularly noticeable in the 1980s, not only in anthropology but also in other social sciences and humanistic disciplines that stop viewing the body and human sexuality exclusively as a biological given and direct attention to the social and cultural dimensions of its existence. In this way, the body wins, many years after the early thoughts of Paul

of normative acts based on value judgments. In this way, certain biotechnological procedures are legalized in accordance with the cultural values of a certain society, i.e. in accordance with what is considered morally correct, thinking and acting. The purpose of biotechnologies is to help achieve the biological function of reproduction and therapeutic function, which eliminates the consequences of various diseases or damage to the organism when other methods of treatment are not effective. In the first case, it is about assisted reproduction, and in the second, about research in genetics, applied molecular biology, immunology and similar fields. According to some, procedures in the field of corrective surgery can be added to the above, as well as theoretically possible and yet unrealized procedures, such as human cloning, as well as transplantation procedures (Жикић 2018, 321–322).

Biotechnologies, as the use of stem cells in the treatment of autoimmune diseases, implantation of implants that regulate the work of certain organs, gene therapy of “rejuvenation”, etc., lead to the questioning of cultural ideas about the body as a unique unit with established boundaries, towards the outside world and in terms of functioning, which is some a kind of guarantor of the permanence and immutability of the self and the framework of its existence. We can also consider the question of representations of the body as an organic whole, if it is not completely organic, that is, the question arises whether we can talk about the body as something natural. This raises the questions of what is the essence of being human, what is humanity in itself, how to define the self and its boundaries (Жикић 2018, 325–326). Namely, a human organism with a surgically implanted implant can be considered a cyborg, i.e. a cybernetic organism, although such usage of the term is rarely used. In this way, the boundaries of humanity, which were previously considered exclusively biological, are expanded, and thus the boundaries and frameworks in society that are considered natural are overcome. In this way, according to Bojan Žikić, Serbian anthropologist, “natural and social, i.e. cultural, no longer have to appear as separate ontological categories” (Жикић 2018, 326).

When it comes to reproduction management, this term includes demographic analysis and projections by economists, based on which certain models of reproduction management are constructed and applied, which have proven to be unreliable. There has been a conceptual change in the formulation of international population policy; there was an insistence on population control, so that the orientation would be directed towards reproductive health. Žikić believes that the bearers of reproductive policy in the local context and the social and cultural motives that guide the bearers should be determined (Жикић 2008 A, 153–154). According to Žikić: “Population control, i.e. the desire to limit the growth of a

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Radin and Marcel Moss about the mechanisms of its social and cultural construction, the status of a cultural artifact” (Ivanović, Šarčević 2002, 14)

country's population, for example, primarily for economic reasons, has its roots in Malthusian concerns from the second half of the last century onwards regarding the alleged population crisis, i.e. fear that the planet's population will soon threaten its natural resources and its own well-being. [...] A more direct criticism of the ideology of population control, sees it as pure racism and negative elitism or social Darwinism, i.e. as a successor to nineteenth-century and Nazi eugenics theories in every respect - ideological, organizational and personal." (Жикић 2008b, 15). Such attitudes are the result of the influence of the critic by feminist theorists. Also, other researchers dealt with the problem of the relationship between public health and human reproduction, towards population control programs. According to their claim these programs aimed at limiting fertility, as a solution to a problem of population growth that concerns modern world (Жикић 2016, 61). Reproduction, reproductive rights and reproductive health are related to poverty and general insecurity, which is connection to nutrition, hygiene and health services, sociocultural determinants of health status (Жикић 2016, 62). If we take for example, contraception is socially organized by multinational pharmaceutical companies, which are in direct cooperation with international governmental and non-governmental organizations. The question arises of the role of governments in certain countries and their policies, when it comes to the immediate consequences for the development and implementation of contraceptives and strategies in terms of reproductive health. Such policies can be strongly pro-natalist, neutral and anti-natalist (Жикић 2008b, 16).

Editors of the collection of papers *Biopolitics in Central and Eastern Europe in the 20th century: Fearing for the nation*, Joachim von Puttkamer and Immo Rebitschek, German historians, explain the biopolitical aspects of Central and Eastern Europe in the previous century from the historical point of view. The Area of East Central and Eastern Europe during the twentieth century went through intensive and often violent cataclysms. Governing of life and death took place under different conditions, caused by these developments. The imperial borderland communities in the countries as Poland, Austria or Hungary turned into nation states both during and after the First World War. Nation, not the populace, was in focus, when the biopolitics of Eastern European societies is considered. State activities in the field of biopolitics were not only a consequence of the need to secure social welfare and individual well-being, because the small and large nations in Europe competed, and the survival of some was endangered (Puttkamer, Rebitschek 2022, 2). Editors speak of the contributions of this collection papers, remarking: "Female fertility and (the lack of) female agency take centre stage for the studies [...] due to the fact that most policing technologies are inherently designed to regulate and interfere with female biology. Societies and governments in twentieth century East Central

and Eastern Europe raised, enforced or negotiated their claim on potential life (and women's bodies) for the sake of communal and national survival, a thriving economy, or even racial supremacy" (Puttkamer, Rebitschek 2022, 3). Some contributions of the authors are considering understanding of biopolitics that goes beyond the sphere of procreation and reproduction, i. e. population management issues in relation to matters of health, nutrition and hygiene, combating hunger and disease (Puttkamer, Rebitschek 2022, 3).

When the historian's approach is considered, Ivana Dobrivojević Tomić, Serbian historian, did research on the problem of family planning during the existence of both Yugoslavias (1918–1991). The author points out that controlling and limiting births through forced abortions as the only method of family planning was not the focus of researchers before. Regulations governing the termination of pregnancy became more liberal relatively early on, and the widespread availability of abortion has been noticeable since the early 1960s. In Eastern Europe, in the 1960s and 1970s, there was a turn towards pro-natalist policies and stricter legislation on the regulation of termination of pregnancy. In Yugoslavia, liberalization continued after abortion was allowed. Unlike in European countries until the end of the 1960s, the issuance of modern contraceptives was not linked to marital status. In Western European countries, abortion was almost always a "backup option" for couples. On the other hand, in Yugoslavia and in Eastern Europe, abortion can be seen as the basic "method" of family planning. While the increasingly widespread use of contraceptives in the West led to a reduction in the number of abortions to 0.6 % per woman, in Eastern Europe and Yugoslavia there was resistance to contraception (Dobrivojević Tomić 2022, 7–8).

Catherine Mills, Australian philosopher, analyzing in her work connections and relations between bioethics and biopolitics, points out Foucault's standpoint that "power no longer operates through a violence imposed upon subjects from above, but through a normalizing regulation that administers and fosters the life of subjects. In this new regime, power incorporates itself into and takes hold of the body of the citizen through the discreet force of normative regulation or 'the normalization of life processes'" (Mills 2011, 7). Mills also claims: "with the development of technologies that challenge our ethical intuitions, the traditional (bio)ethical conceptions of ethical subjectivity and normative constraints such as individual autonomy, the dichotomous formulation of nature and culture, and the trade-offs of liberty versus harm are also coming under challenge. In their stead, new formulations that emphasize embodied singularity, relationality and an inescapable responsibility for others provide new ways of addressing the ethical problems of contemporary life" (Mills 2011, 8). Mills tends to point out the most important concerns in bioethics of contemporaneity, mostly considering

liberal eugenics and reproductive ethics (Mills 2011, 9). Marina Calloni, Italian philosopher, writing in 2002 from the feminist point of view, argues that UN Conferences and European legislation promoted relevant policies toward the issue of gender-based violence in the last decades of 20<sup>th</sup> century, but, considering reproductive rights (e. g. abortion, *in vitro* fertilization) a lack of recognition is present. New emerging forms of biopolitics due to the increasing power of biotechnologies and discoveries in the field of genetics initiate new bioethical problems that represent challenges for women and European feminists (Calloni 2002, 78).

In her paper *On Postsecular Paradigm and Influence of Religion in the Field of New Medical Biotechnologies – Some Introductory Remarks*, Zorica Ivanović, Serbian anthropologist, among other issues, considers governing biotechnologies. She states:

“Today, already extensive literature on various aspects of contemporary biopolitics points to the importance of new medical biotechnologies, which should be understood as ‘political technology invested in the body’. It is a ‘politics of life itself’, which differs from biopolitics from previous periods in that it enables us to control, manage, reshape and adjust ‘the very life capacities of human beings as living creatures’. Rose [Nikolas Rose] especially emphasizes that what is still new about these technologies, when it comes to advanced liberal societies, is the change in political rationality and management technologies, which is particularly noticeable through transformations in the domains of social security, health and safety. [...] Here it is enough to say that the changes that Rose talks about led to the development not only of a new socio-political discourse but also of an institutional-legal framework for the management of biosciences and technologies, first in Western societies and then on the international and global level. In this newly created social and political field for the regulation of science and ethically problematic technologies, an important role is played by bioethics, which has developed into a significant field of specialized knowledge and professional expertise and has become the ‘conceptual basis of the transcultural debate’ [...] In any case, one of the important elements in the repertoire that states have developed to deal with the challenges of managing biosciences are bioethical bodies. These bodies represent advisory institutions of expertise appointed by state or international authorities, which have the task of considering morally and technically complex issues on behalf of the public with the aim of encouraging wider discussion and giving opinions and recommendations to awardees” (Ivanović 2018, 855–856).

Editors of the collection of papers dedicated to the thought of H. Tristram Engelhardt, Jr., a philosopher who stood out with his work in philosophy, medicine, bioethics, and theology, published in 2015. On the one hand, Engelhardt’s best-known book *The Foundations of Bioethics* (1986, second edition in 1996), is

explaining the empirical reality of moral pluralism of the modern world. On the other hand, his book *The Foundations of Christian Bioethics* (2000) represents a counterpart of his previous work, and in it Engelhardt gave a detailed and serious account of Orthodox Christian bioethics. His conclusions were “that general secular reason is unable to secure a uniquely true account of the right, the good, the virtuous, or the just. It cannot even establish a definitive account of the reasonable or the reliable. As a result, general secular reason is powerless to provide definitive foundations for content-full secular bioethics, much less settle the deep moral controversies of medicine and health care policy” (Rasmussen, Smith Iltis, Cherry 2015, XVI).

Andrew Byers, Visiting Assistant Professor of History, Duke University, and Patricia Stapleton, a comparative political science and public policy scholar, define biopolitics as “the merger of life and politics” (Byers, Stapleton 2015, 1). Bodies are, according to these authors, objects of biopolitical power and, consequently, surveillance and disciplining of the body are the ways how people are being subordinated to the state (Byers, Stapleton 2015, 2). Authors imply that there is a series of once unrealistic, utopian biopolitical ideas, that are being more and more realistic in modernity, and some of them are even considered dangerous (Byers, Stapleton 2015, 4). Contributions in the collection of papers *Biopolitics and Utopia: An Interdisciplinary Reader* (2015) try to present a variety of possibilities of the results of biopolitics and biopolitical debates in the modern world and in the near future (Byers, Stapleton 2015, 7).

*Research on biopolitical aspects of media,  
democracy, globalization and ex-colonial world*

Contemporary problems concerning media, democracy, globalization and the ex-colonial world are some of the social aspects where social theories derived from the work of Foucault and then developed by other thinkers may be applied. Today, when humanity faces many crises in recent years, considering epidemics, migration, anti-global and anti-institutional movements and wars, these aspects are very actual and socially involved. Also, they are important if one tries to understand the complexity that is a huge challenge for a researcher, if he tries to understand and explain the contemporary social and historical processes. Plurality of viewpoints and interpretations is evident in the scientific work from the turn of the centuries, influenced by the multiplicity of political and social events on a global level, together with major breakthroughs in technology development. Multiperspectivity is always inspiring for readers and those who are constantly rethinking the present, always connected with the past.

Beatriz da Costa, late interdisciplinary artist, and Kavita Philip, who studies colonialism, neoliberalism, and technoscience using history and critical theory, while writing about “tactical biopolitics”, emphasize that this term draws its inspiration from “the assembly of resistant cultural practices referred to as *Tactical Media*, and the intellectual ferment around the history of biopolitics” (da Costa, Philip 2008, XVII). “Tactical biopolitics” connects practices of technoscience, activism, and art, on one side, and the interdisciplinary exchange of opinions that followed Foucault’s notion of biopolitics, on the other (da Costa, Philip 2008, XVII). Da Costa and Philip cite Garcia and Lovink’s (1997) definition of tactical media practices: “Tactical Media are what happens when the cheap ‘do it yourself’ media, made possible by the revolution in consumer electronics and expanded forms of distribution [...] are exploited by groups and individuals who feel aggrieved by or excluded from the wider culture. Tactical media do not just report events, as they are never impartial they always participate and it is this that more than anything separates them from mainstream media. [...] Tactical media are media of crisis, criticism and opposition. This is both the source of their power, [...], and also their limitation” (da Costa, Philip 2008, XVII). “Tactical Media clearly defined itself as a cultural, decentralized, non-institutionalized formation, it has also found creative ways to explore temporary alliances and funding sources within institutionalized academic and public contexts. Over time, it has also built increasing ties with larger strategy-based movements such as the antiglobalization movement” (da Costa, Philip 2008, XVIII).

Sandro Mezzadra, political scientist, Julian Reid, political theorist, philosopher, and professor of International Relations and Ranabir Samaddar, an Indian political scientist, imply that “Foucault’s works have had a massive influence on postcolonial literatures, particularly in political theory, literary criticism and historiography, in recent years [...]. But while Foucault’s thought has been inspirational for the interrogation of colonial biopolitics, as well as governmental rationalities concerned with development in the postcolonial era, his works have too often failed to inspire studies of the forms of political subjectivity that such regimes of power incite. Instead, they have been used to stoke the myth of the inevitability of the decline of collective political subjects, often describing an increasingly limited horizon of political possibilities and provoking disenchantment with the political itself. Worse, they have been the target of a morose criticism for their apparent inability to have addressed spaces outside the Western world [...]. And worse still, they have been used to displace our understanding and recognition of the brutality and exploitative nature of colonial and every other form of biopolitics: the war, killing and multiple forms of violence without which it would not have been possible” (Mezzadra, Reis, Samaddar 2013, 1). These authors, as editors of

the collection of papers *The Biopolitics of Development: Reading Michel Foucault in the Postcolonial Present* (2013) and other contributors to this volume intend to find ways how to use Foucault's ideas in aim to give answers to the fundamental question: „Why and how it is human life in postcolonial settings has been depoliticized to such effect?“ in the context of the ‘underdevelopment’ of postcolonial peoples (Mezzadra, Reis, Samaddar 2013, 2).

In the introduction to the collection of papers *Radical Democracy and Collective Movements Today: The Biopolitics of the Multitude versus the Hegemony of People* (2014) editors imply the following viewpoint: “Horizontal, swarm-like struggles for freedom and equality had fizzled out after their global momentum in 2011, the old neoliberal order still survived in a zombie-like manner which remained yet as blood-thirsty as ever, the need for a way out and forward was massively felt, but this way remained always obscure, uncertain, if not blocked forever. For global multitudes aspiring to greater justice and freedom for all, the practical dilemmas and political divisions were nonetheless the same as they have been in the last 15 years. [...] Among high-profile radical intellectuals, Alain Badiou and Slavoj Žižek [a Slovenian Marxist philosopher, cultural theorist and public intellectual] argue today that in 2011 we witnessed a re-awakening of history, a global popular uprising against the unlimited power of ‘a financial and imperial oligarchy’ which benefits from the regime of ‘capitalo-parliamentarism’” (Kioupkiolis, Katsambekis 2014, 3). Kioupkiolis and Katsambekis, professors of Contemporary Political Theory, also stand out the point of view of Hardt and Negri from 2012 that these movements “are foundational principles that we already take to be inalienable rights”. According to Hardt and Negri, the horizontal organization of the multitude will enable collective participation in making decisions excluding hierarchies. Badiou and Žižek consider protests of 2011 as weak because of the lack of concept that would ensure durable organization. The authors of the aforementioned collection of papers try to seek the answers to the debate about horizontal multitude and the politics of hegemony in contemporary political theory (Kioupkiolis, Katsambekis 2014, 3–4).

Koljević Griffith reconsiders biopolitical aspects of democracy in the context of political events at the beginning of the 21<sup>st</sup> century: “Prevailing theoretical and practical conditions suggest that *en generale*, we still live in the world of biopolitics. Because, in *contemporary biopolitics*, on the level of technology and sexuality everything is possible, and *everything is allowed* in all spheres – so long as it does not infiltrate the heart of *politics* and *economy* and thus threatens the *system* itself. This is to say that *political virtuality*, as well as the simulation of economic sustainability of structurally unsustainable paradigms, with expansive roles of *crypto-elites*, still enables the *hyper-production* of the *status quo* in the Western

and some parts of the non-Western world. Through multiplicity of techniques of power, domination and intervention, in Arab countries the influence of imperial and colonial forces is still present and visible; the OWS movement, at this moment, is not going through its best days, while, on the third side, in spite of numerous new processes occurring on European grounds, the dominance of force is still at stake, even when most of *the people* are opposed to it” (Koljević Griffith 2014, 87).

Koljević Griffith in one of the newest articles *After Biopolitics / True Democracy as 21st century “Lifeworld”*, she argues: “In this light, divergent forms of ‘liberal democracy’ as procedural i.e., formal democracy which appears as the primary condition of possibility for biopolitical neo-totalitarianism are analyzed. This neo-totalitarianism of the West i.e., of Pax Americana, which simultaneously includes the project of the EU, is primarily manifested through numerous contemporary phenomena of biopolitics – from ‘humanitarian interventionism’ to ‘wars against terrorism’ and measures taken against COVID 19. [...] In other words, special relevance of education for true democracy – as well as for the structural relation between the political and the normative element – is emphasized. In such a way, the author at the same time reflects upon the necessity of culture for true democracy and formation of the *polis* because culture – which always comes in plural – is the *sine qua non* not only for politics and ethics but for the possibility of civilization. The potential for realization of political subjectivity and sovereignty is then presented in the form of true democracy as self-determination of the people” (Кољевић Грифит 2023, 79)

### *Biopolitics and epistemological issues: contemporary research insight*

In the following lines, we will try to present the contemporary views of scientists who connect biopolitics with epistemological problems. It may seem that through the extensive quotations the author of these lines move quickly from topic to topic and from one theorist to another. Considering epistemological issues, it seems the numerous theoretical concepts that will be mentioned could not survive without referring to biopolitics and Foucault, and it may be noticed that biopolitics is becoming a popular trend in science and a kind of empty signifier into which different contents are being mixed, sometimes difficult to be properly linked, although the authors make great efforts to do so, trying to be modern and original.

According to Foucault, in any given culture and at any given moment, there is always only one *épistémè* that defines the conditions of possibility of all knowledge, whether expressed in a theory or silently invested in a practice. Foucault viewed history as being broken up into distinct *epistemes* (‘Episteme’ is the Greek

for knowledge or understanding). He explores three – the *Renaissance Episteme*, the *Classical Episteme* and the *Modern Episteme*. What's important to consider is that Foucault is not here defining eras as a conventional historian would; Foucault does not see each episteme as a 'development' (progression) from the last episteme. So, these are historical periods which are not eras – and the following of one by another should not be seen as a 'progression' (Foucault 2002, XXII– XXIV, 60).

Nancy Ettlinger, a professor in the Geography department at The Ohio State University, in her paper *Governmentality as Epistemology* considers Foucault's governmentality as a kind of analytical framework through which researchers may interpret and use empirics toward critical theory. "Although Foucault viewed the discipline of geography narrowly regarding spatial patterns, his geographic sensibilities connect with contemporary critical human geography, which examines processes relationally from a topological, non-Euclidean view of space. Further, Foucault's novel approach to multiscale analysis offers critical insight into one debate: whether scale as an analytical concept unproductively reifies hierarchy and obscures the mobilization of power. Foucault's ascending analysis clarifies how scale-sensitive analysis can illuminate the mobilization of power regarding its targets (as per techniques of biopower and disciplinary power) and its diffuse sources, and how actors' practices can become unchained from normalizing societal pressures. [...] Foucault scholarship [is an] overall framework that is useful for analyses concerning a variety of questions" (Ettlinger 2011, 537). The author gives examples of using Foucault's theoretical framework for the analyses of urban and race-related issues.

Maurizio Meloni, a social theorist and a science and technology studies scholar, commenting on Roberto Esposito's work, says that Esposito, as an Italian political philosopher of a wide-known reputation, gave a new impulse to the Foucauldian project of an ontology of the present. His book *Bios*, represents a new reading of biopolitics through the perspective of his paradigm of *immunization*. Esposito's goal is to show how a politics of life in modernity "continually threatens to be reversed' into a politics of death" (Meloni 2010, 551). Meloni also analyzes Foucault, discussing his well-known essay 'Kant on Enlightenment and revolution' which Foucault used to define a distinction between two great traditions in modern philosophy, both originating with Kant. First, an 'analytic of truth', which is a form of philosophy mainly oriented towards epistemological issues, aimed at defining 'the conditions in which a true knowledge is possible'. The second 'critical tradition' puts its focus on questioning: 'What is our present? What is the contemporary field of possible experience?' which might be called an ontology of the present, or, 'an ontology of ourselves' (Meloni 2010, 551–552, Foucault 1986, 96). Meloni continues that the first trend, which is epistemological

in character, dominates philosophy in the Anglo-American world, while the second trend, the one engaged in an 'ontology of the present', has been revived in recent Italian political theory, especially through influential works of Antonio Negri and Giorgio Agamben (Meloni 2010, 552). Meloni finishes with a following opinion: "In a way, what is needed today for philosophers who want successfully to understand the intricacies of biopolitics is a kind of reconciliation between the three aspects of the Foucauldian intellectual project: the political thinker who focused on the superimposition of life and politics in modernity; the archaeologist of the sciences, who addressed modernity as the threshold of a new epistemic spatialization, where life was first conceived as 'a regional and autonomous discourse'; and, finally, the anti-metaphysician who firmly believed in the methodological need to locate the emergence of any 'particular type of rationality' in the materiality of its specific and situated practices" (Meloni 2010, 564).

Interpreting Foucault's biopolitical theory, while writing about biopolitics of security in the 21st century, Michael Dillon, a historian and biographer with extensive experience of teaching the history, politics and society of China and the Chinese language, and Luis Lobo-Guerrero, professor of History and Theory of International Relations at the University of Groningen, connect it with epistemology. They are discussing in terms of a people, public, a nation or a state as agents with intentions that have a certain view as a part of a contemporary political discourse. Authors develop their opinion that the life which Foucault first considered analyzing the bio-economy of power relations was a life of 'population', which is not a subject, a people or a public, but "a cohort of biological individuals" and displays behavioural characteristics and correlations. Dillon and Lobo-Guerrero underline:

"The epistemologies of political subjectivity – especially in relation to traditional security discourses – are preoccupied with establishing secure knowledge about more or less rational choice, interests, intentions and capabilities, and so on. Even when they cannot realise it, which is always, their regulative epistemological ideal is the establishment of causal law. Conversely, the epistemologies associated with the biopoliticised securing of populations are those concerned with surveillance and the accumulation and analysis of data concerning behaviour, the patterns which behaviour displays and the profiling of individuals within the population. Instead of causal law, such power/knowledge is very much more concerned to establish profiles, patterns and probabilities" (Dillon, Lobo-Guerrero 2008, 267).

From the 18th century onwards, according to John Marks, a freelance writer and lecturer, biological existence is no longer a neutral, unchanging essence upon which political existence is superimposed, and that biology becomes closely related

with the domain of power and knowledge. He thinks that humanity enters an era in which biopolitical problematization becomes crucial and is characterized by an uncertainty over the way in which these new technologies reconfigure the natural world epistemologically and even ontologically, on the one hand, and also by what Paul Rabinow (1999) identifies as a 'purgatorial' dimension, on the other. This point of view emphasizes that most of the new technologies promise much in terms of material interventions, but it is more than what they can currently achieve. For example, in the period when Rabinow wrote, the possibilities for genetic therapy were extremely limited, and pre-natal and pre-implantation genetic testing could only screen for a very small number of genetic 'abnormalities'. So, "there is a widespread sense that we may be on the verge of significant shifts in our ability to manipulate and transform life, combined with the knowledge that we do not yet know the limits of these new capacities" (Marks 2006, 333–334).

Walter Mignolo, an Argentine semiotician (School for Advanced Studies in the Social Sciences) and professor at Duke University who has published extensively on semiotics and literary theory, and worked on different aspects of the modern and colonial world, exploring concepts such as decoloniality, global coloniality, the geopolitics of knowledge, transmodernity, border thinking, and pluriversality, speaks in the paper we analyze about (de)coloniality, border thinking and epistemic disobedience. First, he defines decoloniality and brings it in connection with biopolitics, finding origins of this concept in the Third World. Mignolo observes: "The nature of its impact was similar to the impact produced by the introduction of the concept of 'biopolitics', whose point of origin was Europe. Like its European counterpart, 'coloniality' moved to the center of international debates in the non-European world as well as in 'former Eastern Europe.' While 'biopolitics' moved to center stage in 'former Western Europe' (cf., the European Union) and the United States, as well as among some intellectual minorities of the non-European followers of ideas that originated in Europe, but who adapt them to local circumstances, 'coloniality' offers a needed sense of comfort to mainly people of color in developing countries, migrants and, in general, to a vast quantitative majority whose life experiences, long and short-term memories, languages and categories of thoughts are alienated to life experience, long and short-term memories, languages and categories of thought that brought about the concept of 'biopolitics' to account for mechanisms of control and state regulations" (Mignolo 2013, 129–130). The author defines border epistemology: "border epistemology is the epistemology of the *anthropoi*, who do not want to submit to *humanitas*, but at the same time cannot avoid it. Decoloniality and border thinking/sensing/doing are then strictly interconnected since decoloniality couldn't be Cartesian or Marxian. In other words, decoloniality's point of origination in the Third World

connects to 'immigrant consciousness' in Western Europe and the US today. 'Immigrant consciousness' is located in the routes of dispersion of decolonial and border thinking. [...] Border thinking created the conditions to link border epistemology with immigrant consciousness and, consequently, delink from territorial and imperial epistemology grounded on theological (Renaissance) and egological (Enlightenment) politics of knowledge. As it is well known, theo- and ego-politics of knowledge were grounded in the suppression of sensing and the body, and of its geo-historical location. It was precisely that suppression that made it possible for both theo- and ego-politics of knowledge to claim universality. Border epistemology goes hand in hand with decoloniality. [...] Decoloniality focuses on changing the terms of the conversation and not only its content" (Mignolo 2013, 131–132). Same author observed: "There is a territorial and imperial epistemology that invented and established such categories and rankings. So once you realize that your inferiority is a fiction created to dominate you, and you do not want to either assimilate or accept in resignation the bad luck of having been born equal to all human beings, but having lost your equality shortly after being born, because of the place you were born, then you delink. Delinking means that you do not accept the options that are available to you. [...] The option was decolonization" (Mignolo 2013, 135).

Research of Madina V. Tlostanova, professor of postcolonial feminisms,

"focuses on the interrelated epistemic and ontological dimensions of the global crisis of modernity. The critical analysis of the possible ways out offered within various Western and non-Western paradigms (such as biopolitics and necropolitics) is provided. The author argues for the decolonial (post)continental geopolitics and body-politics of knowledge stressing locality as the epistemological correlation with the sensing body perceiving the world from a particular locale and particular local history rather than a geo-historical location of the knowing subject. Rethinking of the Cartesian formula 'I think therefore I am' into 'I am where I think' comes along with discrediting of neo-liberal market teleology and the last progressive-universalist vector of global history vanishes together with the last closed utopia of the global salvation" (Tlostanova 2011, 39).

The paper of Kyle Grayson, a senior lecturer in international politics at Newcastle University, analyzes the human security debate as a site of biopolitics, takes in consideration following arguments: "By privileging objectivist claims to knowledge of human (in)security, it is argued that empiricism and rationalism, as forms of cosmological realism, foster the production of logics which facilitate forms of biopolitical intervention. The quest for precision, measurement, causality and policy relevance that define the production of human security knowledge is shown to have important political effects beyond the definitional debate

itself in terms of agency, normalcy, and the scope for intervention“. The author “demonstrates how the demarcation of human security as a field of knowledge is a process pregnant with relations of power that are important to understanding contemporary political dynamics“ (Grayson 2008, 383).

In the *Introduction* of her book *An Epistemology of Religion and Gender: Biopolitics – Performativity – Agency* Ulrike E. Auga, Professor of Religious Studies, Intercultural Theology and Ecumenism at Humboldt University of Berlin and Hamburg University as well as CTI Fellow in Princeton, explains that “the historicity of knowledge in the humanities and social and natural sciences was discussed by Gaston Bachelard<sup>13</sup> and Georges Canguilhem<sup>14</sup>. From a feminist perspective, it was formulated as ‘situated knowledge’ by Donna Haraway<sup>15</sup> and ‘activist knowledge’ by Sara Ahmed<sup>16</sup>, who helped to understand that it is not ‘nature’ that formulates natural laws but that ‘knowledge’ is produced in social processes under material conditions“ (Auga 2020, 3). Auga used the concept of epistemology following Eve Sedgwick’s “Epistemology of the Closet”,<sup>17</sup> relying on

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- 13 A French philosopher. He made contributions in the fields of poetics and the philosophy of science. To the latter, he introduced the concepts of epistemological obstacle and epistemological break.
  - 14 A French philosopher and physician who specialized in epistemology and the philosophy of science.
  - 15 Donna Haraway, an American professor emerita in the history of consciousness and feminist studies departments at the University of California, Santa Cruz, and a prominent scholar in the field of science and technology studies, coined the term ‘situated knowledges’. The term was born of a specific situation, in scientific and technological, late-industrial, militarized, racist, and male-dominant societies but continues to have far-reaching theoretical consequences that render it a useful and vibrant notion for thinking-with in many recent feminist debates. The notion works on four planes simultaneously: epistemological, ontological, ethical, and political. Demonstrating also that such planes are interrelated and not separate. On an epistemological level the notion of *situated knowledges* is an effort to think outside the duality of objectivity-relativism. Monika Rogowska-Stangret, *Situated Knowledges*, <https://newmaterialism.eu/almanac/s/situated-knowledges.html> (accessed December 12 2024). See: Haraway 1988, 575–599.
  - 16 More about Sara Ahmed and her work: Lisa Gasson-Gardner, *Sara Ahmed*, <https://politicaltheology.com/sara-ahmed/> (accessed 12.12.2024).
  - 17 In *Epistemology of the Closet*, Sedgwick, an American feminist academic scholar in the fields of gender studies, queer theory, and critical theory, states that standard binary oppositions limit freedom and understanding, especially in the context of sexuality. Sedgwick argues that limiting sexuality to homosexuality or heterosexuality, in a structured binary opposition, is too simplistic. The author analyzes a late-nineteenth century historical moment in which sexual orientation became as important a definer of personal identity as gender had been for centuries. In her preface, the author examines the book both personally and historically, as she analyzes the first wave of the AIDS epidemic and its influence on the text. See: Sedgwick 1990.

the French tradition of epistemology which perceives the historical and material conditions that influence the process of scientific inquiry (Auga 2020, 3). Auga's book concentrates on debates on religion, gender and orientalism and on the question of the constructive character of religion and gender, but it also discusses the new role of religion in the public sphere regarding post-secular interventions, analyzing societies in transition in the 20th and 21st centuries, focusing on the new role of religion and gender in the public sphere in Europe, the U.S.A. and the Africa. Auga urges that "with these case studies in mind, the book attempts to elaborate an epistemological concept for the theoretiation of religion and gender. The project is embedded in questions of the historical, cultural and philosophical constructive character of religion, including the question of exclusion and inclusion mechanisms in the context of the emergence of 'religion' as a 'category' with Daniel Boyarin<sup>18</sup> and David Chidester<sup>19</sup> and in 'religious paradigms' as Bee Scherer<sup>20</sup> asks. Additionally, the poststructuralist approaches that use the term 'imagined communities', according to Benedict Anderson's<sup>21</sup> groundbreaking study on the constructive character of the category 'nation' and 'invented traditions', are discussed in order to analyse the concept of religion" (Auga 2020, 3-4). Also, Auga claims that "the project is based on a discursive understanding that, according to Michel Foucault, defines discourse as a systematic arrangement of a body of knowledge contained in historically variable knowledge formations (epistemes) that also exist extratextually, for example in apparatuses of the state and the church. Where others also appreciate religion as a discursive notion, the importance of the shift in different historical or geographical epistemic orders is rarely included, which will be done here" (Auga 2020, 5).

Masato Mori, professor with major interest in cultural geography, examines "the epistemological reconstitution in Japan—from Eisei (hygiene) to Kankyo (environment and ecology) — in the 1960s, particularly focusing on Yokkaichi city in the Mie prefecture that was infamous for environmental pollution" (Mori 2008, 1466). The author presents a conclusion that "the epistemology that connects pollution and industry and regards them as a social risk was constituted in the 1960s". In his judgement, "this reconstitution is related to the regime of bio-politics, which is the control of people's lives. The regime of bio-politics in Japan had regulated the labour force and had controlled modern society with the concept of hygiene until circa the end of the 1950s. When society was confused

18 An Israeli-American academic and historian of religion.

19 A prolific writer and an internationally acclaimed scholar in the field of comparative religion.

20 A professor of Buddhist studies at the Vrije Universiteit Amsterdam.

21 Benedict Anderson (1936–2015) was an Anglo-Irish political scientist and historian who lived and taught in the United States.

by the overwhelming appearance of environmental pollution, it constituted a new epistemology based on the concept of the environment. It reconstituted our way of seeing, legislated laws to control society and arranged new spatial formations (such as the new governmental agency and amenities established all around Japan) in the late 1960s". Mori "emphasizes that the new concept of environmentalism was surely constituted in favour of bio-politics, although this is done in the guise of environmental ethics where scientists and the government were both involved in creating a table of risk deployed at various scales (state, local and body scale). Thus, the regime of biopolitics has a dynamic process in the constitution of society" (Mori 2008, 1478).

Krithika Srinivasan, interested in the intersection of political ecology, post-development politics, animal studies, and nature geographies "develops the idea of the sustainability episteme for the critical analysis of contemporary wildlife conservation. It takes forward recent work in conservation and more-than-human geographies that questions the biopolitical emphasis in conservation on protecting collectivities such as species. Drawing on empirical research on turtle conservation in India and on Foucault's writings, it inspects how these animals and their wellbeing come to be conceptualized and pursued in contexts marked by tensions between human-centred socio-economic goals and concern for non-human life. Specifically, the paper theorizes the concept of the sustainability episteme to argue that biopolitical ontologies of the collectivity enable win-win conservation that addresses incompatible normative goals. Building on these arguments, it discusses the political function of dominant conservation ontologies with reference to the global trajectories of conservation. In problematizing the taken-for-granted dominance of ontologies of the collectivity, the aim is to open up opportunities for life-forms that otherwise remain outside the bounds of conservationist care" (Srinivasan 2017, 1). "While others [...] have explored the different ontologies that underlie conservation, this paper draws upon Foucault's writings on biopower and epistemes to investigate the predominance of collectivities as the ontologies for conservation. By theorizing the concept of the sustainability episteme, the paper has shown how the dominance of biopolitical ontologies and interventions in wildlife conservation is linked to the embedding of human-centred values and assumptions relating to economic development which are otherwise incompatible with the goal of nonhuman wellbeing. The paper thus takes forward scholarship on conservation biopolitics by explaining why biopolitical practices and concepts in conservation have prevailed, i.e., because they sustain the contradictory logics of sustainability" (Srinivasan 2017, 13–14).

Contemporary science, as one can see from the above mentioned, connects Foucault's theory of biopolitics and his social epistemology, and applies it to

contemporary issues of biopolitical philosophy (Italian thinkers Agamben, Negri and Esposito), analyzes the interweaving of biopolitics with the epistemology of religion and gender, with decoloniality and “border epistemology”, epistemological and ontological dimensions of biopolitics of global crises of the modern era, biopolitics and knowledge about human (in)security, concepts of environmental protection in the service of biopolitics, as well as the question of the relations between biopolitics and the preservation of endangered species. It may be said that, when epistemology is analyzed in the broader biopolitical strategy of interpretation, it departs from its previous concepts, considered in the work of authors before Foucauldian influence and those who even now are not favorable with these points of view. In this way, epistemology is related to phenomena where the connection is sometimes hard to see, and these concepts of epistemology may seem unrecognizable to those accustomed to observing it differently.

*Concepts of biopolitics in social science studies:  
how biopolitics is applied to the various social phenomena*

In the analysis of applying biopower, it is a standpoint that roles of its actors may be considered as objects of control, implemented by various institutions, such as the church, institutions of medical care, education and culture through a set of regulations. Biopolitics may be used as a means of nation-building, producing the norms and standards that include and exclude certain groups and individuals, marking, for example, certain sexual practices and lifestyles as undesirable and an object of marginalization. In such a way, as the idea of “bare life” created by Agamben manifests, rules defined by biopolitics determine “belonging” and “abandonment” in shaping political communities, thus norming the consensus on what is supposed to be a “correct” way of life. Cases of restrictions caused by biopolitical regulations are, e. g. political incarceration, marginalizing and social rejection of LGBTQIA+ people or migrants (Makarychev, Yatsyk 2017).

There is also an idea implemented by biopolitics to “normalize” human bodies by means of administration, management, protection, care-taking etc. Transhumanism and the ideas it advocates are being scrutinized by some scientists precisely because it gives the possibility of using AI as a tool of biopolitics. The concept of transhumanism and biotechnologies enables control, management, reshaping and adjusting existing biological capacities of human beings and thus sets, especially in liberal societies, a legal framework by which institutions manage biosciences and technologies (Ivanović 2018, 856). Engineering-politics and regenerative-politics connected with biotechnology present in the modern world demonstrate that there is power over life and body in contemporaneity that is far

exceeding the extensions and the technological possibilities of power that are until today known to people (Tratnik 2012, 17). There are many questions considering cyborgization, an integrating process of organic and inorganic 'nature', humans, computers and machines. Some authors emphasize the necessity to establish cyborg ethics that would determine the limits of implementation of artificial elements in the natural human body (Greguric 2012, 41). Veselin Mitrović, Serbian sociologist, delivers a question: "Does the precision of reproductive technologies enable freedom of choice regarding the desirable personal traits, or is it a potential tyranny of parents over children and the path to a uniform sexuality?" (Mitrović 2012, 79). There are many important questions that imply themselves in the modern world and science considering relations between biopolitics and biotechnologies, liberal eugenics and transhumanism.

Some political concepts and discourses are a product of biopolitics, e. g. those considering family as a fundament for political relations of domination. Biopolitics may be used as an important element of foreign policies, citizenship and "passportization" policies. Foucault's concept of biopolitics is more about managing populations, less about conquering and possessing territories, so some authors make an important distinction between geopolitical control and management of population. Also, through the concept of biopolitics there may be more precise lines drawn between practices of liberal democracy, on one side, and totalization, on the other. In this way, in the context of biopolitics, both (neo) liberal instrumentalization of biopower that can improve people's care of their bodies and productivity, and totalitarian regulation of lives and deaths through implying regulative norms may be discussed. Agamben's interpretations are being considered by some authors as radical, with possibilities of totalitarian devolution that stay open, so authors as Hardt and Negri, studying bans and surveillance as mechanism of totalization, consider such outcomes as the global empire of universal "biopolitical machine" or "a society of control" (Makarychev, Yatsyk 2017).

Anne Brunon-Ernst, professor in Legal English at Paris Panthéon-Assas University, and researcher both at the Cersa (Panthéon-Assas) and at the Centre Bentham (ScPo Law School), with research interests focus on the British legal philosopher Jeremy Bentham, in her book *Utilitarian Biopolitics: Bentham, Foucault and Modern Power* presents a viewpoint "Population control implies the management of wealth, the monitoring of labour capacity and the need to strike an adequate balance between growth and resources. Thus, when governments address the issue of population, they cannot avoid trying to control human sexuality, to render it healthy, productive and norm-compliant. The future of any society is at stake when human beings engage in sexual activity. Sex is a highly biopolitical issue. Biopolitics was defined [...] as the means of government that regulates the

population in all aspects of human life” (Brunon-Ernst 2012, 26–27). Furthermore, in Foucault’s view “sex comes first in the biopolitical mechanisms of population control. Moreover, sex stands at the intersection of individual conduct and population control. Although Foucault does not realize it, he and Bentham share a common preference for de-criminalizing certain sexual acts. Central to the issue of decriminalizing some kinds of sex is the use of neutral terms to name sexual activities as opposed to the eulogistic and dyslogistic terminology currently in use. [...] Contemporary societies have shown how policies are introduced to try to influence the way people seek pleasure. [...] The bio-regulation of the population cannot but be shaped by the utilitarian calculus of cost/benefit in all fields related to the management of life. The biopolitical control of people’s bodies is thus utilitarian in spirit. It has been shown that in the unsuspected area of resistance to biopolitical control, which Foucault names ‘bodies and pleasures’, pleasures are also subjected to individual and State-calculus to ensure the maximization of the population’s well-being” (Brunon-Ernst 2012, 2930). [...] In the works of these two authors [Bentham and Foucault], such a disposition is founded upon an unequal and asymmetrical power-relation between the government and the governed, in which he who imposes a law sees it validated by those who are required to submit to it. The strength of their theories lies in their accounting for legal norms without delineating either the content or the form of norms” (Brunon-Ernst 2012, 64– 65).

Being a philosopher of anti-psychiatry,<sup>22</sup> Foucault was also a representative of critical discourse of power that psychiatry has on racism and modern society. In that respect, his discourse on relations between race and psychiatry is suitable for application in humanities, social and medical sciences. In this respect, Foucault observations could be suitable to Holocaust studies and biopolitics (Vasiljević 2022, 48, 54). According to Maja Vasiljević, Serbian interdisciplinary scientist, “Foucault’s interpretation [...] deserves special attention since he noticed that direct relations between the treatment of ‘race’ and the technology of the ‘abnormal’ are established, i.e. emphasizing the ‘abnormal’ as physical differences (and not ethnic or cultural difference) as carriers of certain congenital diseases, and like that a kind of threat to society and thus those who had to be excluded out of society” (Vasiljević 2022, 51). Also, as Vasiljević claims, “although he followed the development of psychiatry and the ‘abnormal’, and emphasized the importance of monitoring the individual, he was not interested in the psychological experience of the colonial threads (colonizers) of other nations, but his micro analysis was constantly reflected in a macro perspective - as ‘internal racism’ affects society and how it protects itself from it” (Vasiljević 2022, 53).

22 Anti-psychiatry, is a movement based on the view that psychiatric treatment can be often more damaging than helpful to patients.

Kate Schechter, a psychoanalyst, psychotherapist, and medical anthropologist/bioethicist, extends the approach of the concept of biopower, that analyzes the intertwining of medicine, technology, subjectivity and government in modern liberalism, to psychoanalysis. She points out that biopower theorists concentrate on the global question of the mode of politics that biopolitics represents or, those historically and ethnographically oriented, analyze biotechnology and the instrumentalization of molecular life (Schechter 2014, 6). Schechner defines her theses in following words: “In psychoanalysis, biopower is inscribed in the working sense that psychoanalysts have of their world at risk, in their trained feel for the securitizing, risk-management powers that the doctor — patient relationship — the prized, labored, familiar figure at the center of their world — holds for them. As the capacity to cultivate deeper dependencies, thereby, in their case, literally create analytic patients where there are none, the analyst’s relational ability is under increasing scrutiny in the psychoanalytic collegium. The objectification of this relational ability, surveyed and evaluated and regulated by the analyst’s peers as technical expertise — an expertise most specifically in finding, making, and keeping patients — is steadily coming to define what psychoanalysis ‘is’ as a specific practice in neoliberal medicine” (Schechter 2014, 7). “In reading the history of the Chicago Institute for Psychoanalysis and looking closely at how this group of psychoanalysts manages an ongoing situation of collective failure, I will point to the ways that in and through an expansion of a vital politics of real relationships these psychoanalysts ratify and extend biopower without subjecting it to explicit critique, perforce without knowing about it, in two mutually reinforcing registers: a clinical technology of fostering and nurturing patients, on the one hand, and, on the other, an educational technology of surveillance centered on policing the vicissitudes of that therapeutic relationship” (Schechter 2014, 15).

Researchers study gender track and analyze the biopolitical deployment of gender in the West in the period after World War II onward. These analysis embrace fields of psychiatry, sexology, sociology, feminist theory, demography, and policy documents, in the context of biopolitical governmentality. Focuses are on the anatomo-politics of body, biopolitics of population, understanding challenges to feminist theory and politics posed by biopolitical genealogy of gender (Repo 2015, 22– 23).

Nicholas Lee, an Associate Professor of Childhood at Warwick University, UK, in his research considers security strategies and implications of how they function or fail to find and secure children’s place in global biopolitics. He refers to Giddens notion of human quality of ‘plasticity’ which is concentrated in the first twenty years of a lifetime. According to Lee: “Today, developments in the bio-sciences appear to be creating new plasticities and redistributing them

throughout the life-course. In some areas, this appears to increase choice about key life events. Pregnancy and life-span, for example, are ever more open to deliberate influence. Further, pharmaceuticals are in development that could increase adults' and children's capacities to learn. Perhaps most fundamentally, techniques are becoming available that can extend 'plasticity' to the genetic level, extending the ability to shape the young to points well before their conception" (Lee 2013, 3). "Together, climate change and developments in the life sciences pose a wide range of challenges and opportunities for individuals, families and states. They affect our relationships with the future through the medium of our existence as biological creatures – as eaters of food and drinkers of water who are composed of cells and organs. In this sense a good deal of today's politics of childhood is 'bio-politics'" (Lee 2013, 4).

Marijan Krivak and Dora Marjanović, trying to analyse the concept of life between biopolitical and postmodern condition from the aspect of philosophy, in their research focus on relationship between contemporary biopolitical theory and the theory and philosophy of *condition of postmodernity* (D. Harvey), searching for connection "between Lyotard's *The Postmodern Condition* and Agamben's description of *Homo sacer*", trying to analyze "why is the relation between analysis of 'naked life' against sovereign power (Agamben) – vsa report on knowledge in most developed countries of, so called, Western world (Lyotard) – so important". Krivak and Marjanović conclude: "The category of life is narrowly connected with the possibility of radical change in the world. A life that is nothing but biologically determined, or just politically/culturally prescribed – is it worth living at all? The life should be neither nakedness, nor 'biological machine', but the real freedom. 'Being without truthful life of freedom doesn't have any sense at all'", so, according to them, life survives through reading and thinking and writing processes (Krivak, Marjanović 2014, 38).

Implementing biopolitics to the contemporary political realism, Koljević Griffith develops an opinion that "the first step in this process is an explication of logic of the Western biopolitical discourse, which has not infrequently manifested itself as the use of brute force, i.e., this is about wars as the so called "*humanitarian interventions*" in which what is at stake is always one population fighting for mere survival against the other population, i.e., it is about the *selection of the right to life*. Moreover, virtually entire biopolitical logic relies on the fundamental *friend-enemy binarism*, which has thus turned out to be the leading principle of the international strategy, i.e., it has in structural terms marked international relations and politics as a constitutive principle from which the regime of truth of neoliberalism was established. [...] Moreover, the *economic crisis*, followed by the *migrant crisis* – especially in contemporary Europe – appeared as a specific

living expression of *biopolitical expansion*, i.e., *control and regulation*, i.e., they turned out to be new twenty-first century political phenomena, through which the regulation of population manifests itself as a literal replacement of one population with another in selected territories. Therefore, for the purpose of total governmentality over a region, but over time as well – the transfer of populations, equally as the regulation of economic statuses, were legitimized through the postmodern and liberal discourse of “refugees” and thus once more through the stipulation of humanitarianism, directed towards the destruction of political subjectivity. [...] *safety discourse* – the core of which is the concept of a continuous threat to the entire population – has seen its most notable manifestation in the 21st century, in the form of the spreading of the COVID-19 virus that consequently led to a large number of measures being imposed on populations, which gave rise to a new dimension of biopolitical total governmentality. [...] biopolitical phenomena in the making – such as ever-more present *shortages of food*, even in Western societies, that go hand in hand with ever-more substantial changes in living conditions – and the general fact that *food and water have established themselves as elementary resources of contemporaneity, are a reflection of the world stepping into a change of epoch [...], which in actual terms may signify the end of neoliberalism via biopolitics, or perhaps they will end up as totalitarian (self-)destruction* (Кољевић Griffith 2022, 1247-1248)

Ljeposava Ilijić, Serbian defectologist, and Olivera Pavićević, Serbian sociologist, both employed as senior research associates at the Institute of Criminological and Sociological Research, while writing about relations between biopolitics and migrations, consider migration from the perspective of biopolitics and try to understand migration as a biopolitical process. Their opinion is “that migration trends are no longer considered as separate and temporary phenomena, as they are almost conceptualized, but as a permanent issue of modern, social, political and economic life connected with many aspects of globalization”. The view of the authors is that “the equality of people [is] in the right to mobility, which ascends to the highest level of value – to freedom of movement that becomes a constantly scarce and unequally distributed commodity and a major stratification factor of postmodern time”. Authors analyze “the ‘biopolitics policy’ and present some critical insights into the biopolitical regulation of the migrant and refugee populations through the functioning of biopower mechanisms” (Ilijić, Pavićević 2019, 86). Also, there is various research of applying concepts of biopolitics on managing population, for example, that of Marius Turda, Professor in the Department of History, Philosophy and Religion Oxford Brookes University, analyzing minorities and eugenic subcultures in East-Central Europe. Ethnic minorities in East-Central Europe pursued the eugenic strategy with an aim to provide their survival, in

the period when national homogenisation and eradication were dominant. This was also a way for these eugenic sub-cultures to reshape the relationship of the ethnic minority with the host nation-state, built on the foundations that represent racial exclusivity, homogeneity and protectionism (Turda 2015, 8). According to Turda, “once we reconfigure the relationship between ethnic minority and ethnic majority as *subcultural*, dislocations within the master narratives about the past may be treated deservedly as intrinsic features of a historical process that is as much about the *reality* of the nation as it is about its *imagining*” (Turda 2015, 15).

Some authors, in the context of biopolitics think that “digital transformation” may bring to people so-called “surveillance feudalism”, because the Covid-19 pandemic speeded up some social processes and trends existing in the past, including spending the most of time indoors, interaction through information and communications technologies, causing transition to surveillance society and technological platforms for data collection (Podjed 2023, 7). These authors claim that social control, being a tool for maintaining order in modern capitalism, changed its form from disciplinary to surveillance model. At the same time, surveillance tools also changed forms, becoming a cybernetic model of communication and maintenance of social balance (Milenković 2023, 69). Shoshana Zuboff, an American author, professor, social psychologist, philosopher, and scholar, views the role of technology in functioning of surveillance capitalism, and Dalibor Petrović points out some deficiencies in understanding of relations between digital surveillance technologies and their users. He thinks that they are preventing people from considering alternative resistance strategies against the spread of surveillance capitalism (Petrović 2023, 115). Shoshana Zuboff presents the challenges to humanity posed by the digital future in her examination of the unprecedented form of power called “surveillance capitalism,” and the quest by powerful corporations to predict and control our behaviour. Shoshana Zuboff’s deals with the social, political, business, and technological meaning of the changes taking place in our time. She argues that in our contemporaneity the confrontation between the vast power of giant high-tech companies and government, the hidden economic logic of surveillance capitalism, and the propaganda of machinae supremacy that threaten to shape and control human life have become visible (see Zubof 2020). Alpar Lošonc considers the phrase “surveillance capitalism” as pleonasm, claiming that surveillance follows capitalism from the very beginning, changing forms, and this can be considered as a relative continuity. Author analyzes the connection between the market and security dimensions, concluding that “the economy in capitalism, as well as the digitized economy, cannot function without a legal perspective that represents a field of conflict of different interpretations. Surveillance takes on government-based forms that are

increasingly relying on algorithms today” (Lošonc 2023, 94). On the other hand, some anthropologists, among them Nina Kulenović, Serbian anthropologist, writing an anthropological analysis of bitcoin, places following arguments “that the algorithm at the very core of Bitcoin is perceived not only as the fulfilment of an Enlightenment dream of a method itself as a non-cultural and supra-historical guarantor of objectivity (as the one) removed from politics, economy and ideology but also as a democratization method applicable to them all. Apart from the mentioned above, [...] Bitcoin is seen as the fulfilment of a modernist dream of efficient, formal, predictable, depersonalized bureaucracies in the context of the diminished legitimacy of centralized, hierarchically structured, sluggish, fallible, and abuse-prone economic and state institutions. The focus of trust shifts to technology: to an algorithm seen as self-regulating, efficient, free from ideology, subjective interests, and potential abuse, almost divinely infallible, decentralized, and democratic system that provides a group of individuals not only with the necessary tools to achieve their freedom and privacy, deprived from control and regulations, but also as a tool for reforming the political and economic system” (Kulenović 2024, 84).

Various authors have been also rethinking the notion of biopolitics in the context of the consequences of COVID-19 pandemics. One may say that not all aspects of governmental control and surveillance belong to the biopolitics spectrum, but some associations could derive. Dušan Marinković and Sara Major determine the two discontinuities in the genealogy of biopolitics. The transformation of the “old biological regime” and the emergence of the gaze as a technology of power/knowledge may be regarded as the first, marking the epoch of the birth of biopolitics, and the period when life “entered” the sphere of politics. The second discontinuity may be considered in biopolitical technologies today, during the pandemic of COVID-19, as we are witness to the transformations of biopolitical measures on the global scale. Marinković and Major continue: “We also recognize important lessons from the genealogy of biopolitics as a ‘history of the present’. During just one historical epoch, biopolitics emerged as the power over life. That was the period of the so-called ‘epistemic break’ and the emergence of life as the new dynamic force of productivity, power, trade, cities, urbanization, population, and capitalism” (Marinković, Major 2020, 486). According to Tijana Perić Diligenski, Serbian jurist, political scientist and politician, “the coronavirus imaginarium exposed the logic of the neoliberal market economy and pointed to the need to deconstruct the existing and establish a new economic paradigm”. Perić Diligenski concludes “that the pandemic has brought to light an infection of non-solidarity and intolerance towards the phenomenon of otherness, which is accused of being a contagious factor” and “that democratic ways of governing

are overshadowed by populist manners that tend to use the narrative of fear of viruses to consolidate their own regimes” (Perić Diligenski 2020, 636).

Editors of the thematic issue of the academic journal *Issues in Ethnology and Anthropology*, titled *Anthropological Perspectives of Covid-19*, state that “the Covid-19 pandemic has been a highly disruptive global crisis, touching nearly all aspects of human existence and changing many policy assumptions in transnational perspectives. Anthropologists witnessed these impacts first hand across many countries, while mainstream media reports focused primarily on the spread of the disease, public health measures and the impact on economic life in western countries. Other dimensions of the pandemic such as the emergence of new socialities and inequalities, social disarticulation, the changing role of family and kinship and the transformed domestic and professional spaces mediated through technology, especially in developing countries, were largely ignored” and that “pandemic transformed the family, community, social and cultural lives of those affected, as well as their perceptions of the sustainability crisis, climate change, food security, education, politics and public policy” (Vučinić Nešković, Reuter, Mohan Patnaik 2023, 25-26). Fadwa El Guindi, American anthropologist and former professor, following the anthropological aspect of COVID-19 pandemic and the war in Ukraine that came up next, says that “it led to the weaving of globalization processes within national sovereignties arresting paths being imagined by vague abstract notions such as human security, multilateralism, and global governance. [...] Predictions about a “new world order” began with Covid and continue as the War in the Ukraine progresses. In my analysis, talk about the world order is really about military and economic dominance by certain nations protected by military coalitions. [...] Significantly, alternative models are beginning to emerge which are based on mutuality, cooperation, and the exchange of economic and technological services, without military designs across borders” (El Guindi 2023, 149-150).

Articles in the collection of papers *Post-epidemiological Stress: Historical and Medical Dilemmas*, among other, analyze post-COVID or long-COVID as the condition of those who were infected and then experienced long-term symptoms of the disease and did not fully recover. The pandemic that began in the People’s Republic of China at the end of 2019 represents the first discontinuity in daily life and the global economy of its kind since the end of World War II. If viewed from a historical standpoint, the long COVID can very likely be considered a disruption in social and international relations. This disruption occurred during the closure and isolation, which triggered a general climate of distrust in institutions and medicine, while intellect and conscience in the public and private sphere regressed, and there was also a disruption of global supply chains

and disruption of international relations (Divac, Dajč, Samardžić 2024, 7). The COVID-19 pandemic has disrupted the world market and affected the fate of every individual on the planet. “Ognjen Radonić [Serbian sociologist] pointed to the increase in debt of the poor compared to the rich, to the growing differences between the richest and the poorest. Delayed effect and duration inflation ensued, supply routes were cut, demand for commodities was generated and, regardless of inflation, the importance of strong currencies was consolidated. This was followed by Russia’s second aggression against Ukraine, in 2022, with global consequences that still cannot be clearly seen. The experience of the pandemic, destruction and economic disruptions became an incentive to re-examine the dynamics and internal trajectories of the city’s everyday life” (Radonjić 2024, 95–112; Divac, Dajč, Samardžić 2024, 9). The most vulnerable social groups suffered the most and were the most threatened. Hence the reminder of Isidora Jarić, Serbian sociologist, Miloš Milenković, Serbian anthropologist, and Marko Milenković, Serbian jurist, that the healthcare system in Serbia was not prepared to cope with the challenges, although there were several similar warnings about infections during the last two and a half decades. At that time, the absence of a protocol to care for patients suffering from chronic non-communicable diseases is highlighted. “Fear, uncertainty and frustration pulled the patient community, or at least a part of it, out of their comfort zone and encouraged them to try to bridge the resulting institutional void. It is no coincidence that this search directed them towards communication mediated by digital technologies” (Jarić, Milenković, Milenković 2024, 113–123; Divac, Dajč, Samardžić 2024, 9). These authors came to a following conclusion: “Of course, it remains an open question whether this fragmentary experience created at a moment that irresistibly resembles an unintended social experiment will be used to innovate and improve the existing system of health services or at least its protocols for dealing with emergency (pandemic) circumstances in which access to health services is protection reduced or disabled. It depends on how future protocols could operationalize this experience [...] and whether people’s inner intimate need for openness and egalitarianism in communication will defeat the need for control supported by algorithm refinement. The described case shows both sides of the reality towards which we are moving – the potential of spontaneous alienated communication between actors (patients and doctors) within a micro subcultural digital ecosystem through which a response to the real and constructed needs of patients with non-communicable diseases was articulated and a dystopian communication chain of exchange (on social networks and internet) of collected information about the impact of vaccines moderated by fear and ‘algorithmic manipulation’” (Jarić, Milenković, Milenković 2024, 122).

Nikola Samardžić, Serbian history professor at the Department of History, Belgrade Faculty of Philosophy, reconsiders “long Covid” from the standpoint of decadence:

“COVID-19 is also an ethical phenomenon, since a part of humanity indulged in decadence, resisting the application of scientific knowledge and innovations in the field of discovery of new vaccines and therapies. The obstruction of epidemiological procedures and the pandemic of the anti-vaccine movement led to unnecessary deaths and the phenomenon of long-term COVID-19. The death of an individual exposed to social disorder seems to lead to the death of an organized society. Decadence to entropy. The meaning of human community is a counterbalance to nature, the universe, which tends towards self-destruction. An orderly society avoids the belief in transience and postpones spiritual and biological dying. Scientific medicine struggling to maintain and improve public health, the well-being of the individual and postponement of death, is the basis of an orderly modern society and only the responsible behavior of institutions and every human being in this sense is ethical (Samardžić 2024, 143 – 144).

Researching Covid-19 in Serbia from an anthropological point of view, Bojan Žikić distinguishes two patterns of thinking, considering the pandemic. The first accepted the given disease as a real danger to someone’s health and influenced a positive attitude towards risk management. The other one denied either the disease itself or the danger from it and influenced a negative attitude towards managing the risk of it. The first type of cultural thought is based on trust in social institutions and may be considered as a product of modernity, and the second as a consequence of postmodernity stream effect (Жикић 2023, 235). The author has an opinion that an emphasis should be put on the relatively lukewarm reaction of the state to the entire process of denying the risk of Covid-19. As two crucial factors Žikić points out resisting anti-epidemic measures and the non-existence of a systematic response to attempts to discursively deconstruct the scientific truths. Author argues: “The question can be raised, of course, whether the democratic character of the society is a factor that prevents any reaction aimed at stifling, or even just silencing, a different opinion, or whether it was a politically motivated assessment that the public divided on the issue of anti-covid measures and that we should not irritate the voters – since that is the way state managers, i.e. politicians in general, see us: as pieces of a numerical puzzle that decides on the distribution of administrative power in the state in one mandate period” (Жикић 2023, 240).

Azize Serap Tunçer, faculty member at Cankiri Karatekin University, Department of Social Work, and Ahi Evran University, Political Science & Public Administration, discussing effects of artificial studies in health as a biopolitical tool, states that human is in contemporary society an ideological-political subject, and

artificial intelligence through its products, information technologies and programs, is used on humans with the development of biological control and regulation. Similar products are being used for self-regulation and 'self-actualization' when health is in question, for example, through diet, sports, etc. Author delivers a bold statement: "There is technique in the historical origin of this control network, and at the stage we have reached today, artificial intelligence programs have taken over. Fears of epidemics have been the legitimate ground of biopolitical control since the first appearance of registration and registration processes in the UK case in health care. The Covid 19 experience has made this linear line once again clearly visible. On the one hand, large-budget health artificial intelligence studies have been accelerated, on the other hand, digitization processes have entered the daily life of all people" (Serap Tunçer 2022, 110). Following, in the conclusion: "Various negative developments may occur, especially if they are used as a tool for future biopolitics, and the existence of functional programs that nourish the human mind and solve its health problems is also of vital importance. In this process, finding the ethical framework and staying within this framework with a global harmony may also be the main determinant of the duty and future of human beings" (Serap Tunçer 2022, 112).

There is also a connection between biopolitics and popular culture. In the period since the 1990s, when biotechnology enabled manipulation of biological life and has extended to various social and economic spheres, including agricultural, biomedical and military, Polona Tratnik, Full Professor at the University of Ljubljana and Senior Researcher at the Institute IRRIS, who has published monographs and articles on philosophy of art and technology, explores the interweaving of biotechnologies and art: "The artists have entered laboratories, they have set laboratories as their studios, but they have also started to establish laboratories as spaces that are designed for manipulating living tissues in the galleries and other art or public venues. The trend to bring laboratory practices of biotechnological manipulations into the artistic context testifies how relevant the imperative of performativity is for biotechnological art. The imperative of performativity means, in short, that art does not depict or narrate about manipulation of biological life, but 'performs' the manipulation of life by itself. Many artists tend not to make this manipulation prior to the exhibition – in that case they would just show the product and fail to perform. The aim is to establish the performative dimension with the living microorganisms in the real time, in front of the audience" (Tratnik 2020, 113). In a similar way, Eva Šlesingerová, an anthropologist and sociologist who has focused on different areas of research and academic interest: body, genomics, AI technologies, robots and biotechnological art and experiments, explores bio art that "includes the works of artists who are intrigued by working with living or

semi-living tissues and biotechnologies”. Analyzing artwork by Louis Bec, Heather Dewey-Hagborg, and Biononymous, Šlesingerová “investigates current forms of power over life – biopower – that imagine, classify, and govern our societies today, even on molecular and genetic levels” and sheds light on “artistic reflections of the processes by which people are governed mainly as the derivatives of the body, biological and genetic data sets”, describing how “artworks inspired by specific biopolitical engineering rationality and surveillance practices enabling naming, fabricating and dealing with life which is synthesized, ethnicized and monitored” (Šlesingerová 2017, 59).

Polona Tratnik analyzes the formation of a disciplinary society, mostly in the aristocratic culture of French storytellers at the end of the seventeenth century. Fairy tales played an important role in what Norbert Elias called the civilizing process. Fairy tales had an important role in the formation of a polite court society as well as disciplining women. From biopolitical aspects of fairy tales that Tratnik explores, fairy tales in the 17<sup>th</sup> century “show social shifts and consolidation of certain concepts, especially a particular concept of femininity and a particular social role of women, which remain largely unchanged also later on.” The tales of Cinderella as written by two different authors, Charles Perrault and Marie-Catherine d’Aulnoy, are being compared by Tratnik “as regards the representation of gender, gender roles and relationships, as well as their messages and morals.” Tratnik continues that “in the second half of the twentieth century, thanks to Walt Disney’s adaptation of Perrault’s Cinderella, this version became the world’s most famous fairy tale about Cinderella. The biopolitical relevance of Perrault or Disney’s Cinderella as arguably the most globalized story in general has been and still is remarkable” (Tratnik 2022, 155).

Bojan Žikić, in his article on body improvement and bodily pleasures in science fiction, which is a form of popular literature and motion pictures media, considers aspects that can be connected with contemporary issues involving biotechnology. According to Žikić, “science fiction is a reflection of a social reality in this regard because it tries to project the possible outcomes of human bodily modifications – taking into account the state of science and its assumed development to a greater or lesser extent – and to morally comment on them” (Žikić 2012, 99). Žikić concludes: “On the other hand, the possible technological and moral outcomes of the change in the basis of humanity, the physical body, impose [...] the possibility that man will step down from the top of the food ladder in this world and become a passive means of killing time for the pleasure of superior beings.[...] socio-economic systems, political ideologies, religion, etc., i.e. the very hierarchical essence of the organization of our cultural world, in which certain groups of people dominate other groups, ‘paying’ for that dominance with a better

life in terms of food, accommodation, clothing, sexual relations, health, body maintenance and the like, testify to the fact that ‘post-humanity’ exists here and now, and that its criteria are precisely the possibility of self-indulgence in terms of power and pleasure” (Žikić 2012, 100–101).

Maja Davidovac, PhD at Interdisciplinary doctoral studies at the Department of Theory of Art and Media at University of Arts in Belgrade, applies biopolitics to the field of the fashion development, analyzing “dressing mechanisms of micro/bio power of fashion, from discipline, and biopolitics to clothes as a new media, and as a postcolonial mechanism, through case studies such as vail and corset in different traditional, new media, fashion and artistic representations. [...] Fashion clothing is becoming multimedia, which blends design, entertainment, communication, and science and erases boundaries between human and machine, real and virtual, art and biopolitics, fashion design and new media, designer and scientist/programmer, function and aesthetics, everyday life and science fiction, but also between corset and vail, West and East, keeping the apparent line between freedom, surveillance, and control stable (Davidovac 2024, 6). As Davidovac claims in her doctoral thesis *Fashion dispositif: from biopolitics to new media* “the study’s goal is to question and challenge norms, discursive and non-discursive fashion practices, and representations that shape, create, and regulate bodies, and to activate those bodies and clothing as places of resistance, subversion, interruption, and reversal of power into counterpower, or rather apparatus into counter-apparatus, using critical theory, artistic and fashion practice, as well as a mechanisms and knowledge of this same biopower” (Davidovac 2024, 6–7).

In addition to aforementioned examples of applying biopolitics, there are other possibilities, for instance, in the studies connecting history, sociology and music. Maja Vasiljević, writing about the status of musicians in Belgrade during the German occupation in World War II, uses historical relational biopolitics based of Foucault, assessing the status of musicians in a particular crisis of “social state”, arguing that biological and racial criteria were dominant in the society in occupied Belgrade, while she follows two interpretations of biopolitics – German and Serbian (see Vasiljević 2020). In another, more recent research, Vasiljević analyzes racial biopolitics towards Jews in the NDH, placed in the context of an important Jewish role in the cinema culture of Croatia. Vasiljević reveals the following facts. When the NDH was established as a satellite of the Third Reich, the state proclaimed “racial laws” with immense consequences on social structure, economy and culture, i.e. all fields in which Jews had an important role. These laws were proclaimed in the NDH, on 30 April 1941, “Legal Provision on Racial Affiliation”, “Legal Provision on Citizenship” and “Legal Provision on the Protection of Aryan Blood and Honor of the Croatian People”. In this way, *radical*

*nativism* was introduced because only persons of Aryan blood could be Croatian citizens and mixed marriages between Jews and persons of Aryan origin were prohibited. On 4 June 1941, the “Legal Provision on the Protection of the National and Aryan Culture of the Croatian People” prohibited Jews from participating in the work of all institutions. This whole process of the Holocaust was, first of all, the process of confiscation of property as the economic death of Jews. With the change in biopolitics, the previous tradition of cinema culture in Croatia also changed from the ground up. So-called “nationalization” involved the confiscation of entire cinemas, films, and film equipment owned by Jews, but also Serbs. The process of confiscating property was conducted in several stages. All property of racially and politically undesirable people had to be reported and handed over. A regulation was introduced that stipulated that Jews were obliged to hand over to the State everything that was more valuable and that did not serve their basic needs. As another option, forced “sale” of property was applied, a typical procedure for the Third Reich and all occupied territories where, for the purpose of moral manipulation of the masses, auctions or sales of Jewish property for next to nothing were organized (Vasiljević 2025, 196–198).

### *Conclusion*

It is obvious that the views of theorists who deal with the discourse of biopolitics and bioethics, both in the world and in our country, differ significantly when it comes to the initial settings of the notion of *biopolitics*, defined by Foucault. Many still debate today what Foucault was aiming for when he delivered the published lectures of 1978/79. There are conflicting views of scientists regarding the aspects of biopolitics related to the surveillance and control of citizens in modern societies, bioethics, i.e. management of people’s bodies as a form of subordination to the state, views on what represent and where liberal democracy and neoliberalism are leading. The author believes that pluralism of opinion is something that must be nurtured, but also caution when making final assessments in which direction global politics and the development of liberal democracy will lead modern societies and individuals in them. Theoretical considerations represent only some of the possibilities for the development of world events, the justification of which time will show.

On the other hand, the apply of concepts of biopolitics empowers scientists to define and deeper analyze historical and contemporary political and social processes, such as nation-building through producing the norms and standards that include and exclude certain groups and individuals; population management; administration, management, protection and care-taking of human bodies and

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intertwining of biopower with psychoanalysis and gender issues; foreign policy and demarcation between liberal democracy and totalitarianism, and many others. For example, biopolitical aspects are discussed in contemporary philosophy, referring to the concept of life in the contexts of biopolitics and postmodernism or used to compare Foucault with other philosophers, even from the more distant past, then, in political philosophy, which is applied to the analysis of global-political events in the first decades of the 21st century. Some authors connect biopolitics and modern digital technologies with the concept of “surveillance capitalism”, others emphasize biopolitical discontinuities and other biopolitical consequences caused by the pandemic of the COVID-19 virus. Also, with all this, the researchers highlight the connection between biopolitics and popular culture, through which biopolitics has been influencing the formation of a disciplinary society, where even fairy tales played an important role in the civilizing process and had an important role in the formation of a polite court society as well as disciplining women. In the same way biopolitical issues are being analyzed by researchers in the context of science fiction. The connection of biopolitics and biotechnologies can also be seen in some phenomena of modern art and fashion development.



# HOW DOES BIOPOLITICS, ARTIFICIAL INTELLIGENCE AND TRANSHUMANISM INTERWEAVE? THEORETICAL RESEARCH SINCE THE BEGINNING OF THE NEW MILLENNIUM<sup>23</sup>

## *Introduction:*

### *the nature of AI research in social sciences, humanities and biopolitics*

A key research topic related to human identity and self-knowledge is one that aims to focus on what it means to be “truly” human. The main purpose of AI is to show whether and how it is possible to study and simulate human intelligence so that computers can be programmed to do what the human mind does, e. g. to think independently, learn and advance intellectually through the acquisition of their own experience and based on the collected information. According to some authors, the first and foremost is to create a model of the human mind that will be used as a basis for building and programming an intelligent entity that resembles a human being. Alan Turing, a British mathematician and founder of AI, believed that an intelligent computing machine should resemble a human being by virtue of being able to think like a person. This perspective is accepted and integrated into the basic theories of modern artificial intelligence, which consider our mental capacities to be crucial for everyday life and self-knowledge (Guo 2015, 3). Also, as one of the founders of the discipline of artificial intelligence is considered John McCarthy, who co-authored the document that coined the term “artificial intelligence” (AI). Basically, at first a computer was an information processing device, which operated by using symbols according to certain rules. When using computers, we must follow these rules and be “sensitive” to computer symbols, i.e. we are conditioned to think according to the way computers process our thoughts into information and knowledge. People who live and work with computers have come to rely on digital information on a daily basis. According to Ting Guo, “self-reconceptualization becomes more essential in contemporary culture since it is heavily influenced by AI technologies” (Guo 2015, 6).

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23 This chapter presents a revised and expanded version of the paper Popović, Miroslav M.; Kulenović, Nina (2024). „Artificial Intelligence, Transhumanism and Biopolitics: Theoretical Frameworks in the Past Two Decades“. *Acta historiae medicinae, stomatologiae, pharmaciae, medicinae veterinariae* 43 (1): 65-79. Prof. Nina Kulenović is agreed with that, for which I am thankful.

Researchers, among them historians, investigate a key question of civilization: to what extent and by what means does technology determine political, social, economic and cultural forms in a society? In anthropology, the opposite question may also be posed: how does the cultural context shape, i. e. create or modify technology? Historians, in principle, support the view that technologies are social products, sensitive to the system of government and, therefore, to democratic or totalitarian control. Karl Marx started the modern discussion of determinism, and Robert Heilbroner renewed it in the context of the history of technology. Marx's views are somewhat embedded in contemporary Western culture, in the form of phenomena that are constant reminders of how rapidly changing technologies can change human lives. The idea of "technological determinism" can take different forms, ranging from "hard" to "soft". According to "hard determinism", the progress of technology has the ability to influence the course of events, in the present and in the future. For example, the side in a war that has a more advanced military technology may gain the upper hand at a critical moment. Innovations in the field of genetic engineering can lead to changes in human DNA that can be inherited by future generations of people, thus directly influencing the future. The future seen through the eyes of "hard determinism" may have several versions. According to optimists, it will be the result of many free choices and the realization of the dream of progress. For pessimists, it will be the product of needs dictated by political and economic power structures, leading to totalitarianism. Proponents of "soft determinism" remind us that the history of technology is the history of human action. In order to understand the origin of a particular type of technological power, researchers must first investigate its actors, i. e. who they were and in what circumstances they operated. In this sense, important questions arise: why were innovations created by certain people and not by others, why the innovations occurred at a certain time and place, and not in another time-space framework, and then, who benefited from them, and who suffered? (Marx, Merritt Roe 1994, IX– XV)

Back in 1998, Dennis Weiss, professor of philosophy, pointed out that "the various subcultures that have grown up around the digital computer (the so-called 'digital culture') have been actively defining and shaping popular conceptions of what it means to be human and the place of humanity in the digital era." Weiss emphasizes the mind as information independent of the physical body, the obsolescence of the human body, the elimination of the individuality of each person, the flexibility of human nature and logic, and the arrangement of the computer as a metaphor for the cosmos. According to him, "a renewal of the philosophical anthropology movement — devoted to the issues of human nature and humanity's place in the cosmos — permits us to see the inadequacy of the conception of

human nature implicit in the digital culture.” (Weiss 1998, 142) The basic focus of anthropology of AI is man’s relationship to technology, and its research is concerned with the future of humanity together with technology and with the questions of the “essence” of technology. Seventy years ago, Martin Heidegger posited technology as a way of “discovering” the world. The essence of technology, he argued, is not only technological or mechanical, but represents the way in which the world is revealed to us, and thus the “enframing” of the problem of technology determines our understanding of what exists in the world (Waltorp, Lanzeni, Pink, Smith 2023, 3–4; Heidegger 1997, 23–24). Leslie White, American anthropologist known for his advocacy of the theories on cultural evolution, sociocultural evolution, and especially neoevolutionism, emphasized the primacy of technological factors in determining the form that society will assume: “[A] social system might well be defined as the way in which a society makes use of its particular technology in the various life-sustaining processes [...]” (Carneiro, Brown 2007, XIII). White also believed that the technological system of society included the means and ways of applying energy, and that the use of energy was a decisive factor in cultural evolution. The technological aspect of culture, according to White, initiates change, sets in motion a series of transformations following one another, which ultimately affects every part of the system. (Carneiro, Brown 2007, XIV).

The most important feature of anthropological studies of technology is their focus on various knowledge practices that technologies bring about and on which they are based. Research in anthropology actively contributes to discussions of various value issues relating to technologies. Finally, they point to the way technologies fit into broader political-economic and socio-historical processes that shape and often foster inequality and discrimination, while at the same time creating diversity (Hojer Bruun, Wahlberg 2022, 2–3). At the end of the 20th century, in the 1980s and 1990s, industrial mass production increased, together with a faster development of transportation and global communications, and increased migrations. The same period also saw the efforts intensifying to define new directions for the anthropology of technology in the era of globalization. During the first two decades of the 21st century, anthropologists have continued to study the ways in which technologies develop and shape everyday life (Hojer Bruun, Wahlberg 2022, 12– 18).

The term *biopolitics* was first used by Michel Foucault to denote the organized power of institutions over life in general, through the scientific and technological regulation of knowledge as a new form of state surveillance, i. e. repression over the lives of citizens. As previously mentioned, according to Bogdana Koljević Griffith, “it is also about total control of economic processes, i. e. the ultimate goal of modern political economy is population regulation in practically all

aspects – especially economic growth, migration and health. Or, more precisely, given that the power exercised over populations relevantly includes the control and regulation of biological processes – birth, death, disease, food and living conditions in general” (Кољевић Griffith 2022, 1233). Artificial intelligence and transhumanism can also be considered in this context. The creation of artificial intelligence is often influenced by political and economic factors, and behind the ideas at the core of some AI systems are often people from the world of politics and political and economic power centres. Transhumanism, with its ideas about “improving man” and encouraging the development of intelligent life through science and technology, can influence the control of various issues in the field of health and provide solutions for controlling the population problems that the world is facing today.

### *Artificial intelligence research in social sciences and humanities (2000–2023)*

This chapter is considering the interest in the impact of artificial intelligence (as an extension of biopolitical and bioethical research) on the (self) understanding and eventual reconceptualization of concepts such as humanity, sociability and the like, as building blocks of what constitutes the cultural concept of man in today’s society. Only some of the results and interpretations of modern anthropological research on artificial intelligence in the digital age will be presented here to serve as an illustration of some of the contemporary trends in the anthropological analysis of the AI phenomenon and associated problems in the past two decades or so.

For researchers concerned with the nature of knowledge, the idea of artificial intelligence is one that fascinates and stimulates re-thinking. AI research opens up a wide range of key questions relating to culture, cognition, knowledge and power, raising numerous philosophical and methodological problems. Some AI experts believe that computers will be able to replace human expertise. Researchers who approach AI with a grain of salt respond to these claims by arguing that, given the nature of knowledge itself, machines can support human expertise, but cannot replace it completely (Forsythe 2002, 35). According to Diana Forsythe, who was a leading researcher in anthropology and a key figure in the field of science and technology studies, when building an expert (AI) system based on scientific knowledge, the principles of selection and interpretation of existing knowledge must be applied. She believes that it would be useful for AI engineers to include the theory and methodology of qualitative social sciences in their education. In this way, engineers would develop new ways of thinking about how to acquire knowledge and that would help them achieve their own system-building goals. AI engineers are aware that they have to make choices about what to include in their systems, which is essentially based on their own values and assumptions. AI

engineers' ways of thinking, values and assumptions have a manifold influence on the selection of knowledge on which AI systems are based. The knowledge and solutions that AI systems possess and bring, which are taken for granted as being reliable, illustrate the cultural nature of scientific practice. Design decisions made by individual AI engineers are encoded in computer languages that many people cannot read, and when an expert system is built, it is very easy for the user to assume that what such a system "says" must be correct. In a way, a knowledge-based AI system is a replica of its creator's perspective. AI engineers are often unaware of everything they have incorporated into or excluded from the system. The power exercised by AI engineers has a political dimension, raising questions about the relationship between technology and society. The big questions that arise are whose knowledge should form the basis of the "knowledge base" and whose practices should be considered as "expert"? Who should select the cases or "knowledge" that should represent "reality"? All of this is influenced by big political issues concerning differences in culture, race, class and gender (Forsythe 2002, 55– 58).

"Deep learning" techniques, which are gaining popularity in the field of artificial intelligence, identify patterns in a large number of data systems, make classifications and predictions. AI experts and scientists who trust "deep learning" techniques present these classifications and predictions as more accurate than those made by humans. Claims of "superhuman" accuracy of these results, along with the inability to explain fully how these results are obtained, create a discourse about AI that some authors call *enchanted determinism*. To analyse this discourse, researchers draw on Max Weber's "theory of disenchantment".<sup>24</sup> "Deep learning" is a complex form of technological calculations and predictions that Weber associated with disenchantment. In order to explain the mechanisms of these systems, which cannot be interpreted, and their counter-intuitive behaviour, so-called

24 Weber borrowed the idea of the process of "disenchantment of the world" from Schiller. Putting this idea at the core of his sociology, Weber, elaborating on it, expects the suppression of superstition, myth and magic which will be replaced by a more "realistic" approach to the world. Once magic is eliminated from life, the mind returns to itself and tries to reconstruct the world according to "rational" criteria. In this way, intellectualism suppresses magical beliefs and the world's processes become disillusioned, losing their magical significance; they still exist, but no longer signify anything. The new "religions" of modernity, which replace the myths of traditional society, cause a "short circuit" in the human mind with empty promises, cause resentment, which leads to collective aggression and despair (Greisman 1976, 496–498; Owen, Strong 2004, XX–LXII). As stated by Weber: "It means that in principle, then, we are not ruled by mysterious, unpredictable forces, but that, on the contrary, we can in principle control everything by means of calculation" (Weber 2004, 12–13). "Our age is characterized by rationalization and intellectualization, and above all, by the disenchantment of the world" (Weber 2004, 30).

magical discourses are being used. Discourses of magical “deep learning” create techno-optimism, leading to a large number of phenomena, and the deterministic, calculated power of these systems intensifies the social processes of classification and control, and protects their creators from responsibility (Campolo, Crawford 2020, 1–19). Vanja Subotić, Research Associate at the University of Belgrade, Institute of Philosophy, specialized in Philosophy of Linguistics, Philosophy of Cognitive Neuroscience, Philosophy of AI, General Philosophy of Science and Experimental Philosophy, analyzes “state-of-the-art connectionist, deep learning models of natural language processing, most notably large language models, to see what they can tell us about linguistic competence” (Cybotiћ 2023, 2). According to Subotić: “Deep learning is a statistical technique for the classification of patterns through which artificial intelligence researchers train artificial neural networks containing multiple layers that crunch a gargantuan amount of textual and/or visual data.” Subotić argues “that these models suggest that linguistic competence should be construed as stochastic, pattern-based, and stemming from domain-general mechanisms”, distinguishes “syntactic from semantic competence”, and shows “for each the ramifications of the endorsement of connectionist research program as opposed to the traditional symbolic cognitive science and transformational-generative grammar” (Cybotiћ 2023, 2). Subotić provides “a unifying front, consisting of usage-based theories, construction grammar approach, and embodied approach to cognition to show that the more multimodal and diverse models are in terms of architectural features and training data, the stronger the case is for the connectionist linguistic competence”, proposing “to discard the competence vs. performance distinction as theoretically inferior so that a novel and an integrative account of linguistic competence originating in connectionism and empiricism [...] could be put forward in scientific and philosophical literature” (Cybotiћ 2023, 2).

According to Marchenko and Kretov: “The analysis of theoretical positions relevant for the philosophy of information and transhumanism resulted in a number of conclusions, central among which is the statement of the ‘blurring’ situation, the hidden elimination in the content of problematics of philosophical anthropology and its humanistic pathos within the limits of modern forms of correlation and existence in the scientific discourse of the philosophemes [philosophical statements, theorems or axioms] and ideologemes [fundamental units of ideology] in the information philosophy and transhumanism. Epistemological phenomena of ‘cognitive closure’ and a man as a ‘blind spot’ in the thinking on the science and technology development, primarily communication, indicate the relevance of a full comprehensive consideration of the problems of philosophical anthropology in projects of the information philosophy and transhumanism” (Marchenko, Kretov 2019, 101). According to these two authors, the question of

correlation between the philosophy of information and transhumanism projects should be divided into several spheres. The first of these is the nature of formal modalities of interaction between humans and the digital information environment. Next, the status of human consciousness and personality in the context of such interaction is important and, finally, we are considering the transformation of cognitive and human activity through this interaction. The status of human consciousness and personality moves on levels between imperative (that is, the one who programs) to affiliate (social-communicative platforms) and dependent (strategies of use, problems of digital personality and manipulative strategies in the sphere of information). The transformation in the form of speech and language discourse is explained by the fact that “live” speech is not formalized within digital communication models (Marchenko, Kretov 2019, 110– 111).

Some authors are concerned with the economic, political and historical dynamics of technological innovations and their consequences on employment and economic restructuring, which are carried out through sovereign and discursive power (Boyd, Holton 2018, 331). The conclusions are reached that technological change has a transformative potential, but also its uncertainties and limits. Also, Boyd and Holton believe that the analytical perspective “has normative implications in that it raises the possibility of alternative futures [...]. The possibility of futures other than the dystopian or utopian strands of the radical change thesis, allows an array of competing hypotheses about future trends to be articulated and evaluated against a plurality of normative viewpoints. Such an exercise is crucial if a deliberative democratic discourse is to emerge around new technology” (Boyd, Holton 2018, 343)

From the standpoint of political anthropology, algorithms, digital data processing and decision-making mechanisms are no longer purely technical-rational constructs. They are always created under the influence of those who create them politically and technically. In other words, the creation of AI is very frequently influenced by political factors, interests and ideas behind people from political life, and AI engineers turn those ideas into reality through programming. So AI can be seen as a kind of amalgamation of people and codes, which is in accordance with the basic principles of the so-called “new materialism” school of thought. According to these views, it is inadequate to distinguish between humans and machines, animate and inanimate matter, participants in events and structures. According to some authors, the people who develop the systems do not dictate the functioning of the algorithms, but the acquisition of power and the necessity of management will result from the interaction between the algorithms and those who developed the system. “Governance by Things’ requires good, human and humane ‘Governance of (these) Things’” (Wagener 2022, 7–8).

According to Michael Harkin, one of the leading anthropologists in the United States, the long-awaited biological connection of man and technology contributes to the transformation of human beings. The development of technology has led to the proclamation of “technological singularity”, in which an intertwining of humanity with technology will be possible, whereby a kind of immortality will be achieved, either through the replacement of impaired body parts or through the replication of individual human consciousness in a virtual form. If the development of technology enables humans to overcome their own mortality, the issues of maintaining populations with unlimited life spans and the morality of living outside “natural” limits will open up. Harkin also points out the importance of how the benefits of technology will be distributed. He also states: “Finally, as humans become more technological beings, technological beings are becoming more human. The category of ‘humanoid robots’ is new to us in reality, although long imagined in science fiction, and considered at a fairly deep level by writers such as Isaac Asimov and Philip K. Dick. However, the reality of humanoid robots will open up fundamental philosophical, ethical, and legal questions of humanity and its relation to robots”. In the same way, the author discusses the Internet revolution, highlighting the intertwining of the virtual and real worlds of Internet users, because for many online identity is a central component of their overall identity. According to Harkin: “If we are living (or soon will be) in a post-human world, it is worth questioning whether we can be said to be entering a post-cultural era. [...] Or, going further, should we finally recognize, as many have urged, that ‘culture’ was always an ideological construct — a scientific reification used to manufacture and legitimize boundaries that reflected a set of distinctly European fantasies — fantasies that proved to be historically unsustainable?” (Harkin 2012, 99–102).

According to Kathleen Richardson, professor of Ethics and Culture of Robots and AI, the *Terminator* film series exemplifies how super-advanced intelligent machines tend to destroy humanity to ensure their own supremacy. She explores the origins of the robot as a cultural product in the cultural milieu of the 1920s. According to her, the robot was a critical response to the views of right-wing and left-wing philosophies which, as Karol Čapek, a Czech writer, playwright, critic and journalist, believed, were obsessed with work and production. Richardson explores how the revolution and the fear that humans are gradually losing their individuality influenced the notions and understanding of robots. Then she introduces the concept of robot into the field of artificial intelligence, which focuses on the simulation of human intelligence in machines, and points out that much of the efforts put into creating AI has been devoted to the development of war machines. In doing so, Richardson focuses on Alan Turing’s biography, related to his theory of thinking machines. The author explores the philosophy associated

with social robots and social machines, and leads us to the new way of thinking about what it means to be social and how companionship between humans and machines can be developed. Richardson is also engaged in the study of gender issues of the people involved in the creation of robots and AI systems and the types of those people, who are often characterized as “weird”. The creative work of scientists on constructing the robot is a form of unconscious dialogue with their own existential anxieties and difficulties. Finally, the author interprets the roles of fantasy and reality in the creation of robots (Richardson 2015, 1– 20).

Writing about relations between robots and humans, Ljiljana Gavrilović, Serbian anthropologist, points out that the stories of Isaac Asimov about robots consider human-robot relations in the context of masters and slaves relationships. She also takes into consideration other narratives from literature and film related to this topic and concludes that relation between human and robot-as-Other reflects the permanent need of Western civilization to dominate over the Other. Robots are usually submitted to humans in the context of literature and movies and there is always visible fear of robots seen as autonomous technology without being controlled. In this way writers and movie creators reflect their ambiguity in the attitude that concerns development of technology taking place in contemporaneity and show how people are not sure how to define themselves towards technology. Gavrilović also emphasizes that narratives from literature and movies shape people’s behaviour in a globalized world in terms concerning technology (Gavrilović 2010, 109).

Michael Mateas, professor of Computational Media, analyzes HAL 9000, a form of AI from the books of Arthur Clarke and the film productions created from them, most notably *2001: A Space Odyssey* and *2010: The Second Odyssey*. Instead of presenting Hal as an expression of human fear of an evolutionary confrontation with increasingly autonomous technologies, Mateas offers an interpretation of Hal as an expression of goals, methodologies and dreams in the field of artificial intelligence. Hal contained pre-existing intellectual currents already operating within the field of AI and served as an important cornerstone that had a remarkable impact on individual actors in the field of artificial intelligence and aspirations in the field. Writing in the context of the combined efforts of the humanities and computer science, Mateas reads Hal as a representation and expression of technological practices within AI. Hal was and remains a powerful inspiration for AI researchers. The author shows how Hal influenced the work of AI engineers and the current state of AI research. There have been many depictions of robots and smart computers in science fiction films, but few have achieved the status of Hal among AI experts. It has integrated many specific abilities, such as computer vision, natural language processing, chess playing, etc., representing the desirable

model of intelligence that AI researchers have been looking for (Mateas 2006). Also, Mateas points out that the field of AI has produced a series of technological practices and interpretive conventions in the creation of machines whose behaviour can be considered intelligent. Artists have begun to incorporate AI into practices of cultural production, which is reflected in the production of artefacts and experiences that function in the field of culture (Mateas 2001, 147).

Borivoje V. Baltazarević, professor of Culturology, stands out in his research that “while proponents of technological determinism posit that emerging technologies, such as AI, act as agents of cultural transformation, their perspectives are juxtaposed against those who perceive a perilous erosion of cultural diversity. In this context, the study critically engages with [Langdon] Winner’s *Autonomous Technology* to elucidate the socio-political ramifications of technological determinism, underscoring the need for a balanced ethical assessment. Ethical considerations applied to AI occupy a prominent place in this discourse. Cognizant of the transformative power of AI, scholars such as [Nick] Bostrom and [Luciano] Floridi have probed into the ethical dimensions of AI deployment. The study reflects on their findings, highlighting the imperative of ethical vigilance in the development and application of AI technologies. It contends that ethical assessments of AI must be inherently bound to the preservation and enhancement of cultural diversity, thereby ensuring the equitable distribution of AI’s benefits. This analysis further delves into the existing digital divide and its intricate interplay with the ethical evaluation of AI. It acknowledges the sobering reality that unequal access to technology exacerbates social disparities. As articulated by [Paul] DiMaggio and [Ezster] Hargittai, the digital divide reinforces existing inequities, underscoring the ethical imperative of addressing access disparities in the deployment of AI” (Baltazarević 2024, 165).

Steven Lyon and Michael Fisher, English physicist, as well as chemist and mathematician, have an opinion that the displacement of populations caused by natural disasters opens up a series of problems in urban planning, the solution of which requires a shorter or longer period of time. The authors believe that the most important contribution that anthropologists can make is the creation of a formal model of indigenous knowledge systems, derived from specific cultural systems, and the identification of ways to communicate with such systems. The creation of indigenous knowledge systems would imply a multidisciplinary approach that borrows knowledge from the development of AI and MAM (multi-agent modelling – design of multi-agent systems).<sup>25</sup> Lyon and Fisher point out

25 Agents and multi-agent systems represent software that has the ability to solve problems independently, without user intervention, and today they are mainly used to solve typical problems in the field of transportation and logistics, and serve to support decision-making.

that these disciplines can play an important role in the long-term planning of the coexistence of relocated communities, if these knowledge systems are adequately informed by anthropological interpretations relating to communities that are relocated (Lyon, Fisher 2006, 40–53).

A standpoint of Steven Puff is that “anthropologists should explore machine learning anew in order to revitalize their understanding of the interconnected sociotechnical phenomena of machine learning, data science, and big data [...]”. This would help foster new connections between anthropology and data science and within the qualitative/quantitative battlefield; this could help generate new connections with a newly rising perspective more potentially amicable to ethnography and other anthropological methods and modes of thinking (Paff 2018). Some authors believe that the association of anthropology, information science and artificial intelligence opens up the possibilities of a transdisciplinary activity that is able to shape and interpret human culture. An Ethnographic Semantic Data Modeling (EKSDM) approach is proposed because it combines ethnography with semantic data processing techniques to create systems of analysis that encompass broader contexts and explanatory possibilities (Matt 2023).

### *Contemporary aspects of transhumanism, bioethics and its religious perception*

Starting this chapter with a try to define a notion of transhumanism, perhaps it is fitting to use a formulation according to Wolfgang Hofkirchner, Austrian political scientist and psychologist, professor of Internet and Society, and Hans-Jörg Kreowski, professor for computer science: “transhumanism is a worldwide philosophical and futuristic movement aiming to enhance the intellectual and physical capabilities of human beings beyond their current limits. Having its roots in the 1920s and 1930s, it has gotten quite some drive and attention in the last three decades. [...] Transhumanists intend to employ already existing and future technologies such as artificial intelligence, robotics, cognitive science, information technology, nanotechnology, biotechnology and others as human enhancement technologies.” The authors state two positions. The first was given by Max More, one of the main proponents of transhumanism, who defines it as “both a reason-based philosophy and a cultural movement that affirms the possibility and desirability of fundamentally improving the human condition by means of science and technology. Transhumanists seek the continuation and acceleration of the evolution of intelligent life beyond its currently human form and human limitations by means of science and technology, guided by life-promoting principles and values.” There is another point of view, that of Francis

Fukuyama, who saw transhumanism as one of the most dangerous ideas in the world: “Nobody knows what technological possibilities will emerge for human self-modification. But we can already see the stirrings of Promethean desires in how we prescribe drugs to alter the behavior and personalities of our children. The environmental movement has taught us humility and respect for the integrity of nonhuman nature. We need a similar humility concerning our human nature. If we do not develop it soon, we may unwittingly invite the transhumanists to deface humanity with their genetic bulldozers and psychotropic shopping malls” (Hofkirchner, Kreowski 2021, V)

For the military-industrial complexes, transhumanism is a kind of temptation. Namely, future technologies promise to break the limits of military power, especially in terms of connecting people and machines, overall computers (Coenen 2021, 97–110). Also, new gene editing inventions allow direct modification of the DNA of organisms. Genetic engineering can be used to improve human beings and, even, ensure that these changes be inherited by future generations (Ranisch 2021, 111–120). In the same way, transhumanism forces social innovation that can be a double-edged sword, as we face an era of military rearmament due to advances in AI, robotics, and the enhancement of human beings (Reymann, Benedikter 2021, 121–130). Some authors believe that computers will never be more intelligent than humans, because human intelligence is not based only on logical and computational operations, but possesses a number of characteristics unique only to humans (such as curiosity, imagination, intuition, emotions, passions, desires, pleasures, enjoyment, purposes, goals, values, morals, experience, wisdom, judgment and humour) (Braga, Logan 2021, 133–140). Others believe that a verification criterion is necessary for robotic devices, computing machines, autonomous cars, drones, etc., so they will not harm humans under any circumstances (Krzanowski, Trombik 2021, 141–154). Transhumanism is under the scrutiny of scientific critical viewpoints related to racial and decolonial theories. The views of transhumanism tend to establish an “algorithmic” relationship to the historical processes of race formation within the Euro-American historical experience, and form a techno-scientific response to the “white crisis” phenomenon (Mustafa Ali 2021, 169–183).

When considering biopolitics, researchers also concentrate on the politics of human sensory engagement, particularly touch. The aim is to define how human touch articulates the values, assumptions and beliefs of individuals and of the culture and the society they belong to, which means that besides being a functional act, physical gesture is a way of meaning and of being. Sensory anthropology and sensory history research are articulating different ways that touch has been deployed in Western societies during the past, so these researches

reconstruct the way in which embodied subjects using the senses understand the world. It is important to stand out that sensory regimes differ between cultures and that bodily capabilities have an important role in the creation of our experience and understanding of the world. Subsequently, touch and the other senses are implicated in the forming of our values and the way we communicate them. The biopolitics of touch reveals our values, assumptions, beliefs, and has a motivating influence on our attitudes and behaviours (Cranny-Francis 2013, 2–3). Researchers also analyze intimate politics of human tactile relationships with new technologies, for example, the way the touch enables us to use a technology and places the human as a part of a system or a practice that has its own politics and ethics. According to Anne Cranny-Francis, Australian professor of English and Cultural Studies, with current research interests that include technology and culture, embodiment and sensory studies, multimodal literacies, and the history of inter- and transdisciplinary research methodologies, the use of prosthetics makes important changes of the traditional construction of physical impairment, and the close connection of those prosthetics with the human body confronts people with expectations and assumptions considering what it is to be human. In this way, the conventional divide between human and technology is removed. When one speaks about the connection between human user and machine, it enables the user to perform functions that expand the scope of his possible actions, and the tactile engagement incorporates users into systems and practices with political and ethical complexity. There are also interesting aspects of exploring interactions with robots that involve touch in many ways (Cranny-Francis 2013, 4–5).

Questions in the domain of transhumanism and biopolitics have also been discussed by anthropologists and sociologists in Serbia and the region. The second volume of the journal *Anthropology* for 2012 (published by the Department of Ethnology and Anthropology, Faculty of Philosophy, University of Belgrade) is devoted to relations between the body, (bio)technologies and power. Polona Tratnik points out the importance of biotechnology, which she considers as “a political technology investing in the body, improving its qualities, prolonging youth, taking care of health and reproduction”. [...] It intensifies techniques of biopolitics and anatomo-politics (detected by Foucault) and implicates specially derived politics, engineering-politics and regenerative-politics, which demonstrate that there is power over life and body in contemporaneity that is far exceeding the extensions and the technological possibilities of power from the biological modernity” (Tratnik 2012, 17). Ivana Greguric, professor of Philosophy at the University of Zagreb and a research associate at the Scientific Center of Excellence for Integrative Bioethics at the Faculty of Humanities and Social Sciences, with scientific activities primarily within the *Scientific and Research Committee for*

*Bioethics, Technique and Transhumanism*, touches upon many questions raised by cyborgization, the process “in which organic and inorganic ‘nature’, humans, computers and machines integrate, making a single matrix entity – the Cyborg”, and emphasizes:

“Modern man is gradually disappearing as a natural being and increasingly turning into an artificial creature ‘cyborg’ that leads into the question, what will ultimately remain human in a human body? In which direction can we expect further development of cyborgisation and where are boundaries that will strictly divide man from a cyborg in the near future? In order to protect man from the omnipotence of technology and its unethical application it is necessary to establish cyborgoethics that would determine the implementation of an artificial boundary in the natural body.” (Gregoric 2012, 41)

Greguric claims: “The cyborgized reality of scientific humanism as naturalism – the global liberal capitalism – shows its true face in the alienation and objectification of man, his life and death, which have become a commodity in the global economic exchange. The cyborgization procedures are the last act in the existence of man as a natural historical being and a step towards organless bodies or bodiless organs, and a way of establishing anthropology and the metaphysics of post-biological technical life and nonhuman imaginary beings. The machine as a new body with artificial organs and artificial intelligence takes over the control of world of life” (Greguric 2021, 317) and urges “the need to include all persons, regardless of their social or scientific and technological position, into the process of intersubjective harmonization of fundamental ethical values of life and on this basis to establish ethic, or cyborgoethic principles for moral actions on legal solutions to preserve the vitality of life in us and our reality and preserve the life of nature as the foundation of everything that is and every existence, before the closure of the nihilistic march of the scientific work” (Greguric 2021, 316).

Also, from the viewpoint of Greguric, “enhanced cyborgs, like other cybernetic transhuman and posthuman beings, set up new cybernetic ontologies and anthropologies. Cybernetic science and technology ontologize the entire biological life of nature and society. [...] Man and the world are no longer ontologically and ethically grounded in a transcendent battle, God or in a self-conscious subject. Man still co-operates in this will to power as an interpreter of the scientific-technical mind, and this on the one hand makes him powerful but also powerless because he is no longer a subject but an object of the self-serving movement of science and technology” (Greguric 2022, 33). Therefore, “philosophy and ethics, as well as humanity as a whole, face the task of adopting thoughtful ethical principles about the limits of transhuman human enhancement and the existence of posthuman

beings. From an ethical standpoint, cyborgs are only the first step of transhumanism towards posthuman robotic beings and man-made artificial intelligence. The principles must start from the meaningful value of life, which is older than reversible scientific-technical projections of artificial man” (Greguric 2022, 38).

A similar opinion is argued by Weiping Sun, network engineer: “Once such powerful AI technology is blended with biotechnology, there will be the greater probability that the integration will surpass human intelligence, which will lead to huge uncertainty and risks. At the same time, confronting this critical emerging technology, we realize an intense contrast between the robust AI development and our deficiencies, including backward concept, unclear policy orientation, shortage of ethical regulations, the tenuous moral ideas and the imperfect laws and regulations. Under such circumstances, we should set a foothold in ourselves, conduct an all-round introspection on AI and the application consequences. We should persist in the people-first principle, safeguard human dignity, guard against and dissolve the possible risks so as to establish a reasonable, righteous ethical order” (Sun 2018, 30).

Nora L. Jones, professor of bioethics at Temple University, puts the light on the following issues of bioethics:

“An embodied ethics brings two important transformations to bioethics, currently dominated by a normative and principle-based tradition. First, an embodied ethics leads us to ask new types of questions. In the realm of organ transplantation, for example, bioethicists overwhelmingly focus on how to increase the supply of organs for donation, on rethinking the parameters of organ compatibility, and the issues of compensating organ donors and their families. Bodies in these discussions appear only as the carriers of organs. Shifting our gaze to questions of embodiment, identity, and the daily realities of the bodies-in-action-in-context brings us instead to the concerns and preoccupations of the recipients and donors themselves and provides a more holistic and grounded view of organ transplant practices. Replacing the body as the vessel of organs with embodied donors and recipients redirects bioethicists to ask questions about changes in embodiment while waiting for an organ, the meaning of living with a transplanted organ, and about the relationships between donors and recipients. Second, an embodied ethics focuses not only on the embodiment of the patient, but also on the embodiment of all the stakeholders in medicine. It shines a reflexive light on the social processes that lead practitioners to focus on the specimen and the public to focus on the spectacle. It changes the way we see the relationships among selves, bodies, and illness. In so doing it opens a way forward to a more genuine and more generally healthful engagement between people and all that modern medical technology has to offer today, in a way that does not marginalize the body to specimen but

brings it to the center of care and holds it at the center of our attention” (Jones 2011, 83 –84).

Concerning regenerative medicine, Polona Tratnik concludes:

“Regenerative medicine in particular is focused on the performances of the body: it is optimizing its capabilities, concentrating its forces, increasing its utilities. Additionally, biotechnology has become the supporting technology of the biopolitics of the population. Regenerative medicine is used to manage life processes, particularly with regard to improving levels of health, life expectancy and longevity. Regenerative medicine must therefore be acknowledged as one of the leading technologies of contemporary biopower. The political role of regenerative medicine is crucial in slowing down the process of aging, assuring the quality of life, active aging and instant regeneration. Last but not least, all these motifs are represented in popular culture. The cultural tendency towards youth and the need to form one’s own aesthetics of the body according to the prevailing cultural standards and as a means of exhibiting the healthy and fit condition of the body is continuing to grow. In this regard, regenerative medicine is presenting novel options and promising solutions for sustainable corrections of the body. Regenerative medicine certainly contributes not only to the politics of the body but also to the politics of life” (Tratnik 2012, 351).

Tratnik analyzes the paradigm of the regenerative body, claiming “the quality that enables us not only to distinguish life from mechanics, but also to intervene into life processes in order to ‘improve’ or ‘rescue’ the body from dying or aging” is “[...] the quality of regeneration. Regenerative body generates an ultimate dream of the conquest of the body: an immortal active life of a body in constant process of vitalization, with which the process of mortification is defeated once and for all” (Tratnik 2017, 77).

Veselin Mitrović, focusing on liberal eugenics, writes:

“It has been argued that allowing the artificial insemination through biotechnology would be a correct decision, despite the limitations and shortcomings of the technology. It is expected that in the near future the new technologies will enable women to choose their children by being artificially inseminated with a ‘genetic copy’ or a ‘clone of a genius’. According to Nicolas Agar, a strong advocate of the liberal eugenics, the counter-arguments to this concept are rooted in irrationality that is fear, unease and ‘yuck’ towards genetic intervention. Due to their irrationality these arguments should not be taken seriously, Agar argues. However, there are certain social and epistemological implications of Agar’s stance. Are not the irrational fear and moral ‘yuck’ actually a part of typical and normal functioning of the human kind? Does the precision of reproductive technologies enable freedom of choice

regarding the desirable personal traits, or it is a potential tyranny of parents over children and the path to a uniform sexuality?" (Mitrović 2012, 79)

He is of the opinion "that the concept of the liberal eugenics would not lead to the reproduction of chosen traits but to the self-reproduction of women which might eventually create an asexual society" (Mitrović 2012, 79).

Mitrović explains two basic standpoints regarding the enhancement of human beings through genetic engineering, while considering views of Julian Savulescu, which starts from a technoprogressive, (neo)liberal orientation, and that of Francis Fukuyama's, which rests on (bio)conservatism, returning to the natural human rights. The aspiration of these stands is to put an emphasis on greater control and monitoring by the state for the benefit of individuals and (or) humankind. Fukuyama advocates the use of biotechnology for the purpose of therapy and prevention of disease, while Savulescu under "enhancement" includes increasing the length and quality of life, with a focus on genetic intervention for this purpose. Fukuyama thinks we should limit the use of biotechnology for religious and utilitarian reasons, not neglecting the ones of philosophical nature (Mitrović 2010, 75). Mitrović has an opinion that "initial conflicting views on the use of pharmacological means, or genetic interventions, treated only positive or only negative effects of those interventions. The presented arguments concentrated on the moral justifying different interventions or improvement tools, however, they neglected 'an early analysis of the ethics of the use of those technologies'. So, trying to justify the notion of improvement through erasing the differences between individual activities, indicating only their consequences, they neglected to see its essence. Although that is a difficult task, it is also interesting, because it pushes us to establish our morals, determinations and values that we will appreciate in the sphere of social life" (Mitrović 2010, 94).

Connecting bioethics and neuroethics, Mitrović points out that benefits in medicine and illness prevention resulting from the new research on the brain, consciousness, and artificial intelligence are often being praised, but also open to certain social and ethical questions. Some scientists today speak of neuroscience exclusively from the perspective of bioethics because the challenges to human survival are directly linked to artificially caused advancements in human consciousness, cognition, intelligence, and to an extent even morality. (Mitrović 2016, 1457-1458). Author discusses and is being challenged by many dilemmas: "Could enhancing consciousness and the related changes in the character of human knowledge influence our relationship with other biotechnologies and how? Have we become more accurate in using such technology or our enhanced anticipation capacities would surpass the present level of caution in scientific research and application of the obtained results? The mentioned dilemmas leave

open the issues such as, can the changed nature of knowledge with which human brain operates be used for political manipulation“ (Mitrović 2016, 1474– 1475).

Mitrović also presents three existing viewpoints concerning enhancement. First, the *transhumanistic stream*, promoting the practice of genetic, prosthetic and cognitive enhancement of human kind, which favors transition from human to a post human society. The second viewpoint is *bioconservative*, perceiving a threat in the violation of human dignity, explaining it as “playing God“. For representatives of this standpoint, a threat lies also in the changes to the nature of human beings. Representatives of the ‘middle standpoint’ consider that the most dangerous dilemmas are those connected to the dialectic relation of capitalism and medicine (Mitrović 2014, 93).

The boundaries of the body are, according to Bojan Žikić, in a real sense of meaning, boundaries of culture. Extra-human elements may be regarded as the intrusion of the extra-cultural into the culture, on the one hand, and as a way to enrich the range of culture with new elements, so, according to this interpretation, technicized body structurally becomes less human, but the self-concept of humans goes beyond of the limits of biological, i. e. organic frameworks. Žikić concludes that

“the question of the boundaries of corporeality, the self, society and culture are thus revealed, as are the questions of control and power known to humanist discourses. The human, i.e. social and cultural world is the world over which man has control and the power to shape it according to his needs and interests[...]" (Жикий 2018, 328).

Gregor Mobius, a researcher whose work since 1992 has been based on deciphering and interpreting visual representations of DNA and RNA as a specific visual language, considers: “It seems that the four key properties of life: metabolism, replication, observation and memory could be interpreted through the observer-observed relationship. In fact metabolism relates to observation and replication relates to memory. While metabolism and observation are exchanges/interactions with the environment (inside-outside), replications and memory are processes within the living being (observer) itself (inside-inside). However, both these relationships, external and internal, form ‘pictures of the world’ impressed into the living being (from DNA to Biosphere), which are being continuously updated throughout its life. Without the observer there is no observation. Without life there is no world. Without the living there is no non-living matter. There is a possibility that, at some “bio-singularity“ point, something we could call Bio General Intelligence (BGI) will emerge and become a living alternative to Artificial General Intelligence (AGI)“, putting an emphasis on the question „could the properties

which have so far been specific only to living matter (intelligence, consciousness, self-awareness, self-initiative, self-reflection, curiosity) be extended to non-living matter as well, not to mention feelings like happiness, fear, empathy, intuition, anger“ (Mobius 2021, 1). Mobius gives the following thoughts: “When and how, under what conditions, does non-living matter become alive? Below what order of magnitude is living matter not possible? What about the ‘proton motive force’ that is maintaining life in all living cells? Are protons (and electrons) taking part in these processes non-living or living? These questions of countless relationships between living and non-living matter will be probably redefined with a new layer on the macro level, with the emergence of the Bio General Intelligence as a single largest conscious living entity and non-living Artificial General Intelligence if and when it ever appears as an independent entity. Whatever the future brings, it seems that in the case of the emergence of Bio General Intelligence and/or Artificial General Intelligence the key role(s) will be played by humans“ (Mobius 2021, 3).

Offering introductory remarks on the post-secular paradigm and the influence of religion in new medical biotechnologies, Zorica Ivanović considers, among other issues, governing biotechnologies:

“Today, already extensive literature on various aspects of contemporary biopolitics points to the importance of new medical biotechnologies, which should be understood as ‘political technology invested in the body’. It is a ‘politics of life itself’, which differs from biopolitics from previous periods in that it enables us to control, manage, reshape and adjust ‘the very life capacities of human beings as living creatures’. [Nikolas] Rose especially emphasizes that what is still new about these technologies, when it comes to advanced liberal societies, is the change in political rationality and management technologies, which is particularly noticeable through transformations in the domains of social security, health and safety” (Ivanović 2018, 855-856). “[...] One of the important elements in the repertoire that states have developed to deal with the challenges of managing biosciences are bioethical bodies. These bodies represent advisory institutions of expertise appointed by state or international authorities, which have the task of considering morally and technically complex issues on behalf of the public with the aim of encouraging wider discussion and giving opinions and recommendations to awardees.” (Ivanović 2018, 856) “In this way, the development of biosciences called into question not only the boundaries between living and non-living, between human and non-human, but also posed a challenge to the moral and political understanding of the very foundations of democratic institutions in societies where religious freedoms are treated as the basis of individual freedom and human dignity. It can be said that it was discussions about the benefits and dangers of modern scientific and biotechnological progress [which] inspired considerations about the most adequate

model of action of religious institutions and communities within contemporary plural secular societies.” (Ivanović 2018, 856-857).

In the following passages stands the Orthodox Church (especially Russian Orthodox Church) and the Roman Catholic Church, as the most important institutional religions that published their official views on issues considering the emergence of biotechnologies in everyday life, will be regarded, and also within Islam. John Breck, an archpriest and theologian of the Orthodox Church in America specializing in Scripture and Ethics, in his book concerning Orthodox Christianity and bioethics, starts with defining “eugenics” as a science aiming to improve the human gene pool and human nature itself. This science tries to achieve the aforementioned by improving environmental factors and human condition. Genetic engineering as a science exercises the manipulation of genetic material for therapeutic or eugenic purposes, and gene therapy is a branch of genetic engineering. There are, according to Breck, two main dangers of genetic manipulations: “violation of the dignity and integrity of created life-forms; and interference in the micro-evolutionary process of natural selection which, as it plans, can narrow the gene pool with unforeseeable consequences. [...] Even depression and schizophrenia, now widely recognized as illnesses of biochemical origin, seem susceptible to treatment by genetic therapy” (Breck 1998, 190–194). Breck follows: “we as Orthodox Christians ought to call for a moratorium on all experimentation with human germ line cells (as the Orthodox Church has done regarding human cloning, in a statement in the Spring of 1998). [...] There where the dignity and integrity of the human or animal subject are fully respected, such a quest should be encouraged and, where appropriate, subsidized by public funding”. [...] A clear and unambiguous stand should be taken against any form of human experimentation that would violate the freedom, dignity or integrity of the person. [...] Finally, we should urge a reversal of the decisions to grant patents on newly developed animal life-forms” (Breck 1998, 197–198).

Considering the stands of the Serbian Orthodox Church towards digital technologies and bioethics, Ana Čović, Serbian jurist and scientific advisor, gives the opinion: “the development of digital technologies along with the spiritual poverty of modern times societies and people in them, increases the danger of various abuses in relation with [...] questions from the domain of bioethics. Medical staff, donors, users of forementioned services or intermediaries may not promote science without ethical awareness and responsibility towards human life (and the unborn child), human dignity, nor be guided by political and economic interests or primarily interests in the domain of new scientific progress research. Since the Serbian Orthodox Church does not have an official document that clearly and unambiguously determines its position on issues of extracorporeal

fertilization, surrogacy, organ donation and euthanasia, it would be necessary, and for the faithful, it is useful to start working on it as soon as possible, following the examples of the Russian Orthodox Church and the Greek Orthodox Church“ (Човић 2023, 145– 146).

Stands of the Russian Orthodox Church about bioethics are published as a part of an official act called *Fundamentals of the Social Concept of the Russian Orthodox Church*:

“While drawing people’s attention to the moral causes of illnesses, the Church also welcomes the efforts of doctors aimed at curing hereditary diseases. However, the goal of genetic intervention should not be the artificial ‘improvement’ of the human race and interference with God’s plan for man. Therefore, gene therapy can only be carried out with the consent of the patient or his legal representatives and exclusively for medical reasons. Gene therapy of germ cells is extremely dangerous, because it is associated with a change in the genome (a set of hereditary characteristics) in a series of generations, which can lead to unpredictable consequences in the form of new mutations and destabilization of the balance between the human community and the environment. [...] Advances in decoding the genetic code create real prerequisites for widespread genetic testing to identify information about the natural uniqueness of each person, as well as their predisposition to certain diseases. The creation of a “genetic passport” with reasonable use of the information obtained would help to promptly correct the development of diseases that are possible for a specific person. However, there is a real danger of misuse of genetic information, in which it can serve as a basis for various forms of discrimination. In addition, having information about a hereditary predisposition to serious diseases can become an unbearable mental burden. Therefore, genetic identification and genetic testing can only be carried out on the basis of respect for individual freedom. [...] The cloning (obtaining genetic copies) of animals carried out by scientists raises the question of the admissibility and possible consequences of human cloning. The implementation of this idea, which is met with protest from many people around the world, can become destructive for society. Cloning, to an even greater extent than other reproductive technologies, opens up the possibility of manipulating the genetic component of the individual and contributes to its further devaluation. A person has no right to claim the role of creator of similar creatures or to select genetic prototypes for them, determining their personal characteristics at his own discretion“ (“Основы социальной концепции Русской Православной Церкви”, XII/.5, XII/.6).

In the following passages standpoints of the Roman Catholic Church concerning application of genetical engineering and biotechnology will be cited, according to the *Compendium of the Social Doctrine of the Church* [Roman Catholic]:

“An issue of particular social and cultural significance today, because of its many and serious moral implications, is human cloning. [...] From an ethical point of view, the simple replication of normal cells or of a portion of DNA presents no particular ethical problem. Very different, however, is the Magisterium’s judgment on cloning understood in the proper sense. Such cloning is contrary to the dignity of human procreation because it takes place in total absence of an act of personal love between spouses, being agamic and asexual reproduction. In the second place, this type of reproduction represents a form of total domination over the reproduced individual on the part of the one reproducing it. The fact that cloning is used to create embryos from which cells can be removed for therapeutic use does not attenuate its moral gravity, because in order that such cells may be removed the embryo must first be created and then destroyed” (Osnove socijalnog učenja Katoličke crkve 2006, 128).

“The Magisterium’s considerations regarding science and technology in general can also be applied to the environment and agriculture. The Church appreciates ‘the advantages that result — and can still result — from the study and applications of molecular biology, supplemented by other disciplines such as genetics and its technological application in agriculture and industry.’ [...] ‘it is necessary to maintain an attitude of prudence and attentively sift out the nature, end and means of the various forms of applied technology.’ Scientists, therefore, must “truly use their research and technical skill in the service of humanity,’ being able to subordinate them ‘to moral principles and values, which respect and realize in its fullness the dignity of man” (Osnove socijalnog učenja Katoličke crkve 2006, 240).

“A central point of reference for every scientific and technological application is respect for men and women, which must also be accompanied by a necessary attitude of respect for other living creatures. Even when thought is given to making some change in them, ‘one must take into account the nature of each being and of its mutual connection in an ordered system.’ In this sense, the formidable possibilities of biological research raise grave concerns, in that ‘we are not yet in a position to assess the biological disturbance that could result from indiscriminate genetic manipulation and from the unscrupulous development of new forms of plant and animal life, to say nothing of unacceptable experimentation regarding the origins of human life itself.’ (Osnove socijalnog učenja Katoličke crkve 2006, 241).

“Modern biotechnologies have powerful social, economic and political impact locally, nationally and internationally. They need to be evaluated according to the ethical criteria that must always guide human activities and relations in the social, economic and political spheres. Above all the criteria of justice and solidarity must be taken into account. Individuals and groups who engage in research and

the commercialization of the field of biotechnology must especially abide by these criteria. In any event, one must avoid falling into the error of believing that only the spreading of the benefits connected with the new techniques of biotechnology can solve the urgent problems of poverty and underdevelopment that still afflict so many countries on the planet. [...] In a spirit of international solidarity, various measures can be taken in relation to the use of new biotechnologies” (Osnove socijalnog učenja Katoličke crkve 2006, 249–250).

Considering a European protestant perspective of theological bioethics, Peter Darbrock, professor of Systematic Theology (Ethics), concludes:

“Looking back at this European sample of how a Protestant bioethics defines its role, one may note several specific characteristics. First of all, even within a foundational theological approach, this Protestant bioethics was conceived not as independent of, but instead as placed in the very midst of its secularized societal environment. The need to respond to this environment is thus seen as one of that theology’s defining features. Secondly, this bioethics frames its orientation to its non-theological surroundings in terms of Luther’s doctrine of the two kingdoms. Assuming responsibility within secular society thus can be seen as Christians’ genuine mission. Third, the Kantian philosophical, and purportedly secular, endorsement of human dignity is recognized as resting on a certain commitment to unavowed moral principles that in turn derive from Christianity’s tradition. This is why it made sense to recapture the Christian roots underlying that endorsement and to restore the incarnate context for that reason, by reference to which Kant argued that human autonomy and human rights must be unconditionally respected and protected. As this one example of a German Protestant bioethics teaches, neither is Christianity in Europe limited to the merely Christian language” (Darbrock 2010, 151–152).

Yechiel Michael Barilan<sup>26</sup> wrote on Jewish bioethics, considering some contemporary medical trends and issues:

“Moreover, the very notion of conscientious refusal as a formal legal concept is alien to *Halakhah* and traditional Jewish society. Rabbis insisted that Israeli law recognize patients’ and families objection to the diagnosis of death by the brain death criteria, but, despite the fact that some Orthodox doctors and nurses do not subscribe to the “brain death” criteria of death, no request has been made to exempt doctors from participating in brain death committees and organ transplantation from the

26 Yechiel Michael Barilan is a practising clinician, expert in internal medicine, and Associate Professor of Medical Education in the Sackler School of Medicine, Tel Aviv University. He received his medical degree from the Israel Institute of Technology (Technion) and his Master’s degree, in bioethics, from the University of Leuven.

brain-dead. In Israel, it has been taken for granted that formalization is unnecessary to avoid conflicts between personal values and the provision of healthcare. [...] In addition to the legal prescriptions, another important aspect of studying a legal system is close attention to those paradigmatic cases on which a legal system focuses and those about which a legal system is silent. For example, whereas the only case of abortion discussed in the Talmud is abortion under- taken as the only way to save the mother's life, even contemporary official Catholic manuals to healthcare practitioners ignore this problem as if it does not exist all over the developing world. It is evident, therefore, that the role of law is not to match "cases" with normative instructions (i.e., "in case X, do/do not do/may do Y"). No less crucial for understanding the law, formal theology, and even social reality are questions such as which problems the law addresses, which problems adherents of a normative system bring before the legal system for arbitration, and which normative ideals and cognitive schemata a legal system internalizes and constructs for the people. [...] One example would be the harvesting of organs for transplantation from non-heart-beating donors, which all halakhists endorse. However, many devout Jews decline donation of organs, fearing the fate of an incomplete body at the time of the resurrection of the dead. In this case, we find the formal law at odds with social reality and with the religious sentiments of the people. Elective abortion is another case in point. Although Jewish religious law is one of the most permissive legal systems with regard to abortion, many women are terrified at the prospect of terminating the lives of their children, perceiving abortion as in violation of their most cherished religious values. The "pro-life" activists in the Jewish world are religious people, led by rabbis. [...] A[n] example is opposition and refusal to cooperate in vaccination programs and newborn screening. These phenomena are quite marginal, socially negligible, and yet manifested almost exclusively by observant Jews whose religiosity is a blend of Judaism and a proclivity toward "natural" medicine along with a suspicion of the medical establishment and adherence to doctrines such as homeopathy (which has nothing to do with Judaism)" (Barilan 2014,17–18).

Miloš Marjanović, Serbian law professor, discusses the differences between scientific and religious approaches to bioethics. Desecularization or religious renewal confronted scientific and religious worldviews, especially in the field of bioethics. Religious approach, while not giving the epistemological and methodological contributions to bioethics, insists on the moral limits of human intervention on itself and the surrounding nature. Fritz Jahr<sup>27</sup> proclaimed bioethical imperative to the *Declaration toward a global ethic* (adopted by the Parliament of the World Religions in Chicago in 1993), and from that moment respect of

27 The founders of bioethics were American biochemist Van Rensseler Potter (1970) and the German theologian Fritz Jahr (1926) (Marjanović 2014, 68).

life as life, in all its forms and stages, is moral constant of religious perspective in bioethics, becoming one of its foundations (Marjanović 2014, 68).

Zorica Ivanović summarises the efforts of institutionalized religions and religious communities in the field of bioethics. The *World Council of Churches* initiated a 'Five-year study on the future of man and society in a world of science-based technology' in 1969, trying to discuss theological and ethical questions related to scientific-medical biotechnologies. The following year, the first of a series of ecumenical conferences was held as part of this project. One of the main features of the period from 1969 to 1983 considering religious stands towards discourse on biotechnology is that this discourse was formulated within the WCC. It considered the issue of the risks of recombinant DNA technology (rDNA), the impact of new reproductive technologies on the family and women, the theological and ethical attitude towards scientific discoveries that enable gene therapy, 'embryo status' and embryonic research, also discussing issues as those of social supervision and control of scientific research. The conclusions the WCC made were not officially recognized in the period that followed, but remained on the level of recommendations and were considered as various conference and panel opinions. Some institutional religions and religious communities have formulated official teachings. Through these official stands the relationship of the faithful and religious officials towards these technologies were normalized. Also, there was a series of official announcements of institutional authorities of these religions and religious communities and statements of religious officials and/or representatives (Ivanović 2018, 843–844).

According to Marko Pišev, Serbian anthropologist, when the development of new biotechnologies is in question, one must take into account different bioethical positions – Islamic, Catholic, Orthodox, Buddhist, Hindu and others (Pišev 2012, 156). The principles of Islamic bioethics come from the foundations of Islam, which are the Koran, the Hadith (oral traditions from Muhammad) and the Sharia (Islamic religious law). One should also have in mind that the reason for the differences within Islamic bioethics is the division of Muslims into Sunnis, Shiites, Hajirites, Ismailis and numerous sects and mystical schools. Also, within the largest number of Muslims - Sunnis, there are four recognized religious and legal schools (Hanafi, Malikite, Shafiite and Hanbali), and each of them has its own legal traditions and religious authorities. (Pišev 2012, 156). When it comes to the principles of Islamic bioethics, the first relates to conflicts between the right and the benefits and harm for the holder of that right (essentially, it is about sacrificing the lesser to achieve the greater), and the second is related to legal cases whose specific solutions have not been disclosed in Koran and hadiths, and in these situations religious-legal authorities are guided by the method of individual reasoning to find a suitable Sharia regulation or legal interpretation.

New reproductive technologies in Islamic bioethics are acceptable in cases when by using them we do less harm in order to remove greater, that is when there is a willingness to make a sacrifice to achieve the greater good. Any procedure that may carry a religious-moral risk requires that a Muslim consults the relevant religious-legal authority (Pišev 2012, 157).<sup>28</sup>

*Biopolitics, Biotechnologies, AI and Societies of Control:  
review of some case studies examples*

This chapter contains some contemporary examples of possibilities of using modern technologies in biopolitical purposes, among others gene modification and AI technologies, and the stands of the scientific community toward them, but also the public attitudes, collected and analyzed by some researchers. Furthermore, some aspects of non-effective response of the US government to the first wave of AIDS in the 1980s, due to the reasons of biopolitical nature, will be considered, as well as discussions on genetic engineering manipulation in USA and People's Republic of China, the Neuralink Project, and Chinese social credit system as one of the state mechanisms of population control. In the introductory part some ideas of Roberto Esposito in biopolitical field will be presented, by taking into consideration the philosophy of Fridrich Nietzsche and phenomena of regeneration, degeneration, eugenics and genocide, especially during the Nazi regime.

In his book *Bios*, Roberto Esposito develops some ideas on the posthuman society, regarding the most the philosophy of Nietzsche. Esposito's opinion is that the community is held together by the equality of conditions and participations, based on a shared faith, and the more the community is preserved intact, the more the level of innovation is reduced, so, the greatest danger for the community is its own preventive withdrawal from danger. Analyzing Nietzsche, Esposito says: "The *Übermensch* (or however we may want to translate the expression) is characterized by an inexhaustible power of transformation. [...] Rather, it bears upon a form that itself is in perpetual movement toward a new form, transversed by an alterity from which it emerges simultaneously divided and multiplied" (Esposito 2008, 105–109). Considering *thanatopolitics*, through the phenomena of regeneration, degeneration, eugenics and genocide, especially during the Nazi regime, at the end Esposito observes that it was considered necessary to subject birth to death. Nazi regime needed to annul the genesis of life, in order to eliminate all posthumous traces of life. Concentration camp inmates in the world of living simply did not exist. They used to be killed an infinite number of time in the same day, but were

28 On sharia and new reproductive technologies, see Pišev 2018, 220–236, and for understanding the context of sharia and gender roles, see Pišev 2018, 169–182.

prohibited from committing suicide. In this biopolitical regime body without a soul belonged to the sovereign and sovereign law had the capacity to put to death and to nullify life in advance (Esposito 2008, 145). These may be some of the philosophical presumptions that can be used for explaining biopolitical use and manipulation of people's bodies and lives. Author of this article mentions Esposito's views on Nazi regime because, according to Peter Propping, German human geneticist, Hitler and the other political leaders, together with the most of the doctors and scientists involved in the crimes of the Nazi period, firmly believed that "bad" genes and even the affected individuals had to be removed from society. Due to the goal to achieve "stronger" and "healthier" race, the unbelievable cruelties against helpless patients were regarded acceptable or even necessary. Nazi doctors and scientists would probably embrace technical possibilities of present-day genetics (Propping 1992, 910). In this way Nazi eugenics is closely connected with today's understandings of biopolitics.

Infectious disease risk management is applied in most cases to blood and sexually transmitted diseases that stigmatize those who suffer from them and is a term used in social epidemiology, medical anthropology, sociology, demography and other disciplines that deal with biosociality, which means phenomena that are essentially social, but directly related to human biophysical conditions. The term risk management means that a person is aware that he is at increased risk of contracting a certain infectious disease due to certain habits and behaviors, and that he guides his habits and behaviors in the direction of avoiding the disease as much as possible. The term risk management was used to denote health strategies aimed at avoiding illness among members of marginal and marginalized groups (Жикић 2023, 10–11). When the government in a country is faced with the spread of a new infectious disease, it is guided by infectious disease risk management, and that was the case in the 1980s in the USA during the first outbreak of AIDS. There is a general opinion that the American administration under Ronald Reagan did not adequately respond to the challenges of the outbreak of a new infectious disease, primarily striving for budget savings, and American society reacted in various ways. Some condemned marginalized groups and the LGBTQ+ population who were most at risk, while others showed compassion. Certainly, the challenge of AIDS was important to the spread of human rights and the development of medical research in the US that contributed to the treatment of the disease.

The emergence of the first wave of AIDS in the 1980s contributed to the radical transformation of the relationship between sexual minorities and capitalism in the US. Employees who were HIV positive, visible to employers and to health care providers, were concerned as an economic risk. In that moment a battle arose between health capitalists, politicians, and AIDS activists over access to health care.

During this battle happened the integration of queer Americans into mainstream society and also a political dead end, enabling the radical possibilities of sexual politics that were alive in the years before the AIDS crisis. Activist groups, primarily, and the liberal politicians led legislative battles at federal and state level to force the health care system to respond to AIDS. Some authors argue that health care activism was in part a marker of class privilege, and a medical model for sexual minorities, which was a goal gay activists and liberal Democrats openly fought for, has helped those minorities to overcome the stigma of a public welfare system and, in this way, they were embraced into heteronormative capitalism (Bell 2018, 1). According to Alison Patterson, the Reagan administration was criticized by the many because of the budget cuts affecting federal health agencies and, besides that, because public speaking about the epidemic was highly neglected (Patterson 2017, 19). Other critics focus on Congress and local government leaders, as conservative senators and representatives added to the discrimination felt by homosexuals and drug users with the disease. Some researchers make an assumption that AIDS typically affected homosexuals who received no support from religious groups due to their condemnation of homosexual behavior, which was true in specific cases. Although the condemnation of homosexuality continued, some Catholic, Episcopal, and interfaith religious groups promoted a sense of compassion. There was a lack of media attention given to the epidemic and because of the lack of government attention, journalists did not take the epidemic seriously (Patterson 2017, 18–23). William W. Darrow, a sociologist and professor emeritus of public health, thinks that organizations, agencies, and authorities failed to safeguard the public's health, but succeeded in carrying out their appropriate tasks of conducting systematic, scientific, research. These institutions also cautiously reported about evidence-based observations and alternative interpretations, and exercised rigorous controls of spending that sometimes was unauthorized and potentially wasteful. Darrow concludes that in the early 1980s there was an adequate and fast response to AIDS crisis due to the activities of the National Institutes of Health, Centers for Disease Control and Prevention, and major newspapers and other media outlets, which contributed to the development of essential features of biomedicine and public health (Darrow 2023, 371).

The beginning of the AIDS epidemic in the 1980s has put the Food and Drug Administration, which regulates of one quarter of the domestic US economy and protects the nation's drug supply, under the large pressure. The FDA has gone through phases in which various priorities dominated, being a regulatory agency, law enforcement agency, and science agency, depending on the political party in power, the ideology of the FDA Commissioner, and the influence of external stakeholders. Some researchers say that the FDA's management of the

AIDS crisis was a serious mistake, because the Reagan administration failed to confront the challenge. Others argue that, despite the absence of presidential leadership, the FDA succeeded in rising to the challenge of the AIDS epidemic in the 1980s (Richert 2009, 467).

Considering genetic engineering and manipulation in connection with it, Nevena Divac, Serbian professor of Pharmacology and Clinical Pharmacology, says that since the discovery of DNA, genome sequencing,<sup>29</sup> the Human Genome Project,<sup>30</sup> the development of genome editing technologies like Clustered Regularly Interspaced Short Palindromic Repeats-(CRIS-PR),<sup>31</sup> discussions about the potential for a new form of eugenics were conducted in scientific and public sphere. The development of these technologies targeted treating genetic diseases, but what brings into the picture ethical concerns of great seriousness is their potential for human genetic enhancement. Opinion of some is that the use of genome editing may lead to practices where genetic features could be selected or altered to achieve desired improvements. If this selection would include physical or intellectual features, the resemblance to the aspirations of historical eugenics movements is evident. The implications of such enhancements and who gets to decide what traits are desirable are the most important segments of scientific and public debates (Divac 2025, 45).

As one of the examples of the possibilities of genetic manipulations, putting it in biopolitical context, we might take the study of Ramos, Almeida and Olsson about CRISPR-Cas9 (clustered regularly interspaced short palindromic repeats and CRISPR-associated protein 9), and several others that will follow, based on the cases of USA and PRC, that deliver following results:

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- 29 "A laboratory method that is used to determine the entire genetic makeup of a specific organism or cell type. This method can be used to find changes in areas of the genome. These changes may help scientists understand how specific diseases, such as cancer, form. Results of genomic sequencing may also be used to diagnose and treat disease" ("Genomic sequencing").
  - 30 The Human Genome Project (HGP) represents a process of biological discovery led by an international group of researchers with the aim to study all of the DNA (known as a genome) of a select set of organisms. In the period since 1990 to 2003, the Human Genome Project's generated as a result the first sequence of the human genome – providing fundamental information about the human blueprint. This discovery speeded up the study of human biology and contributed the medical practices ("The Human Genome Project").
  - 31 CRISPR gene editing is a revolutionary technology that allows for precise, targeted modifications to the DNA of living organisms. Developed from a natural defense mechanism found in bacteria, CRISPR-Cas9 is the most commonly used system. Gene editing with CRISPR-Cas9 involves a Cas9 nuclease and an engineered guide RNA, which come together to allow for the precise "cutting" of one or both strands of DNA at specific locations within the genome (Anzalone, Koblan, Liu 2020, 824).

“The advent of CRISPR-Cas9 in 2012 started revolutionizing the field of genetics by broadening the access to a method for precise modification of the human genome. It also brought renewed attention to the ethical issues of genetic modification and the societal acceptance of technology for this purpose. So far, many surveys assessing public attitudes toward genetic modification have been conducted worldwide. [...] Across countries, respondents see gene therapy for disease treatment or prevention in humans as desirable and highly acceptable, whereas enhancement is generally met with opposition. When the study distinguishes between somatic and germline applications, somatic gene editing is generally accepted, whereas germline applications are met with ambivalence. The purpose of the application is also important for assessing attitudes toward genetically modified animals: modification in food production is much less accepted than for biomedical application in pre-CRISPR studies. A relationship between knowledge/awareness and attitude toward genetic modification is often present. A critical appraisal of methodology quality in the primary publications with regards to sampling and questionnaire design, development, and administration shows that there is considerable scope for improvement in the reporting of methodological detail. Lack of information is more common in earlier studies, which probably reflects the changing practice in the field” (Ramos, Almeida, Olsson 2023, 1).

Other research results on this topic in USA give us the following picture. While discussions are being led among researchers, clinicians, and ethicists considering applications of CRISPR-Cas9, very little is known about public attitudes on this topic. Researchers did an online survey to a large (2,493 subjects) and diverse sample of Americans, including conservatives, women, African-Americans. Older respondents supported this technology, but with great caution, while liberals, men, other ethnicities, and younger respondents did the same with less caution:

“Support was also slightly muted when the risks (unanticipated mutations and possibility of eugenics) were made explicit. The information about genetic modification was also presented as contrasting vignettes, using one of five frames: genetic editing, engineering, hacking, modification, or surgery. Despite the fact that the media and academic use of frames describing the technology varies, these frames did not influence people’s attitudes. These data contribute a current snapshot of public attitudes to inform policy with regard to human genetic modification” (Weisberg, Badgio, Chatterjee 2017, 1).

Authors give a conclusion that attitudes may evolve over time as more information will be available and as people engage more fully with the issues that were the subject of the research, but it generally seems the public is supportive of research in genetic modification (Weisberg et al. 2017, 7). Authors of the

mentioned research conclude that the degree of this support was in correlation with several factors. For example, women, older people, African-Americans, and people with less education, citizens that are supporters of right-leaning politics, are supportive of application of CRISPR-Cas9 technology to a lesser extent and they are much more sensitive to potential risks and unintended consequences of these technologies. Men, younger people, White and Latino Americans, and people with more education and left-leaning politics are less sensitive to the same risks and consequences (Weisberg et al. 2017, 7–8). Heidenreich and Zhang considered applications of CRISPR/Cas systems in neuroscience:

“Genome-editing technologies allow for the introduction of genetic modifications into almost any cell type and organism. For example, Cas9 has already been used to alter genes in species such as killifish and salamander, which are commonly used to study ageing and tissue regeneration, respectively. It may also open up the possibility of developing models in other species of interest to neuroscience research [...]. [...] Furthermore, together with genome-wide association studies, *in vivo* genome editing holds potential for personalized therapeutic applications for brain disorders. However, to realize these advances, several open challenges have to be addressed. First, existing methods for delivering Cas proteins and RNA guides to the brain must be optimized and new methods must be developed to achieve sufficient levels of specificity and efficiency. Second, new methods for stimulating efficient gene insertion and correction in postmitotic cells have to be established. Third, safety and ethical concerns have to be carefully addressed. Nevertheless, we believe that novel genome-editing technologies based on CRISPR–Cas systems, together with powerful read- out methods, will help us better understand the logic of neuronal circuits and unravel some of the mysteries of complex neurological disorders in the near future” (Heidenreich, Zhang 2015, 7–8).

Chinese scientists concluded in 2016 that their research on CRISPR–Cas systems can be used for the improvement of therapeutic treatments of genetic disorders, but major technical issues are yet to be solved. These researches recommend that any application of genome editing on the human germline should be prevented and also underline a need for a rigorous and thorough evaluation and discussion by the researchers and ethicists on a global level (Kang et al. 2016, 1). In this sense, the first babies with CRISPR-Cas9 edited genes ever born were delivered on November 25, 2018. Bruce Rose and Samuel Brown wrote about this experiment:

“Dr. Jiankui He was the first scientist involved in the birth of a baby with edited genes. He chose to edit a gene related to a disease, HIV, which could both be avoided and treated with established therapies. If the recipient of the gene modification does

not contract HIV, it would not demonstrate the efficacy of this gene modification because the individual may never be exposed to HIV. He also chose to modify a gene to eliminate a gene product that did not completely protect the resulting child from the disease of concern. The child could still be infected by strains of HIV that used a different binding protein. Successfully eliminating this gene product by creating a delta 32 mutation, as planned, was known to create alternative health issues for the recipient of the mutation. [...] More concisely, although the thought of gene editing of embryos is an exciting prospect, our present experience using gene editing for the treatment of adults with severe disease or for beneficial genome modification of animal populations is limited. Many aspects of the experiment undertaken by Dr. He were troubling. Even with the discovery of CRISPR-Cas9, suboptimal control of molecular tools for gene editing and a review of the history of gene editing suggest the need for more caution and more collaboration before undertaking additional attempts to modify germline cells to create babies” (Rose, Brown 2019, 160–161).

“The scientist from the Southern University of Science and Technology in Shenzhen” according to Nevena Divac applied “a gene-editing tool called Clustered Regularly Interspaced Short Palindromic Repeats-(CRISPR) associated protein 9 (CRISPR-Cas9)” with a specific goal “of rendering the offspring resistant to the [human immunodeficiency virus] HIV, smallpox and cholera” (Divac 2025, 45). During this experiment there were many ethical violations, breaches of scientific, regulatory, and legal norms, and the potential risks were not taken seriously enough. The participants were recruited through a Beijing-based advocacy group for AIDS patients. Seven couples participated in the experiment, under the false information that the trial is about the fertility, while the actual goal was to prevent HIV and other diseases. It is also possible to apply methods used in this experiment for genetic enhancements, and these genetic modifications may be used to create “designer babies” with preferred traits, that may be considered as a beginning of the new eugenics (Divac 2025, 45–46). In this experiment not only the embryos were altered but there was also a possibility of the influence on the future offspring of the genetically modified humans, so, the goal to control human reproduction was thus achieved, which is a clear feature of eugenics (Divac 2025, 46).

The second example that may be used as a connection between transhumanism, AI and biopolitics is The Neuralink Project. According to Eric Fournernet, a French philosopher specialized in moral philosophy:

“[...] In July 2019, the American billionaire Elon Musk revealed the new objectives for his Startup ‘Neuralink’ (‘Neuralink Launch Event’): to develop a cerebral implant that will help an individual to control different technological devices, such as a computer, solely using the electrical activity of neurons. This technology will be

used to help individuals with various forms of physical disability. [...] Recent studies have shown that external devices controlled from decoded intracortical activity become seamlessly embedded as an extension of the body, the user being able to control the device effortlessly just by thinking about it” (Fourneret 2020, 668).

Fourneret continues with thinking about the questions we must ask ourselves. There are two basic questions, first, would transhumanists still want to be immortal if the idea of immortality was not so lucrative, and, the second, would Musk still want to merge it with human intelligence if the development of AI did not bring so many benefits? Besides the importance of the question whether the hybridization project with AI is morally desirable, there is also a need for this project’s scientific justification. Because, as Fourneret explains, it is not enough to develop an AI, but also to create a new technology, as a bridge between a biological organism and a machine, which does not yet exist. Fourneret also underlines scientific and social repercussions of Neuralink, without the ability of any anticipations (Fourneret 2020, 669–670). Diah Febri Utami discusses that Neuralink enables some telepathic possibilities, also the ability to converse without speaking or words but by access to each other’s thoughts at a conceptual level. Representatives of different ethical traditions have different stands towards Neuralink. While “bio-conservatives” speak negative of Neuralink’s project as a moral transgression, “others consider the jeopardy of technological liberalism that is deeply related to instrumental reason and responsibility” (Utami 2023, 146).

Dimitri Gurtner, specialist in Computer Science, thinks that brain-machine interfaces (BMIs) could offer in the future “many powerful possibilities, such as controlling people and merging our intelligence with artificial intelligence (AI), which may be necessary to mitigate the existential threat of artificial general intelligence (AGI). Simultaneously, they would likely have severe human impacts, such as loss of sense of self, erosion of skills, and privacy issues, creating psychological harm and confusion”. Gurtner urges the need to address these critical issues (Gurtner 2021, 1). BMIs applications are still in therapeutic sphere. Some of them include helping people with spinal cord injury by allowing them to control a computer directly with their brain, then, helping people with epilepsy, Parkinson’s disease, and autism. Learning, enhancement, behavior control, and reading thoughts are some of social and cognitive applications of BMIs. Among the future possibilities of BMIs are brain control, and the fusion of our intelligence with AI. Being still in their infancy stage of development, it is still difficult to predict exactly where BMIs are going. Potential effects of BMIs, particularly the human impacts of current and future BMIs should be the subject of future research (Gurtner 2021, 8). The future perspectives of the Human of Tomorrow in transhumanistic projects is under discussion, which has to be open to all perspectives, creating narrow or

polemic approaches. Three issues that are important, but not commonly analyzed concerning the Neuralink project, are a scientific project as a market strategy, a difficult scientific justification, and a difficult scenario concerning the integration of ethical reflection in the relevant scientific laboratories (Fournieret 2020, 672).

Nafisa Omar Abdallah Youssef, Vanesa Guia, Filip Walczysko, Suthongchai Suriyasuphapong and their project supervisor Camous Moslemi write that the possible outcomes of Neuralink technology may be analyzed through a normative ethical approach and areas such as health risks, social risks, cybersecurity risks, including advantages/disadvantages to community, following the role of government in the potential abuse of the technology when it comes to the military sector, and also through analysis of various lifestyle aspects (individual's health, rights to privacy and equal treatment, and safety). According to the authors, Neuralink technology may create inequality within society, and there could also be amazing societal improvements together with serious concerns related to communities (Youssef et al. 2020, 22–23).

There is also to consider a conclusion of Julia Miśkiewicz, specialist in Quantitative Economics, that she stands towards the idea of implanting a chip into people's brain, which is terrifying for many because it is new, might change during time because ethics keep changing with human progress. Miśkiewicz gives the examples of slavery that was acceptable and today it is now strongly prohibited by law, and of ethical disagreements noticeable between the nineteenth and twentieth centuries, considering people's opinions about women's and Afro-Americans' right to vote. Because along with the development of societies ethics change, "it is possible that today's generation will be thought of as unethical in its perception of AI by future generations" (Miśkiewicz 2019, 27).

Speaking of governmental means of controlling the society, there is a worldwide open discussion about China's Social Credit System, within a Chinese legal reform agenda from 2014. As Rogier Creemers, lecturer in Modern Chinese Studies states, China's legal reform efforts have been directed to ensuring effective legal and regulatory implementation, enforcement and compliance of the mentioned reforms. These reforms were implemented in various fields, for example, the enforcement of civil judgments and intellectual property, then, environmental protection and food safety. Creemer emphasizes the phenomenon always present in PRC that "enforcement is difficult" (*zhixing nan*) and also acknowledges the Chinese government recognized the importance of the improvement of implementation and compliance mechanisms of the legal reform agenda. Also, some reform measures are being applied to the improvement of existing judicial and administrative mechanisms. New, technology-driven tools for social control were introduced by the government, aiming to upgrade traditional means of governing

state and society. According to the author, China's political system has promoted powerful security state, with surveillance and monitoring becoming present across China, the emphasis of which is in politically sensitive areas such as Tibet and Xinjiang. The Social Credit System (*shehui xinyong tixi* – SCS) represents:

“[...] A set of mechanisms providing rewards or punishments as feedback to actors, based not just on the lawfulness, but also the morality of their actions, covering economic, social and political conduct. This maximalist objective, combined with China's rapidly increasing technological prowess, the absence of strong constitutional protections for individual citizens, [...] have led numerous observers to portray the SCS as an Orwellian nightmare” (Creemers 2018, 1–2).

The research conducted by Fan Liang, Vishnupriya Das, Nadiya Kostyuk, and Muzammil M. Hussain brings the conclusion that:

“[...] The SCS aims to centralize data platforms into a big data-enabled surveillance infrastructure to manage, monitor, and predict the trustworthiness of citizens, firms, organizations, and governments in China. A punishment/reward system based on credit scores will determine whether citizens and organizations are able to access things like education, markets, and tax deductions. While the SCS is widely described by the Western news media as a means of ‘big brother’ or political control, we find that it is a complicated system that focuses primarily on financial and commercial activities rather than political ones” (Liang, Das, Kostyuk, Hussain 2018, 1).

Analyzing the SCS helps researchers to understand how state surveillance infrastructures function through various government agencies that are cooperating to form centralized data infrastructure (Liang et al. 2018, 1). On the other hand, there are somewhat different opinions, as those of Karen Li Xan Wong and Amy Shields Dobson, lecturer in Digital and Social Media at Curtin university, specialized in gender and sexuality in digital cultures and social media. They explain that the government in China introduces a social credit system in several cities trying to combine a financial credit score system with a broader quantification of social and civic integrity including all citizens and corporations. After measuring workplace performance and health-related self-tracking, Chinese government continued measuring one's purchasing and consumption history, interpersonal relationships, political activities, and tracing one's movement history (Xan Wong, Shields Dobson 2019, 220). Authors seek to compare the structures and cultures of China's social credit system with those which are already present and in place in Western liberal democratic countries. China's social credit system enables researchers to predict what may happen if democratic countries continue to digitalize everything without stricter data use policies (Xan Wong, Shields Dobson 2019, 220). Yet, researchers

very often stand out that China's social credit system represents a serious danger for maintaining certain human rights, especially the freedom of opinion and expression, which are considered as liberty rights, which tend not to impose material burden on others, and, in accordance with this definition, these rights may be recognized as human rights (Burgess, Wysel 2022, 53). It is also interesting that the public's opinion of SCS, which is based on a cross-regional survey in China, reveals high degree approval of SCSs, and it is the strongest among wealthier, better/educated citizens and urban residents, also among older people. They interpret it through frames of benefit-generation and promoting honest dealings in society and the economy instead of privacy-violation (Kostka 2019, 1565).

When it comes to discussing the, generally spoken, inadequate response of the US government to the first wave of the AIDS, it should be taken into account that it was the first blood and sexually transmitted disease in the Western world for which there was no cure since the widespread use of antibiotics. So, it represented something new and unexpected, for which the government and the health system were certainly not prepared, primarily financially, and neither was society itself, which is used to certain living standards, habits and behaviors. Since the LGBTQ+ population and drug addicts were the most affected by this disease, who, according to the views of a part of society, were considered marginal and stigmatized groups, even in the USA, the leading country of democracy, the struggle of representatives of these groups for the right to health care influenced, on the one hand, the later process of recognition and expansion in the sphere of human rights and freedoms in democratic societies, and on the efforts to find a cure for HIV patients, on the other hand, so HIV today represents an infection that causes a chronic disease with which people can live. The response of the authorities, social public and religious institutions ranged from those who exclusively protected economic and political interests, those who created an atmosphere of condemnation, such as the judgmental attitudes of conservative politicians, to some who showed compassion, such as the behavior of certain groups within the structure of Catholic, Episcopal church and other religious groups.

The idea of the Chinese credit system is often criticized, and its consequences are compared to a dictatorship. The introduction of this system in China has met with disapproval around the world and is colloquially called the "totem of Chinese techno-authoritarianism". Although 10 million citizens and companies have already been blacklisted, some believe that this centralized system was not designed with the intention of the algorithm determining people's position in society. Allegedly, the surveillance and repression of political dissidents or minorities in China is carried out through more invasive surveillance programs, such as "Golden Shield" and "Sharp Eyes" (Пешић 2021).

## *Conclusion*

As Nina Kulenović believes, according to the ideal model, social and humanistic sciences consider the question how to regulate collective life and it is expected of them to solve social problems owing to the 'objective truth', which they arrived at through research thanks to the method, and to set the norms, based on that truth, that would govern social institutions or the (global or local) social order (Kulenović 2021, 151). In this way, social sciences, among them anthropology, are invited to consider the cultural aspects of society that are influenced by the increasingly rapid development of artificial intelligence and new technologies. Also, social sciences can indicate the directions in which the future of society can develop in accordance with the development of technologies, and, perhaps, influence the formation and standardization of future cultural aspects and models related to AI and new technologies.

In short, the subject of artificial intelligence may be traced back to the 1920s, in the context of philosophy, literature, film, science and its popularization. AI gained importance during the Second World War and is linked to the famous Alan Turing, his thoughts on smart machines, on the one hand, and the beginnings of using artificial intelligence for war purposes, on the other. AI has long been the subject of research in anthropology and other social sciences, as it permeates all spheres of social life and concerns philosophical and ethical issues, issues of political power structures and governance. The development of artificial intelligence has broadened the field for eternal consideration of the construction of the future of humanity, and the role of humans and machines in it. The issue of AI development has long preoccupied science fiction writers and filmmakers. With the growing popularity of the sci-fi genre and the growing reliance of ordinary people on digital technologies in everyday life, wider circles of the population around the world are interested in AI development. Scientists, among them anthropologists, should try to interpret this phenomenon with their active involvement. Their goal is to provide a multitude of possible visions of humanity's future, to point out the advantages, disadvantages and dangers brought by access to modern technology, which is increasingly based on artificial intelligence. Scientists should seek to provide answers as to how to live with AI and how it affects the formation of new value systems and transforms humans themselves. In a way, AI can be considered, especially from the perspective of the wider population and some scientists, among them anthropologists, as an opportunity to achieve the utopian dream of objectivity of results and methods in a broader sense, free from the influence of politics, ideology and power structures. AI may serve as a

tool to break free from the control of political and economic power centres. Also, according to some scientists, AI can ensure privacy and gradually lead to the transformation of existing models of political and economic order.

On the other hand, transhumanism and the ideas it advocates are being scrutinized by some scientists precisely because it gives the possibility of using AI as a tool of biopolitics. Some authors have dilemmas if enhancing consciousness and the related changes in the character of human knowledge may influence our relationship with other biotechnologies and whether the changed nature of knowledge with which the human brain operates can be used for political manipulation. Others think that in order to protect man from the omnipotence of technology and its unethical application it is necessary to establish cyborgoethics that would determine the implementation of an artificial boundary in the natural body. There are three existing viewpoints speaking about enhancement: *transhumanistic stream*, whose representatives openly promote the practice of genetic, prosthetic and cognitive enhancement of human kind – transition from human to a post human society; *bioconservative*, whose representatives perceive a threat in the violation of human dignity and the representatives of the 'middle standpoint' consider that danger lies within the dialectic relation of 'capitalism and medicine'.

A part of the wider population, a part of the scientific community and pseudoscientific circles, in some media-dominated societies, which are prone to conspiracy theories and technophobia, voice their concerns that artificial intelligence may become a tool of global control or, even, the realization of the fear that autonomous technology might clash with humanity at its ultimate evolutionary stage. Such fears are observable as a motif in literature and film art. Also, religious people and those with a somewhat more traditional value system believe that the development of technology and the growing attachment of man to it, and the inadequate attitude towards it, leads to alienation, changes in relations between people and the collapse of value systems which were considered "desirable" in a long historical period. Therefore, fear of the unknown dominates among these people and the anxiety that if too much freedom is allowed in the process of constantly overcoming previously set civilizational and technological boundaries, the existence and role of man in the modern world may become meaningless.

To quote Julia Puaschunder, a behavioral economist with expertise in law, economics and governance:

"Organizational changes have led to AI technologies reducing costs of communication, monitoring and supervision within the firm, which trigger a shift towards a new organizational design. The change towards AI induces an organizational shift towards skill-biased meritocracy. Endogenous technical progress leads to economic growth, but also generates wage inequality between low- and high skilled workers.

Faster technical change increases the return to ability and increases wage inequality between, and also within, groups of high-skilled and unskilled workers. Future studies should integrate some of the contemporary inequality measurements such as the Palma ratio, financial development and wealth transfers in contemporary growth theories and measurement. Wage inequality is only one way to assess inequality, but in order to get a richer picture of inequality derived from AI, future research may also consider inequality in wealth, health, status and within-group inequalities. Understanding the links between growth and inequality should also be placed in the different contexts of political, social and historical environments in order to derive inference about a successful introduction of AI into today's workforce and society. Finally, more research is recommended to model and maximize the novel production function including AI and information sharing – especially in light of G5 and the internet of things leading to a further connection and benefits from technology” (Puaschunder 2019, 6–7).

The development of AI certainly leads to transformations of human society and the individual in it. They can be fast, undesirable, and sometimes society cannot keep pace with such transformations. On the other hand, they can contribute to progress in the sphere of science, health, education, economic and infrastructural development, help in solving population crisis, enable the extension and facilitation of human life, etc. Given the multitude of possible scenarios when it comes to the question of directions in which the development of AI can lead humanity, only time will tell which destination this development will take us (Popović, Kulenović 2024, 75–76 ).



## LESSONS FROM FOUCAULT

This book represents an attempt of a review for the needs of the domestic readership, in the center of which are the definition of the concept of biopolitics and the philosophy that develops around it, following it from the originators, starting with Fernand Braudel, but primarily Michel Foucault, to contemporary theorists of biopolitics; then, the application of the philosophy of biopolitics in different fields of research in social sciences and humanities and the analysis of different perspectives through which biopolitics, artificial intelligence, transhumanism and bioethics are intertwined. Along with key foreign authors and theoreticians, the views of domestic researchers and those from the region, from the field of social sciences and humanities, which are a contribution to the scientific field of biopolitics, are represented. The limited space and functionality of the review do not allow complete study, with mention of all relevant works and original scientific contribution, since the author is a historian by basic education, and the complexity of the subject would require a multidisciplinary approach of several different experts for completeness.

When Michel Foucault wrote on sovereignty, governmentality and biopolitics, he and his works were of immense influence in social and political thought throughout the scientific world and public sphere, including literary and cultural studies. Contemporary theorists who discuss mechanisms of biopolitical power and social control imposed by the state in the 21<sup>st</sup> century often lie upon and are rethinking the work of Foucault. Michael Hardt and Antonio Negri mention Foucault's historical analysis of disciplinary power, claiming it precedes their standpoint of the passage from disciplinary to the society of control and that Foucault's thinking brought them to recognizing the biopolitical nature of the new paradigm of power. The source for Giorgio Agamben's concept of bare life and sovereign power was, according to his own words, in an intellectual way, Foucault's theory of biopolitics, being a cornerstone of Agamben's rethinking of the political. Also, many contemporary theorists bring into doubt whether Foucault's hypothesis of biopolitics is completely consistent with today's notion of the society of control and biopower. For example, instead of Foucault's presumption that the modern state is doing something new when it puts biological life as a crucial point, Agamben claims that sovereign political power is founded on the exclusion of bare life (Morton, Bygrave 2008, 2–3).

While acknowledging Foucault's work, researchers today cling to the conclusion that it is increasingly inadequate for describing how complex contemporary forms of sovereign power and biopolitical power have become (Morton, Bygrave

2008, 3). Quoting the words of Stephen Morton and Stephen Bygrave: “Foucault does offer something like a conventional stadial history from the mid-seventeenth to the late eighteenth centuries, and it may be tempting to characterize his account of the movement from sovereign power to disciplinary power to biopower as a grand metanarrative. For this account is after all a story of the replacement of monarchy by discursive institutions (prisons, medicine, the law, education), the power of which is expressed as discipline over the individual, usually expressed on the body, then the replacement of such disciplinary power in turn by what he calls biopower. Biopower is the new discursive regulation of populations through surveillance and control of their health, sexuality, reproduction, and so on. While the power of the sovereign was principally that of life and death over his subjects – which meant principally the power to have them put to death – biopower assumes the right to life over an entire population” (Morton, Bygrave 2008, 4).

The other way to put it is: “At the same time, the discoveries that Foucault makes with the concept of biopower have resulted in conceptual apparatuses that occupy his work for the remainder of his life. Some of these discoveries are as follows: (1) a model of power relations that is essentially expansionary of the forces of life, rather than delimiting; (2) the ubiquity of power relations throughout all other modes and types of relations; (3) the persistence with which new models of power employ the fear of sovereign power for the purposes of maintaining insidious control. All in all, these conceptual apparatuses, as the diversity of contributions in this volume attests, have not gone away — they continue to operate to this day throughout all areas of life” (Cisney, Morar 2016, 14).

According to Sandro Chignola, professor of Political Philosophy, “whole Foucauldian production – at least from the second half of the 1970s onward – was intended to challenge the traditional paradigm of modern political philosophy and its reduction of the question of power to the juridical scheme of sovereignty. [...] Based on an accurate diagnosis of the status of politics in the current era, of the processes of subjectivation that intersect it, of the governmental devices that mark it, Foucault steps away from a political philosophy centred on the modern problem of the genesis and legitimation of the sovereign. The decisive transformation that concerns power relations, from the nineteenth century to the second half of the twentieth, moves the site of ‘veridiction’ from the state to the market. It is the market (and not the legal scheme of the composition of rights) that defines the system of relations whereby subjects represent themselves as individuals. [...] In Foucault’s theory, this passage is marked by the introduction of the terms ‘biopower’ and ‘biopolitics’. On the one hand, these become indications for the deconstruction of the concept of the individual. In the view that portrays the individual as an agent involved in trade and the marketplace, this individual is radically different from the ‘natural’ rights-bearer – rights that are claimed vis-à-vis the state and can be

used as a natural shelter against the expansion of the state action. On the other hand, the concepts of biopower and biopolitics overstep the burdensome sequence of events that led to the state and paves the way for an inquiry into the devices of governmentality. This research marginalizes the state – the alleged cornerstone of Western constitutional history – and demonstrates that the series of events that led to it is but a mere ‘peripeteia’ (literally: ‘péripétie’, as Foucault writes) of more general processes – ones that antedated the state, crossed its legal profiles and its institutional dimensions, and exceeded and overflowed it continuously” (Chignola 2019, 10–11).

As Majia Holmer Nadesan describes modern notion of contemporary biopolitics in a simple manner: “Biopower is seductive because its logics, technologies, and experts offer, or at least purport to offer, tools for societal self-government. Biopower’s mantra of the rational administration of life promises means for realizing the elusive cybernetic fantasy of a society of self-regulating individuals. Under neoliberal governmentalities, sovereignty is disseminated amongst society’s members as the welfare state sheds responsibility for its pastorate by shifting risk and empowerment to its subjects. Thus, the classical liberal fantasy of a society of self-regulating individuals is invoked as a rationale for the dissemination of risk and responsibility achieved by and through biopower’s operations. In essence, the emergence of biopower as a major force in shaping, eliciting, and controlling populations is inextricably linked with historically contingent developments in liberal, and now neoliberal, forms of government” (Holmer Nadesan 2008, 3).

Analyzing biopower and cyber power in online news, Dominic Boyer, anthropologist and writer, argues that “Foucault’s concept of biopolitics is already articulated in a cyber-political register. That is to say, Foucault’s biopolitics already takes for granted that modern power-knowledge (*pouvoir-savoir*) is distributed through the circuits of an integrated field of forces and signs. Recent cyber-political discourse posits much the same field template but describes it (only somewhat more narrowly) as a matter of a revolution in communication technology generating new forms of publicity, relationality and knowledge. One of the most interesting aspects of engaging digital publicity as an anthropological problem is that its streamlined cyber-political narratives bring into clearer focus a cyber-political imaginary that has long been at work in Western social theory” (Boyer 2011, 98). Also, according to the same author: “after chasing biopolitics from early modern Europe into the contemporary domain of cyberpolitics we have found that biopower was cyber-political all along. In the human sciences, Foucault’s biopolitics has been an exceptionally effective symptom of what I would describe as an unspoken (and perhaps unspeakable until our more recent saturation in talk of digital revolution) but nevertheless epistemically consequential ‘cybernetic unconscious’ within post-war social theory. Reading Foucault’s analytics of biopower prepares us well for encountering contemporary digital publicity.

Which is perhaps to say that Foucault had internalized a cyber-political awareness long before many of us did. And, this may also help to explain the widespread intuitiveness and application of Foucault's analytic method in anthropology and the human sciences since the rise of digital publicity" (Boyer 2011, 99).

The complexity of the philosophy of biopolitics is reflected, among other things, in the multitude of applications in social science and humanities research. The application of concepts of biopolitics empowers scientists to define and deeper analyze historical and contemporary political and social processes, such as nation-building through producing the norms and standards that include and exclude certain groups and individuals; administration, management, protection and care-taking of human bodies and intertwining of biopower with psychoanalysis and gender issues; foreign policy and demarcation between liberal democracy and totalitarianism, and many others. For example, biopolitical aspects are discussed in contemporary philosophy, referring to the concept of life in the contexts of biopolitics and postmodernism or used to compare Foucault with other philosophers, even from the more distant past, then, in political philosophy, which is applied to the analysis of global-political events in the first decades of the 21st century. Some authors connect biopolitics and modern digital technologies with the concept of "surveillance capitalism", others emphasize biopolitical discontinuities and other biopolitical consequences caused by the pandemic of the COVID-19 virus. Also, with all this, the researchers highlight the connection between biopolitics and popular culture, through which biopolitics has been influencing the formation of a disciplinary society, where even fairy tales played an important role in the civilizing process and had an important role in the formation of a polite court society as well as disciplining women. In the same way biopolitical issues are being analyzed by researchers in the context of science fiction. The connection of biopolitics and biotechnologies can also be seen in some phenomena of modern art and fashion development. Contemporary science connects Foucault's theory of biopolitics and his social epistemology, and applies it to contemporary issues of biopolitical philosophy (Italian thinkers Agamben, Negri and Esposito), analyzes the interweaving of biopolitics with the epistemology of religion and gender, with decoloniality and "border epistemology", epistemological and ontological dimensions of biopolitics of global crises of the modern era, biopolitics and knowledge about human (in)security, concepts of environmental protection in the service of biopolitics, as well as the question of the relationship between biopolitics and the preservation of endangered species.

Transhumanism brought on the public stage the ideas that are being scrutinized by some researchers criticizing it because it gives the possibility of using AI as a tool of biopolitics. Some authors have dilemmas if enhancing consciousness and the related changes in the character of human knowledge may influence our

relationship with other biotechnologies and whether the changed nature of knowledge with which the human brain operates can be used for political manipulation. Others think that in order to protect man from the omnipotence of technology and its unethical application it is necessary to establish cyborgoethics that would determine the implementation of an artificial boundary in the natural body.

Chinese scientists delivered the following opinion in 2018:

“Before AI was available, people were living in a binary space which consisted of physical space (P for short) and human social space (H for short). In this binary space, the orders for human activities are decided by the interactions and interrelations among the people and between man and object and man acts as the formulator and dominator in human social orders. With the rapid development of mega-data, cloud computing and IOT, intelligent mobile devices, wearable alliances, and “Internet+” react on different sectors of human society and promote the advent of the third industrial revolution and the intelligence era, which drive people to the ternary space (PHC) marked by physical space (P), human social space (H), and CyberSpace (C for short). In the ternary space (PHC), the orders of human society will be invariably restructured. Whether you are aware of such change or not, the profound influence upon human social life which is brought by artificial intelligence becomes a consensus of all walks of life. Therefore, mankind should take the initiative measures so that they may adapt themselves to such change” (Zhang et al. 2018, 2).

The development of AI certainly leads to transformations of human society and the individual in it. They can be fast, undesirable, and sometimes society cannot keep pace with such transformations. On the other hand, they can contribute to progress in the sphere of science, health, education, economic and infrastructural development, help in solving population crisis, enable the extension and facilitation of human life, etc. Given the multitude of possible scenarios when it comes to the question of directions in which the development of AI can lead humanity, only time will tell to which destination this development will take us (Popović, Kulenović 2024, 75–76).

It seems that a moderate path is always the best solution when decisions need to be made regarding dilemmas related to the relationship between artificial intelligence and human beings. According to our opinion, it implies the use of AI for the benefit of humanity, and preserving a relationship with technology in which human would not lose personal identity, unique physical, psychological and intellectual properties, the ability to develop and progress in all possible aspects, through personal work and achievements, and the interaction with the world in which lives. AI technologies and humans can and must coexist in a modern society, and for this coexistence, sometimes, it is necessary to set limits determining the

extent to which artificial intelligence can replace or permeate the human entity (Popović, Kulenović 2024, 76).

Current society is in a phase of tracking and extracting quantitative data from most forms of human activity. Increasingly sophisticated computer-based technologies are being developed, also a kind of combined systems of the coding of units of information (from website preferences to social media participation, also employment history and one's tax situation) cause potentially harmful practices of collecting and maintaining records (Sharpe, Turner 2018, 149). "At issue here is more than government-mandated information streams (e.g. census, social security or health-related data), or even the sneaky, contractually 'agreed' tracking enabled by the internet and mobile apps. With the advent of the digitalised iPhone in particular, subjects are now constantly providing data about themselves – down to their very movements, number of steps walked, calories consumed [...] (Sharpe, Turner 2018, 149). Also, it may be considered that "this advent of 'metric power' should also be seen as one, the most recent, chapter in several much longer histories linking forms of human surveillance and quantification with what Foucault famously called 'biopower' in the modern West" (Sharpe, Turner 2018, 151).

### *Biopolitics and biohistory?*

#### *Biopolitics applied to historiography as ending remarks*

Because the author of this book is a historian, it is important to mention the relations between biopolitics and historiography, on which Barbara Klich-Kluczevska, Polish history professor, one of the editors of the collection of papers *Biopolitics in Central and Eastern Europe in the 20th century: Fearing for the nation* (2022), has following remarks. Klich-Kluczevska considers that historiography of eugenics and racism is often intricately connected to biopolitics, because it reflects the impact of biopolitics on populations. The ways phenomena associated with eugenics were analyzed, first in Western Europe, United States and then, after 1989, in Central, Eastern and Southeastern Europe historiographies, initially did not suffer radical change under the influence of the concept of biopolitics. The emergence of biopolitical concepts altered the previous emphasis of research which aimed to reconstruct the world of eugenic movements, so it was now centered on the tools states used to exert eugenic impact on populations. One might observe that biopolitics represented a kind of connection for comparative research within European countries, which was used to bring together different cases that were the subject of analysis in historiography studies. Biopolitics also showed that eugenics has practical impact in different disciplines, among others, psychiatry and

social policy, and influenced scientists to question the relationship of eugenics with modernity and knowledge. (Klich-Kluczevska 2022, 11).

The connection between eugenics and biopolitics is explained by Marius Turda, who points out that between 1860 and 1960 eugenics became part of larger biopolitical research fields, including social hygiene, racial hygiene, public health and family planning, on the one hand, and racial research on social and ethnic minorities, on the other. Eugenics was used to deliver political and social messages that surpassed political differences and opposite ideological sides. Eugenics and biopolitics differed in ideological and geographical sense, abided by various professional and political European elites, regardless of their political and cultural contexts (Turda 2009, 344).

In this sense, papers in *Acta historiae medicinae, stomatologiae, pharmaciae, medicinae veterinariae* 2015, 34 (1)<sup>32</sup> are of importance, because they were among the first of Serbian journals to analyze eugenics and racial questions from a biopolitical point of view in a historical context. Authors from Europe and Serbia wrote on various topics, such as: minorities and eugenic subcultures in East-Central Europe (Marius Turda), eugenics and racial hygiene in theory and political thought of the Serbian/Yugoslav extreme right 1918–1944 (Aleksandar Stojanović), women and eugenics in interwar Transylvania (Zsuzsa Bokor), eugenics and induced abortions in post-war Greece (Alexandra Barmpouti), midwives and obstetrics in Baranja, Slavonija and Sirmia since the beginning of the 17th to the beginning of the 20th century (Zdenko Samardžija), Scandinavian anthropology, eugenics, and the post-colonial geneticization of Sami culture (Terry Lee Marie Marttinen), eugenics and sterilization policies on the case of Tattare (Alessandro Berliini). Maja Vasiljević and Vladimir Abramović did a bibliography on and about eugenics in the Kingdom of Serbs, Croats and Slovenes/Yugoslavia.

In the following passages, certain examples of research connecting historiography, eugenics and biopolitics will be observed. Klich-Kluczevska mentions the contribution to the field connecting history and biopolitics of Sergei Prozorov, who is a political scientist at the University of Helsinki. In his research on political philosophy and international relations he applied concepts of biopolitics to analyze Stalinism and the system of terror, trying, up to some degree, to lead the connection to the current state policy in the Russian Federation. Prozorov's opinion is that theorists of biopolitics have ignored the Soviet experience, which, as he thinks, in some way may be similar with Nazism. Differences between the Nazi and the Soviet experience were not seen even in the work of Michel Foucault, Giorgio Agamben or Roberto Esposito. Prozorov raises the question of the coexistence of development plans of the Great Breakthrough (1928–1932) and plans

32 <http://actahistorica.com/acta-historiae-medicinae/xxxiv2015/>

for the protection of human life, that ended up in mass death, so the coexistence of biopolitics and thanatopolitics<sup>33</sup> is brought to the scientific scene in Prozorov's works (Klich-Kluczevska 2022, 13).

Also, relations between history and bio-history must be taken into consideration and it must be pointed out that Foucault determined a particular form of knowledge-power not only concerning the field of biology that was in the process of ascension, but also in connection with the development of "different fields of knowledge concerned with life in general," and agricultural techniques were one of those. Foucault always returns to the period immediately preceding the French Revolution when he discusses biopolitics. Changes that occurred in that period represented a relaxation of death's grip over life; in a relative manner. Foucault tried to make a distinction of those moments of pressure "in which the movements of life and processes of history interfere with one another," when, also, an intensification of biopower occurred. "Foucault will place a caesura at the moment of life's greatest interference with history, distinguishing a period prior to their encounter that he in the essay (as well as across his lectures at the Collège de France from 1975–1976 in 'Society Must Be Defended,') will call 'sovereignty'. Before death's respite, Western man, when not dead, was, according to Foucault, less alive than he later became" (Campbell, Sitze 2013, 9).

Timothy Campbell, American historian whose subject area embraces 18th Century British/Romanticism, Media Studies, British Literature, Critical Theory, Objects of Study, and Adam Sitze, professor in Law, Jurisprudence and Social Thought, ask questions that are of the great importance and must be taken into consideration when approaching biopolitical studies:

"And yet such a division between history and biohistory proper raises a question, one that informs so many of the essays collected here. What really does it mean to say that life has a history? Life—the very paradigm, it would seem, of novelty and renewal itself—seems constitutively opposed to 'the past' that history cannot but take as its object, as well as to 'the future' history for which cannot help but to prepare us. [...] What meaning can 'life' have in an epoch, when life itself is no longer outside of history, if it ever was, but is now simply an effect of history itself, one of its variables and contingencies? What meaning can living have when no element of life is outside the domain of politics, and no political interest can be found that does not in the last analysis concern life? Conversely, how might certain concepts of life—pertaining to mortality and immortality, necessity and urgency, newness and the old—inscribe themselves into historiography itself? How might certain presuppositions about life govern the very field within which

33 About the notion of *thanatopolitics* see Esposito 2008, 110–145. Thanatopolitics—a politics of death—stands in opposition to biopolitics and its affirmative instantiations of "life itself".

historical knowledge then comes to be valuable for life? Foucault's shift from law to norm takes place alongside a homologous shift from history to biohistory, with each shift in its turn being spurred by a specific event: the emergence of population as an object of knowledge and power. [...] The result is that living as part of a species for Foucault entails learning to live with norms. Whereas before the advent of biohistory, Western man did not know how alive he was (just that he was not dead), once the self-evidence of death withdraws, we witness the emergence of contingent standards for what qualifies as living" (Campbell, Sitze 2013, 9–10).

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One of the possible ways to conclude chapters of this review that considers contemporary research on biopolitics, reflecting its complexity, is to cite Thomas Lemke, "biopolitics introduces a reflexive dimension. That is to say, it places at the innermost core of politics that which usually lies at its limits, namely, the body and life. Seen this way, biopolitics again includes the excluding other of politics. Indeed, neither politics nor life is what it was before the advent of biopolitics. Life has ceased to be the assumed but seldom explicitly identified counterpart of politics. It is no longer confined to the singularity of concrete existence but has become an abstraction, an object of scientific knowledge, administrative concern, and technical improvement" (Lemke 2011, 117). Following, "analytics of biopolitics has its starting point in the theoretical perspective outlined by Michel Foucault, but it 'lives,' so to speak, from the numerous corrections and elaborations of biopolitics [...]. Taken together, these lines of reception have advanced and substantiated the Foucauldian notion of biopolitics in different ways. First, they make clear that contemporary biopolitical processes are based on an altered and expanded knowledge of the body and biological processes. Thus, the body is conceived of as an informational network rather than a physical substrate or an anatomical machine. Second, it was necessary to supplement the analysis of biopolitical mechanisms with an examination of the modes of subjectivation. This theoretical move allows us to assess how the regulation of life processes affects individual and collective actors and gives rise to new forms of identity. In short, following Foucault, recent studies of biopolitical processes have focused on the importance of knowledge production and forms of subjectivation. Analytics of biopolitics should investigate the network of relations among power processes, knowledge practices, and modes of subjectivation." (Lemke 2011, 18–19).

The scientific field of biopolitics is dominated by scholars specialized in sociology, anthropology, philosophy, political science and history, when social sciences and humanities are taken in consideration. Sometimes a scholar is specialized in several of these fields, combining different approaches to the analysis of biopolitics. In contrast to schools in science that share the same paradigm, with

clearly defined goals and frameworks, which their advocates literally implement, researchers that follow modern trends, such as biopolitics, try to apply these conceptual trends to the most diverse contents and examples, from different and even very distant scientific fields, which, at least, can be difficult to link without it seeming forced. It can be also observed that using the biopolitics as paradigm has become very popular in social sciences and humanities, and researchers see the bond with biopolitics in almost every social phenomenon of contemporaneity, which may be considered excessive. In order for researchers to be original, interpretations are sometimes given that depart from common concepts, as can be seen in the part on the relations between biopolitics and epistemology, and such interpretations are shaped with more or less success. Modern theorists are increasingly moving away from the original interpretation of Foucault. It can be also seen that Foucault is not the first to raise biopolitical issues in the history of scientific thought. Some authors see the predecessors of biopolitical thought in Fernand Braudel, others go as far as Jeremy Bentham (Marinković, Ristić 2019, 1011; Brunon-Ernst 2012, 26-30, 45-46, 64-65). Considering the concept of biopolitics, one may say that there is a constant of a series of new interpretations of biopolitics, which, as the years and the development of modern society and modern science indicate, have no end in sight. At the very end, it is important to note that, despite the fact that biopolitics has become a popular trend in science and that perhaps too much is written about it in the world, and biopolitical concepts are applied too widely, there are indeed researchers who invest serious effort and work, analyze and apply biopolitical concepts in an adequate way and make an important and new scientific contribution in the field of biopolitics.

Perhaps it is interesting to quote Nitzan Lebovic, professor of History at the Berman Center for Jewish Studies at Lehigh University in Philadelphia, where he holds the Apter Chair in Holocaust Studies and Ethical Values, who's work is focused on the history of political concepts:

“To conclude, biopolitical theory is no longer an infant. In its many mature forms, it expands our understanding of radicalization, mechanisms of control, and sovereignty or government. As indicated above, it does so by pointing out how every layer of language could be used to realize a form of the control of one's mind and ways of expression. During the 1920s and 1930s political control had to challenge existing democratic regimes. In the present, the crisis of democracy takes on a different face: Recent work on biometric databases, for example, demonstrates how ‘democratic’ and pervasive this form of governmentality is. In the ‘surveillance society,’ where the many view the few, coercion is part of everyday life and language. In this new world, there is no separation between left and right, inner and outer, civilian and enemy” (Lebovic 2019, 292).

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Considering bioethics and biopolitics, the existence of moral conflicts is present in today's society and it is not always possible to reach a reasonable agreement on all controversial issues. This means that the principle of majority with that of tolerance should be combined in running the state affairs, so there should be a principle of political (not moral) neutrality, and State should remain neutral, while its laws must guarantee the rights of minorities to pursue their vision of the Good and be justified by political, not philosophical and ethical, issues. Subjects of biopolitical decision bring into question our deep moral loyalty and, for this reason, must ensure, for each one, the conduct of their bodies, lives, ethical-professional commitments without any obligation to implement behaviour or undergo interventions in conflict with their vision of the Good. The biopolitical problems in contemporary societies show a necessity of the need for a serious discussion considering ways to manage the conflicts caused by the development of life, sciences and planetary emergencies (pollution, populations health, biodiversity reduction). Biopolitics should be able to deal with global emergencies caused by the process of globalization. A democratic governance must face the challenges of public health and demographic policies, genetic screening of whole populations, the development and placing on the market of GMOs, the use of biotechnology, the possibility of intervention on the human genome, ecological concerns and many others, and able to manage it in the best possible way. Pervasive biopower may not be to be a necessary outcome of modernity, but there are perspectives that can be considered undesirable and cause worrying, such as practices of a possible delegation, destitute of awareness and ability to control, from citizens to political power, including technocrats, specialists, scientists and others, on life and death issues (Manti 2014, 150–151).



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## **BIOPOLITIKA, DRUŠTVENO-HUMANISTIČKE NAUKE, TRANSHUMANIZAM I AI: RAZMATRANJE ISTRAŽIVANJA BIOPOLITIČKIH ASPEKATA U SAVREMENOM DOBU**

Teorijske postavke biopolitike se stalno razvijaju, uočavaju se sličnosti i razlike među misliocima, kontinuiteti i diskontinuiteti u pojavama i interpretacijama, a usko su povezani sa razvojem globalno-političkih događaja, društvenim i kulturnim promenama, naglim usponom novih tehnologija, pre svega digitalnih, biotehnologija i veštačke inteligencije. Teorije vezane za pojam biopolitike mogu se primeniti na naučna istraživanja iz svih sfera društvenih i humanističkih nauka, na političke odnose i političku filozofiju, bioetiku, istraživanja globalizma i savremenog kapitalizma, analizu istorijskih i savremenih političkih i društvenih procesa, kao npr. izgradnju nacije kroz proizvodnju normi i standarda koji uključuju i isključuju određene grupe i pojedince; administraciju, upravljanje, zaštitu i brigu o ljudskim telima i preplitanje biomoći sa psihoanalizom i rodnim pitanjima; spoljnu politiku i razgraničenje između liberalne demokratije i totalitarizma; uticaj biopolitike na umetnost i popularnu kulturu.

Na primer, o biopolitičkim aspektima se raspravlja u savremenoj filozofiji, tako što se teoretičari pozivaju na koncept života u kontekstu biopolitike i postmodernizma ili se stavovi Fukoa porede sa drugim filozofima, čak i iz daleke prošlosti; zatim u političkoj filozofiji, koja se primenjuje na analizu globalno-političkih dešavanja u prvim decenijama 21. veka. Neki autori povezuju biopolitiku i savremene digitalne tehnologije sa konceptom „nadzornog kapitalizma“, drugi ističu biopolitičke diskontinuitete i druge biopolitičke posledice izazvane pandemijom virusa COVID-19. Takođe, uz sve ovo, istraživači ističu vezu između biopolitike i popularne kulture, preko koje je biopolitika uticala na formiranje disciplinovanog društva, gde su čak i bajke imale važnu ulogu u civilizacijskom procesu i formiranju „pristojnog“ dvorskog društva, te disciplinovanju žena. Povezanost biopolitike i biotehnologije vidi se i u nekim fenomenima moderne umetnosti.

Tematika veštačke inteligencije svoje korene „vuče“ još iz 1920-ih, u kontekstu filozofije, književnosti, filma, nauke i njene popularizacije, a na značaju dobija u vreme Drugog svetskog rata i vezuje se za ličnost čuvenog Alana Tjuringa, njegova razmišljanja o pametnim mašinama, s jedne, i začetke upotrebe veštačke inteligencije u ratne svrhe, s druge strane. Odavno je AI predmet istraživanja antropologije i drugih društvenih nauka, pošto zalazi u sve sfere društvenog života i tiče se filozofskih i etičkih pitanja, pitanja struktura političke moći i upravljanja. Razvoj veštačke inteligencije otvorio je prostor za večito razmatranje o budućnosti čovečanstva te uloge čoveka i mašina u njoj. Pitanje razvoja AI odavno zaokuplja

pisce naučne fantastike i filmske stvaraoce, a s rastom popularnosti ovog žanra i sve većim oslanjanjem običnog čoveka na digitalne tehnologije u svakodnevnom životu, i šire krugove populacije širom sveta. Istraživači iz sfere društvenih nauka mogu svojim aktivnim angažmanom pokušati da interpretiraju ovaj fenomen u nastojanju da daju mnoštvo mogućih vizija budućnosti čovečanstva, da ukažu na prednosti, mane i opasnosti vezane za pristup modernoj tehnologiji, u čijoj je osnovi sve više veštačka inteligencija, kako se sa njom živi i kako ona utiče na formiranje novih sistema vrednosti i transformiše samog čoveka. Na neki način, AI se može smatrati, pogotovo iz vizure šire populacije i pojedinih naučnika, među njima i antropologa, mogućnošću da se ostvari utopijski san o objektivnosti rezultata i metoda u širem smislu, lišenih uticaja politike, ideologije i struktura moći. AI može poslužiti kao sredstvo za oslobađanje od kontrole političkih i ekonomskih centara moći. Takođe, prema pojedinim naučnicima, AI može obezbediti privatnost i postepeno dovesti do transformacije postojećih modela političkog i ekonomskog poretka.

S druge strane, neki autori stavljaju trashumanizam i ideje koje on zastupa pod lupu upravo zbog toga što on otvara mogućnost korišćenja AI kao sredstva biopolitike. Neki autori imaju dileme da li unapređivanje ljudske svesti i povezane promene u karakteru ljudskog znanja mogu uticati na naš odnos sa drugim biotehnologijama i da li se izmenjena priroda znanja sa kojim ljudski mozak funkcioniše može iskoristiti za političku manipulaciju. Drugi smatraju da je za zaštitu čoveka od svemoći tehnologije i njene neetičke primene potrebno uspostaviti kiborgoetiku koja bi odredila granice implementacije veštačke tehnologije u prirodnom telu.

Postoje tri postojeće tačke gledišta koje govore o „poboljšanju”: transhumanistička struja, čiji predstavnici otvoreno promovišu praksu genetskog, protetičkog i kognitivnog unapređenja ljudske vrste – tranziciju iz ljudskog u postljudsko društvo; biokonzervativna, čiji predstavnici pretnju vide u povredi ljudskog dostojanstva, a predstavnici „srednjeg stanovišta” smatraju da opasnost leži u dijalektičkom odnosu „kapitalizma i medicine”.

Za pojedine, AI može postati sredstvo globalne kontrole ili predstavlja realizaciju straha da će se autonomna tehnologija u jednom trenutku obračunati sa čovečanstvom. Takvu bojazan vidimo kao motiv u književnosti i filmskoj umetnosti. Takođe, religiozni ljudi i oni sa nešto tradicionalnijim sistemom vrednosti smatraju da razvoj tehnologije i čovekova sve veća vezanost za nju, te neadekvatan odnos prema njoj, vode otuđenju, promeni odnosa među ljudima i urušavanju sistema vrednosti, koje su u dužem istorijskom periodu smatrane „poželjnim” i na kojima se zasniva opstanak ljudskog društva kakvog poznajemo. Dakle, među ovim ljudima preovladava strah od nepoznatog i strepnja da, ako se dozvoli suviše slobode u procesu stalnog prevazilaženja prethodno postavljenih civilizacijskih i tehnoloških granica, može doći do obesmišljavanja postojanja i

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uloge čoveka u modernom svetu. Razvoj AI svakako dovodi do transformacija ljudskog društva i pojedinca u njemu. One mogu biti brze, nepoželjne, a društvo ih nekad ne može ispratiti na adekvatan način. S druge strane, one mogu doprineti napretku u sferi nauke, zdravstva, školstva, ekonomskog i infrastrukturnog razvoja, pomoći u rešavanju populacionih kriza, omogućiti produženje i olakšanje ljudskog života i sl. S obzirom na mnoštvo mogućih scenarija kad je reč o pitanju kojim putem razvoj AI može povesti čovečanstvo, samo ostaje da vreme pokaže do kojeg odredišta će nas taj razvoj odvesti.



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