

# **Journal of Arts & Humanities**

Volume 13, Issue 04, 2024: 14-23 Article Received: 30-08-2024 Accepted: 20-11-2024 Available Online: 17-12-2024 ISSN: 2167-9045 (Print), 2167-9053 (Online) DOI: <u>http://dx.doi.org/10.18533/journal.v13i4.</u>2490

# Ethical language: Analyzing reactions to biopolitical scenarios in terms of unfairness

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# ABSTRACT

Biopolitics, a concept popularized by 20th-century French philosopher Michel Foucault, refers to the control and regulation of human bodies by political entities. This study contrasts responses to four biopolitical scenarios—including health, citizenship rights, military supplies allocation, and targeted advertising—with four non-biopolitical counterparts. The research involves participant-based studies on twenty male high-school students from St. Mark's School of Texas, twenty Gen X female Caucasians in Texas, and three generative artificial intelligence models: ChatGPT, Gemini, and Llama. The findings show that both human participants and AI models perceive biopolitical scenarios as more unjust than non-biopolitical scenarios. However, targeted advertising is viewed similarly to its non-biopolitical counterpart, likely due to its institutionalization in consumer culture. These results suggest that modern AI models respond to biopolitical control in ways comparable to two unique human populations. More studies may be needed for further generalizability, however, due to the relatively small sample sizes and consolidation of poll respondents in Texas. This research overall offers valuable insights into AI decision-making processes and provides a linguistic framework for policy planners seeking public support.

Keywords: Biopolitics; (Un)fairness; Reactions; High-School Students; Artificial Intelligence. This is an open access article under Creative Commons Attribution 4.0 License.

#### 1. Introduction

Biopolitics<sup>4</sup> refers to a power structure where powerful entities govern the deep, personal lives of people. A historic example is China's one-child policy, which forced citizens to have only one child to reduce overpopulation. A modern example is targeted advertising, which is seeing advertisements related to undisclosed or secret parts of one's personal life. This study aims to evaluate the difference in responses between humans and artificial intelligence to four biopolitical scenarios, including control

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<sup>4</sup> The complete data repository which has been assembled for this study can be accessed here:

https://docs.google.com/document/d/1NxUzvzhvVNCoWiSx76xmcTauLe3wWlgxY7U3g9eYk90/edit.

The questionnaire template can be found there too.

over access to healthcare, citizenship rights, food distribution, and targeted advertising. One instance is the health scenario, in which the biopolitical version has an individual agree to have their location and movements tracked at all times to receive treatment for a condition. In contrast, for the nonbiopolitical health scenario, an individual must agree to fill out some lengthy paperwork to receive treatment for their condition. The primary difference in these scenarios is the level of government or corporate control over and entanglement in an individual's life.

This paper seeks to answer four research questions:

1) What is a biopolitical system;

2a) How do people perceive biopolitical control;

2b) How does artificial intelligence perceive biopolitical control;

3) Why are some biopolitical scenarios (targeted advertising) perceived as fairer than others (citizenship rights)?

The data for this research was collected through a participant-based study in Texas. There was one sample of St. Mark's School of Texas high school students, one sample of Gen X Caucasian females, and samples of three different, well-known generative intelligence tools, including OpenAl's ChatGPT, Google's Gemini, and Meta's Llama. Respondents each answered seven questions. They were instructed to pick one out of two scenarios that they thought were the most unfair. After they had answered, the votes were tallied, and the scenarios were ranked by the number of votes they received. Scenarios with the most votes were deemed to be the most unfair. By comparing the biopolitical versions of the scenarios to their non-biopolitical counterparts, this study was able to evaluate and juxtapose their differences in perceived fairness. Moreover, this study also sought to compare the decisions of artificial intelligence models to those of human populations.

Overall, the biopolitical scenarios were universally rated as less fair by both humans and artificial intelligence. There were some noticeable differences, however, in the way that some scenarios were ranked. For example, across all five studies, both people and artificial intelligence believed that the refutation of citizenship rights was the most unfair. In contrast, scenarios involving paperwork or targeted advertising were perceived as relatively fairer. Notably, the rankings produced by both humans and artificial intelligence were strikingly similar.

There are six sections in this paper, each serving a different purpose. First, is the Introduction, which outlines the general structure of the research, results, and goals. Next is the Literature Review section designed to provide clarity on biopolitics definitions and the literature basis for each of the scenarios. Third, the Methodology section describes the process of and reasoning for data collection, including administrating the questionnaire, structuring the questionnaire, and interpreting the data. Fourth, the Analysis draws conclusions based on the datasets by pattern-spotting and searching for outliers. After that, the Interpretation grapples with what the data means in context and why there exists qualitative and quantitative differences between separate population groups including explanations of each of the artificial intelligence models and responses from people about their opinions and thought processes. Finally, the Summary, Conclusion, and Outlook section synthesizes the results of this study and poses recommended questions for future investigation.

# 2. Literature review

Biopolitics can be most simply understood as a political ideology that has a focus on managing the personal lives of people as opposed to simply providing necessities and growing a powerful nationstate, marking "a significant historical transformation from a politics of sovereignty to a politics of society." Biopolitical regimes tend to surveil and punish a species or population, such as disabled people, a marginalized race, or even average citizens. In this shift, as explained by Michel Foucault, societies and governments perpetuate internal xenophobia and intolerance of those who differ from an established norm (Adams 2017). One clear example of biopolitics was the Eugenics Movement during the early 1900s in Europe, where rhetoric throughout the world affirmed the superiority of white Europeans and deprived non-white individuals of basic rights. Individuals who fell outside of this narrow definition were tracked, discriminated against, and in the case of the Nazi regime, eliminated (McWhorter 2017). Biopolitics is often enforced through a series of controlling mechanisms such as a law that states people must not commit fraud or else face a list of punishments, including imprisonment and fines. Beyond the binary question of whether an individual commits fraud or not, there is an element of cost-benefit calculation when considering the punishments and a disciplinary mechanism. These aspects, and more, may initially seem to be innocuous, but when used in excess to manage populations such as through biometric tracking, they make up the foundation of a biopolitical controlling state (Foucault 2007).

This study focuses on four biopolitical scenarios as well as their non-biopolitical counterparts, which are listed on a Google Drive within the first footnote. The first involves the governance of health through "biological citizenship:"

Paul needs treatment for his health condition, so he emails the hospital. Paul is drinking tea at home. A few minutes later, he hears an email notification and sees that it is from he hospital. Paul reads the email, which says that says that to make an appointment for evaluation, Paul must first agree to have his location and movements tracked at all times.

This scenario represents the way that Paul has to leverage his biological status – suffering, as determined by the governing apparatus – to be allowed to schedule an appointment for treatment at a hospital. However, to have the chance to receive treatment for either a major or minor condition, this biopolitical agent demanded invasive and personal details such as location, as seen by the forced agreement requiring Paul to always disclose his position. This illustrates both the governance of humans (biological health) and surveillance. Historically, an example of this phenomenon was seen in Chernobyl, Ukraine after the nuclear reactor explosion in 1986. After the accident, citizens were required to share information about their health conditions and other personal information as a form of currency to receive the necessary treatment. Biological realities were subject to political negotiation. Treatment was exchanged for biopolitical control (Petryna 2013).

The second scenario covers the idea of citizenship. It is a direct example of "bare life," which is the stripping of legal rights to a bare state of inhumanity (Agamben 1998):

Jacob is displaced temporarily from his home country due to a war. He flees to a different country, living there for many years. Jacob makes many friends. One day, Jacob gets a call and learns that his family is alive, waiting for him in his home country. Jacob goes to the airport and boards a plane. When Jacob reaches his home country, he is notified by several officers that he will be allowed to stay, but he will no longer be eligible for the rights and benefits of citizenship.

This scenario illustrates the stripping of legal rights from an individual, Jacob, until he became merely biological: human flesh without rights. Excluded from his country, Jacob was deemed to be outside of the norm and potentially hazardous, feeling this alienation through legally enforced policy. Regardless, Jacob lost his rights due to an uncontrollable situation. A modern example of this biological stripping was a suggestion made by the Institute for Public Policy Research in Berlin, which posited that young children at the age of 5 should have their DNA scanned to determine the likelihood of criminal activity in later life such as searching for psychopathy or violent dispositions. In essence, these children were governed by their biology ("Bare Life," n.d.).

The third scenario relates to military control, particularly the management of food and water, necessities for life:

Alex is a regional manager of supplies and inventory for military bases. He performs analytics to identify needs but ultimately follows orders from higher-ups regarding where and when to send supplies. He has always wanted this job and loves his country. Today, officials ask Alex about a supply chain issue concerning the base. Alex recommends maintaining current supply distributions. However, his decision is overridden. Instead, officials order him to reallocate forty percent of the food and water from Base A to Base B. Alex believes that these officials do not understand the needs of the base, but he still follows their order.

In this scenario, consumable goods were used as a means of biopolitical control because they were necessities for life. Alex was surveilled and wielded tightly by superiors who failed to understand the needs of the base, effectively ignoring the necessity of food and water without reason. The officials made an abusive power play that provided no benefit to the military, using food as a currency, and managing humans as if they were mere animals to be herded. In ancient Rome, control over the bathing and sewage systems was used by those in power to manage the health of citizens, exploiting

the connection between human bodies and the natural environment to govern and control populations. Specifically, legions were managed through health and consumables. Food was withdrawn when they disobeyed or performed unsatisfactorily (Maurizio, 2021).

Lastly, the fourth scenario involves targeted advertising, a modern neoliberal tool of surveillance:

John likes to read the news online and sip warm coffee. Occasionally, after shopping in person for his family, John pays attention to the advertisements on his computer screen. For example, after buying baby supplies at a grocery store, he sees ads for baby supplies. When he goes to a sporting goods store, John gets advertisements for sporting goods. John believes that the online advertisements are connected to his in-store visits.

This scenario demonstrates a modern tool of biopolitical capitalism: surveillance and personal governance. John's life and details were used by advertising companies to target him with advertisements, illustrating both the managing of humans and constant surveillance. Foucault argues that neoliberalism and biopolitics have aligned in the sense that governments have begun to support the market as a tool of their control. For example, political actors pay private corporations to give them highly detailed demographic information to target their political campaigns toward vulnerable sectors of the population (Gudmand-Høyer and Lopdrup-Hjorth 2009).

# 3. Methodology

In the making of the polls, for every biopolitical scenario, a non-biopolitical counterpart was constructed, for example, for the scenario about targeted advertising, there was another scenario created about non-targeted advertising. The wording for all other parts of the scenario was the same except for the individual's name and the portion directly related to targeted advertising. In total, there were four biopolitical scenarios – (1) hospital, (2) airport, (3) military base, and (4) targeted advertisements – plus their counterparts, which resulted in eight total scenarios. All male names were used to reduce bias (Mazor et al. 2002).

To determine a ranking system that most accurately ordered the scenarios, each question required respondents to choose the more unfair option out of two possible scenarios: Pick the scenario that you feel has the most unfair outcome. Some of the scenarios might look like they have been repeated, but slight variations may have been introduced. Read carefully! Unfairness was used as a metric because it measures whether or not "rewards and costs are ... balanced" (Worthy, Lavigne, and Romero 2022). The meaning of unfairness was also very widely understood among participants as opposed to other terms like negative or worse, which had more ambiguous meanings in the context of each question, invoking less instinctive responses.

To ensure that every possible combination of questions occurred exactly once across all four polls, the number of pairs, or ways to pick two out of eight possible scenarios, was calculated using the formula 8C2 = 28 questions. Then, all possible pairs were listed and their order was randomized ("nCr Formula," n.d.).<sup>5</sup> Respondents were asked to make binary decisions because (1) binary forces quicker responses as opposed to a ranking system with eight scenarios, which takes more time and increases the likelihood of participants submitting faulty or incomplete responses and (2) binary decisions minimize the chance that respondents make logical comparisons between similar biopolitical and non-biopolitical scenarios, which would undermine the study's goal to achieve intuitive, emotional responses.<sup>6</sup> Each questionnaire included seven questions, in a total of four separate questionnaires, all combinations of questions appearing exactly once across the four polls in a random order.

Google Forms was used to conduct this study as well as an Excel spreadsheet. No personal information was collected, and the responses were anonymous. Respondents were instructed to fill out one poll out of four possible polls. Every respondent was asked to fill out just one questionnaire so after 20 responses, every questionnaire had received exactly five answers. They were not allowed to fill out multiple polls. Respondents were not allowed to fill out the same poll more than once. Shuffle

<sup>5</sup> This formula determines the number of ways to pick n scenarios out of r total scenarios, i.e., for 4 choose 2, it determines the number of ways to pick 2 numbers out of a list of 4. For example, 4c2 = 6, and the pairs are (1,4)(1,3)(1,2)(2,4)(2,3)(3,4), which is 6 total pairs. 6 However, binary decisions may have pushed participants to a more extreme answer than they might otherwise have given.

question order was enabled to reduce bias and increase randomization. All questions were set to required.

Two demographics were assessed: male high-school students attending St. Mark's School of Texas, primarily rising seniors, and Gen X Caucasian females living in Dallas, Texas, United States. Demographics were kept intentionally small and within a small geographic region to gain more accurate insights that are applicable to this relatively miniscule population. Conducting polls on respondents across the world was outside the scope of this study.

To administer the artificial intelligence trial, several tools including OpenAl's ChatGPT, Google's Gemini, and Meta's Llama were asked the same questions as the human participants to mimic the way that most people interact with an Al,<sup>7</sup> and since access to a prompt engineer was outside the scope of this study. Of course, artificial intelligence differs from humans in some key respects including stereotyping, emotional involvement, and logical processing (Paul 2024; Misselhorn 2024; Korteling et al. 2021). However, biases are present in both humans and artificial intelligence. These biases are also not separable from the broader results of this study because they are inherent, unavoidable components that are fundamental to decision-making and thus relevant to any comparison between humans and Al. Regardless, questions had standardized names and slightly ambiguous wordings to minimize bias. After every seven questions, the Al's chat log was reset, and it was asked a new set of questions. In total, the artificial intelligence systems were asked to complete each questionnaire twice, totaling 56 questions for each generative Al model.

Once the data was gathered for the human trial, Pairwise Victories of all the scenarios were determined, that is, the number of times each scenario was chosen when faced with one of seven opposing scenarios. After each scenario received a certain number of votes, its selection rate was calculated using the formula ×100%. Scenarios with the highest selection rate were perceived as the most unfair, whereas those with the lowest selection rates were perceived as the fairest. Since every pairing appeared the same number of times, the wins were not artificially distorted.

In the human trials, every scenario had 35 total matchups (with every scenario facing 7 opposing scenarios across all questionnaires and each questionnaire receiving 5 responses), but in the artificial intelligence trials, there were only 14 total matchups since every questionnaire was completed just 2 times. A data table was created to compare the results of other population groups and generative models.

#### 4. Analysis

In the below table, scenarios were ranked in terms of how fair they were across each of the trials. 1st represents the most unfair scenario, while 8th represents the least unfair scenario. It was expected that the biopolitical scenarios (S1-S4) would place higher than their non-biopolitical counterparts (S5-S8). If the same number appeared twice in the same sample, then there was a tie. The results are shown in Table 1 below:

Biopolitical scenarios were compared to non-biopolitical scenarios (the expected difference was 2-7 places).

Across the rankings, every biopolitical scenario was rated as more unfair than its nonbiopolitical counterpart. Even when there were only small or minute differences between the scenarios, such as with scenario number 3 (military base biopolitics) and scenario number 7 (military base non-biopolitics), respondents still always rated the biopolitical scenarios as more unfair. These findings indicate that all five population groups have a high receptivity to biopolitics, harboring feelings of unfairness.

In the St. Mark's trial, there were two sets of findings, colored pink and green respectively on the above table, that seemed to be somewhat outliers. Scenario 1 (hospital biopolitics) and its counterpart were only a single place apart, indicating that St. Mark's students perceived hospital

2. Generative AI chatbots have been made to simulate human interactions (Rizvi 2024).

<sup>7</sup> Why prompt engineering is not needed to communicate effectively with AI:

<sup>1.</sup> Most people knowingly-and-unknowingly interact with chatbots as if they were customer service agents in the modern day (Pandya 2024).

<sup>3.</sup> Half of people using AI do not even know that they are talking to artificial intelligence – AI is becoming indistinguishable from people (Hyken 2017).

<sup>4.</sup> Prompt engineering is near obsolete (Acar 2023).

Final Places (Unfaimess)	S1 (Healthcare / Biopolitical)	S2 (Citizenship / Biopolitical)	S3 (Military/ Biopolitical)	S4 (Advertising / Biopolitical)	S5 (Healthcare / Not Biopolitical)	S6 (Citizenship / Not Biopolitical)	S7 (Military / Not Biopolitical)	S8 (Advertising / Not Biopolitical)
St. Mark's	3rd	1 <sup>st</sup>	2 <sup>nd</sup>	6 <sup>th</sup>	4 <sup>th</sup>	8 <sup>th</sup>	5 <sup>th</sup>	7 <sup>th</sup>
Gen X	2 <sup>nd</sup>	1 <sup>st</sup>	3rd	4 <sup>th</sup>	4 <sup>th</sup>	8 <sup>th</sup>	6 <sup>th</sup>	6 <sup>th</sup>
ChatGP T	2 <sup>nd</sup>	1 <sup>st</sup>	3rd	6 <sup>th</sup>	4 <sup>th</sup>	8 <sup>th</sup>	5 <sup>th</sup>	7 <sup>th</sup>
Gemini	2 <sup>nd</sup>	1 <sup>st</sup>	3rd	4 <sup>th</sup>	4 <sup>th</sup>	7 <sup>th</sup>	4 <sup>th</sup>	7 <sup>th</sup>
Llama	3rd	1 <sup>st</sup>	2 <sup>nd</sup>	6 <sup>th</sup>	5 <sup>th</sup>	8 <sup>th</sup>	4 <sup>th</sup>	7 <sup>th</sup>

biopolitics as relatively fair as opposed to citizenship biopolitics (scenario 3), which was viewed as extremely unfair across all trials. Scenario 4 (targeted advertising biopolitics) and its non-biopolitical counterpart were also rated very similarly to each other, showing that these St. Mark's students and all four additional populations viewed targeted advertising as relatively fair compared to the other biopolitical scenarios.

The only other noticeable ranking-based outlier occurred in the Gemini AI trial. Scenario 3 (military biopolitics) and its counterpart were only one spot apart, meaning that Gemini generally did not consider military biopolitics to be extremely unfair as opposed to other scenarios. Notably, when asked to compare whether scenario 3 (military biopolitics) or scenario 6 (citizenship non-biopolitics) was more unfair, Gemini across two trials chose scenario 6, which was generally considered to be the fairest. These choices show that there was room for AI systems to diverge from human perceptions of fairness.

Interestingly, when given the survey in a second trial, ChatGPT 40's answers changed slightly. Specifically, it changed its rating to evaluate scenario 7 as more unfair than both scenarios 4 and 5. This flux indicates that ChatGPT's model is more randomized than the other two systems, with the chance to respond differently to the same prompts. These results are relevant for biopolitical governance because they indicate that ChatGPT's model is susceptible to unpredictable changes. This is as opposed to responses from the Gemini and Llama systems, both of which provided the same answers to each question each time it was asked.

In terms of qualitative results, all three AI systems provided detailed explanations for their answers, causing the user to believe that artificial intelligence has a high capability to reason on decisions involving biopolitics. Of course, more studies are necessary to truly evaluate this phenomenon.<sup>8</sup>

# 5. Interpretation

Overall, this experiment showed that biopolitical scenarios were perceived as less fair than their non-biopolitical counterparts, which makes sense because people generally dislike feeling managed or controlled, particularly Americans, who made up the human sample and had a major influence on Al training data (Illing 2021). This idea of fearing control can be traced to the desire for liberty, which is simply the state of being able to conduct oneself in a way that such a person desires (Ladan 2021). In the context of biopolitics, liberty is restricted by a powerful agent who either surveils or undermines the freedom of an individual through legal or informal means, e.g., targeted advertising that involves

<sup>&</sup>lt;sup>8</sup> One area for further exploration may be to analyze the training data drawn upon by the AI models to see how much the system's decision is original as opposed to directly modeled off of the training data.

tracking. Due to social norms established by the nation-state, many individuals unify around a given ideology that the state claims to adhere to, such as freedom in America (Ting 2008). A phenomenon called groupthink explains how small, targeted clusters of people, such as school classes or even broader age groups will make similar decisions to appeal to the rest of the group (Lee 2019). Ultimately, these shared lived experiences create similar perspectives and perceptions across all five samples, since all the human subjects live in the United States and the generative AI systems are predominantly trained on human-generated content generated from people in the US.

One scenario which was consistently rated as extremely unfair was scenario 2 (citizenship biopolitics). This result indicates that most respondents felt strongly about their legal rights, in this case, more strongly than about their health or access to food. An explanation for this phenomenon might be that legal rights encompass having access to hospitals or meals. Without being a citizen of a country, individuals are vulnerable and unable to defend themselves or demand necessities. Although the prompt never said that the individual would have all their citizenship claims revoked in every state, it did mention that a character would be separated from his family due to his refugee status. Thus, respondents may have felt very strongly about family ties, which is why they were dismayed that the character could no longer visit his family.

Some broader trends affected rankings. Interestingly, respondents rated scenarios that they are less likely to encounter in their lives, such as scenarios 2 and 3 (military and citizenship biopolitics), as more unfair than scenarios that they are more familiar with (scenarios 1 and 4: targeted advertising and, to an extent, health-related tracking). One study of this phenomenon shows that people are more likely to remember things, both positively and negatively, that are novel or new, which seems to correlate with the more extreme rankings for the military and citizenship biopolitical scenarios (Skavronskaya, Moyle, and Scott 2020).

Another trend in the rankings was that respondents were more likely to view scenarios that threatened the life of the character as more unfair than scenarios that had purely economic or personally invasive effects. Specifically, scenarios 1-3 and 5 (military food, citizenship, and health) were universally rated as the most unfair scenarios because they involved bartering for life. It made sense that people viewed life as a precondition to enjoying any other benefits, so even a relatively small chance of losing it was perceived as the most unfair. They were willing to accept consequences such as targeted advertisements or paperwork if it meant they were allowed to live.

A major outlier across all tests was the targeted advertising scenario. Most people and Al systems found it to be relatively fair in comparison to its non-biopolitical counterpart. There are several possible explanations for this phenomenon. The first is since people experience targeted advertising in their daily lives, they may simply feel that it is normal and not unfair. Without having an explicitly bad situation involving targeted advertising, most people likely had no initial negative reactions. The same logic applies to AI, whose data training sets come from human sources. Additionally, particularly for adults, the rise of consumerism has made targeted advertising not just harmless, but also helpful. For example, in a survey, 50% of adults agreed that targeted advertising assists them in "discovering" the product that they are looking for, despite these adults initially feeling uncomfortable with these advertisements (Schomer 2021). These advertisements may be perceived as useful time-savers even though they invade peoples' personal lives.

Another, albeit less noticeable outlier was scenario 1 (health biopolitics), which, in the St. Mark's trial, was rated as relatively fair, even though it involves government tracking of all location and movement activities. There are several possible explanations for why St. Mark's students felt similarly about being permanently tracked for all their movements as about filling out some paperwork. For one, in the recent COVID-19 epidemic, many countries and cities in the United States tracked whether people had been exposed to the sickness ("COVID-19 Exposure Notification Apps Are Available. But Are They Working?" 2021). Perhaps, in light of the epidemic, people are more comfortable having their movements tracked. Impressionable youth, such as St. Mark's high schoolers, may especially have had their minds changed about health-related government intervention. For example, during their formative years, they started attending online school for a year, they were forced to wear masks when they returned, and they were required to report to the school whether they were sick or not. Students abided by the honor system in reporting illnesses. However, there was immense social pressure to report sickness and wear masks. If others sat near students who became sick in the seating charts,

those students would need to return home as well in fear of exposure to the sickness. In the minds of St. Mark's high schoolers, there may have been a new normal established by the precedent of the pandemic. Next, St. Mark's students, without having filled out a substantial amount of paperwork in their young lives, may have felt less comfortable being forced to complete it without the background knowledge of Gen X adults or AI. On the other hand, the Gen X adult population reported more unfair feelings towards scenario 1 (health tracking biopolitics). Without the formative experience of the St. Mark's students, their minds may have still been ingrained in ways of thinking that prioritize freedom from the past.

The last possible outlier was scenario 3 (military biopolitics), which in the Gemini trial, was rated as relatively fair. A possibility as to why Gemini rated scenario 7, scenario 3's counterpart, closely with scenario 3 is that the difference in the way the prompts were worded was very slight: as opposed to reallocating food (military biopolitics), the other scenario reallocated tables and chairs. Since Gemini's system is trained on existing literature, the slight difference in language may not have substantially affected its decision.

# 6. Summary, conclusion, and outlook

This paper investigated perceptions of biopolitics, a political philosophy that describes how powerful entities like governments or corporations manage the deep, personal lives of individuals (see Section 2). In total, there were eight scenarios of interest (health, citizenship, military, targeted advertising, and their non-biopolitical counterparts in consecutive order), four of which were biopolitical whereas the others were not biopolitical (see Section 2). This paper utilized a questionnaire distributed to 5 different targeted population groups including 20 St. Mark's high schoolers, 20 Gen X female Caucasians, OpenAI's ChatGPT, Google's Gemini AI, and Meta's Llama AI to determine their perceptions of biopolitics (see Section 3). Respondents were each polled 7 binary questions and asked to pick a scenario that they believed to be the most unfair. The AI systems were asked questions in sets of 7 before their chat logs were reset, and then they were asked other sets until they had answered 2 sets each of 4 total polls. All combinations of scenarios appeared exactly once across all four possible polls (see Section 3). Then, the results were tallied by adding the number of times each scenario was picked over any given opposing scenario and then calculating the percentage of times it was picked – its "selection rate" (see Section 3). Overall, all five groups universally rated every biopolitical scenario as more unfair than its non-biopolitical counterpart (see Section 4). However, in some cases, some biopolitical scenarios were perceived, compared to their counterparts, as more unfair than others. For example, all five groups rated the targeted advertising scenario as relatively fair, whereas they rated the citizenship scenario as consistently unfair. Some other scenarios varied in their unfairness depending on the population group, such as the health scenario, which St. Mark's students perceived as fairer (see Section 4).

Several explanations were extrapolated for why the results followed the above trends. For one, people and AI seemed to desire liberty, and since biopolitics restricts it, they found biopolitics to be unfair. Since individuals in similar geographic regions, or "nations," often adopt the views of others due to the phenomenon of groupthink, many views such as desiring liberty had become entrenched. Of course, since artificial intelligence is based on human training data, its answers were like the human population groups. On the other hand, with the rise of consumerism, targeted advertising had become an essential component of respondents' lives, so they were more likely to have rated it as fairer. Additionally, the young St. Mark's students, who had experienced the COVID pandemic and its related heavy government involvement across the world, were more likely to rate the health scenario as fairer, likely since they had experienced a similar situation in their own lives and thus felt more comfortable with it. Finally, for all respondents, scenarios that had closer proximity to being able to survive, such as the citizenship biopolitics scenario and the military food biopolitics scenario, were rated as more unfair than those that simply involved surveillance. Since surviving is a precondition to enjoying the benefits of life, respondents likely perceived threats to their lives as the most unfair. Overall, the results were shaped by groupthink, the desire for liberty, the rise of capitalism, the pandemic experience, and survival strategy (see Section 5).

Several research questions arose during the process of collecting data and writing this paper. For one, though this experiment made some progress in understanding whether artificial intelligence can make moral or ethical decisions, more studies ought to be done to determine whether AI's perception of morality or fairness aligns with that of humans by posing a broader range of scenarios, asking about different metrics beyond that of fairness, and questioning other population groups. Additionally, it may be interesting to explore whether the rankings change by asking a prompt engineer to translate the questions from humans to AI. Then, a study could test whether the rankings are altered if questions are posed in a non-binary format. Finally, more biopolitical scenarios could be tested (e.g. crime and punishment) to gain a broader insight into the ethical perceptions of humans and artificial intelligence. Then, policy planners could use this knowledge to determine how and whether to incorporate AI into major decision-making systems. For example, smart technology could be installed in cities, but it should be tested beforehand with the presentation of potential biopolitical scenarios to ensure it is capable of producing ethical responses. Additionally, policy planners could use AI as a consulting tool when making decisions due to its ability to produce ethical and socially productive responses. Finally, policy planners may want to adjust their language to describe public initiatives, such as using terms that do not involve surveillance and control. Then, their policies may receive stronger backing from the public.

#### References

- Acar, O. (2023, June 6). AI Prompt Engineering Isn't the Future. Harvard Business Review. https://hbr.org/2023/06/ai-prompt-engineering-isnt-the-future
- Adams, R. (2017, May 10). Michel Foucault: Biopolitics and Biopower. Critical Legal Thinking. https://criticallegalthinking.com/2017/05/10/michel-foucault-biopolitics-biopower/
- Agamben, G. (1998). Homo Sacer: Sovereign Power and Bare Life. Stanford University Press.
- Bare life. (n.d.). Oxford Reference. Retrieved August 19, 2024, from
  - https://www.oxfordreference.com/display/10.1093/oi/authority.20110803095446660
- COVID-19 Exposure Notification Apps Are Available. But Are They Working? (2021). U.S. Government Accountability Office. https://www.gao.gov/blog/covid-19-exposure-notification-apps-areavailable.-are-they-working
- Foucault, M. (2007). Security, Territory, Population: Lectures at the Collège de France (pp. 19–21). Palgrave Macmillan. https://mirror.explodie.org/Foucault-Security-Territory-Population.pdf
- Gudmand-Høyer, M., & Lopdrup-Hjorth, T. (2009). The Birth of Biopolitics: Lectures at the Collège de France, 1978-1979. Foucault Studies, 7. https://doi.org/10.22439/fs.voi7.2640
- Hyken, S. (2017, June 10). Half Of People Who Encounter Artificial Intelligence Don't Even Realize It. Forbes. https://www.forbes.com/sites/shephyken/2017/06/10/half-of-people-who-encounterartificial-intelligence-dont-even-realize-it/
- Illing, S. (2021, November 8). The paradox of American freedom. Vox. https://www.vox.com/voxconversations-podcast/2021/11/8/22763202/vox-conversations-sebastian-junger-freedom
- Korteling, J. E. (Hans), van de Boer-Visschedijk, G. C., Blankendaal, R. A. M., Boonekamp, R. C., & A.R., E. (2021). Human- versus Artificial Intelligence. *Frontiers in Artificial Intelligence*, 4. https://doi.org/10.3389/frai.2021.622364
- Ladan, Z. (2021). Redefining liberty: Is natural inability a legitimate constraint of liberty? Journal of Medical Ethics, 59–62. https://doi.org/10.1136/medethics-2020-106674
- Lee, Y. (2019). Groupthink as a System of the Decision Making Process. Applied Psychology OPUS. https://wp.nyu.edu/steinhardt-appsych\_opus/groupthink/
- Mazor, K., Clauser, B., Field, T., Yood, R., & Gurwitz, J. (2002). A Demonstration of the Impact of Response Bias on the Results of Patient Satisfaction Surveys. *Health Serv Res.*, 1403–1417. https://doi.org/10.1111/1475-6773.11194
- McWhorter, L. (2017). From Scientific Racism to Neoliberal Biopolitics (pp. 282–293). Oxford University Press. https://scholarship.richmond.edu/cgi/viewcontent.cgi?article=1010&context=wgssfaculty-publications
- Meloni, M. (2021). Porous Bodies: Environmental Biopower and the Politics of Life in Ancient Rome. Theory, Culture and Society, 38, 91–115. https://doi.org/10.1177/0263276420923727

Misselhorn, C. (2024, March 21). 'Empathetic' AI has more to do with psychopathy than emotional intelligence – but that doesn't mean we can treat machines cruelly. *The Conversation*. https://theconversation.com/empathetic-ai-has-more-to-do-with-psychopathy-than-emotional-intelligence-but-that-doesnt-mean-we-can-treat-machines-cruelly-225216

nCr Formula. (n.d.). Cuemath. https://www.cuemath.com/ncr-formula/

Pandya, V. (2024, April 22). The Age of Generative AI: Over half of Americans have used generative AI and most believe it will help them be more creative. *Adobe Blog.* https://blog.adobe.com/en/publish/2024/04/22/age-generative-ai-over-half-americans-haveused-generative-ai-most-believe-will-help-them-be-more-creative

- Paul, A. (2024). AI image generators often give racist and sexist results: Can they be fixed? *Nature*. https://www.nature.com/articles/d41586-024-00674-9
- Petryna, A. (2013). Life Exposed: Biological Citizens After Chernobyl. Princeton University Press.
- Rizvi, J. (2024, March 25). How AI Is Redefining Social Interactions In The Digital Age. Forbes. https://www.forbes.com/sites/jiawertz/2024/03/25/how-ai-is-redefining-social-interactions-inthe-digital-age/
- Schomer, A. (2021, July 23). Most consumers are creeped out by ads that follow them across devices. EMARKETER. https://www.emarketer.com/content/most-consumers-creeped-out-by-ads-thatfollow-them-across-devices
- Skavronskaya, L., Moyle, B., & Scott, N. (2020). The Experience of Novelty and the Novelty of Experience. Frontiers Psychology, 11. https://doi.org/10.3389/fpsyg.2020.00322
- Ting, H. (2008). Social Construction of Nation—A Theoretical Exploration. Nationalism and Ethnic Politics, 14(3), 453–482. https://doi.org/10.1080/13537110802301418
- Worthy, L., Lavigne, T., & Romero, F. (2022). Psychological Reactions to Unfair Behavior. In Culture and Psychology: How People Shape and are Shaped by Culture. https://open.maricopa.edu/culturepsychology/chapter/psychological-reactions-to-unfairbehavior/

# Acknowledgments

Omitted for anonymity.

# **Ethics notice**

Omitted for anonymity.

# **Disclosure Statement**

The author declares no conflicts of interest. No financial interest or benefit has arisen from the direct application of this research.

# Funding Details

No funding was received for this research.