

Between Smoke and Vapour: Biopower, Global Health Policies, and the Emergence of Electronic Cigarettes

Entre Humo y Vapor: Biopoder, Políticas de Salud Global y la Emergencia de los Cigarrillos Electrónicos

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Abstract

This article examines the intersection between biopower, the biomarket, and global health, focusing on the case of electronic cigarettes. Following Foucault's conceptualization, it analyzes the evolution of biopower from absolute control over life in the premodern era to a more subtle form of "making live and letting die" in the modern era, centered on the administration and reproduction of life for the benefit of emerging capitalism.

The analysis highlights how tobacco industries have capitalized on the development of electronic cigarettes, presenting them as a safer alternative to traditional tobacco. Through marketing strategies, research funding, and political lobbying, these companies seek to influence public perception and challenge government regulation. The introduction of electronic cigarettes has created a new scenario where tobacco companies, historically linked to public health issues, now position themselves as part of the solution to tobacco consumption. However, the article emphasizes the uncertainty regarding the long-term safety and effectiveness of electronic cigarettes as a smoking cessation tool. Despite this ambiguity, tobacco industries continue to promote their products to establish themselves as providers of safer alternatives and to influence government decision-making. This phenomenon illustrates the complex intersection between biopower, the biomarket, and global health, where commercial interests and public health concerns intertwine in a conflicting manner. The article proposes addressing these dynamics from an active and adaptive perspective to protect population health from commercial interests.

Keywords: Electronic Cigarette; Biopower; Biomarket; Public Health; Global Health

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Resumen

Este artículo examina la intersección entre biopoder, biomercado y salud global, centrándose en el caso de los cigarrillos electrónicos. Siguiendo la conceptualización de Foucault, se analiza la evolución del biopoder desde un control absoluto sobre la vida en la época premoderna hacia una forma más sutil de “hacer vivir y dejar morir” en la era moderna, enfocada en la administración y reproducción de la vida para el beneficio del capitalismo emergente. El análisis destaca cómo las industrias tabacaleras han capitalizado el desarrollo del cigarrillo electrónico, presentándolo como una alternativa más segura al tabaco tradicional. A través de estrategias de marketing, financiación de investigaciones y lobby político, estas empresas buscan influir en la percepción pública y desafiar la regulación gubernamental. La introducción del cigarrillo electrónico ha generado un nuevo escenario donde las compañías tabacaleras, históricamente vinculadas a problemas de salud pública, ahora se posicionan como parte de la solución al consumo de tabaco. No obstante, se enfatiza la incertidumbre sobre la seguridad y efectividad a largo plazo de los cigarrillos electrónicos como herramienta para dejar de fumar. A pesar de esta ambigüedad, las industrias tabacaleras continúan promoviendo sus productos para establecerse como proveedores de alternativas más seguras e influir en la toma de decisiones gubernamentales. Este fenómeno ilustra la compleja intersección entre biopoder, biomercado y salud global, donde los intereses comerciales y las preocupaciones de salud pública se entrelazan de manera conflictiva. El artículo propone abordar estas dinámicas desde una perspectiva activa y adaptable para proteger la salud poblacional frente a intereses comerciales.

Palabras clave: Cigarrillo Electrónico; Biopoder; Biomercado; Salud Pública; Salud Global

Introduction

The convergence between biopower, the biomarket, and global health is an increasingly important topic in the current context, where socio-economic and political dynamics significantly influence the health and well-being of populations¹. Following Michel Foucault's conceptualization of biopower as the control over human life and death, this article explores how this notion has evolved throughout history, from absolute sovereign control to a more subtle form of “making live and letting die” in the modern era, aimed at managing and reproducing life for the benefit of emerging capitalism.

We undertake a detailed analysis of how biopower has manifested through disciplinary institutions and biopolitical policies, targeting both individual bodies and the population as a whole. From the institutionalization of public health to the creation of national and international policies, we examine how these strategies have influenced the global health scenery, particularly during the globalization era.

A key aspect of this intersection is the role of the biomarket, particularly in the promotion of products such as electronic cigarettes. We analyze how tobacco companies have leveraged these devices, presenting them as safer alternatives to traditional tobacco, and how they have utilized marketing strategies, political lobbying, and research funding to influence public perception and challenge government regulation.

As we reflect on these dynamics, the need arises to address these complex relationships from a dynamic and adaptive perspective in public policy formulation and state intervention. This analysis invites us to question how the forces of the biomarket and biopower interact in the global health landscape, and how these relationships influence the health and well-being of populations worldwide.

The article we present here proposes a reflection aimed at opening the discussion on the challenges posed by the emergence and popularization of electronic cigarettes in recent decades, through the intersection of biopower, the biomarket, and global health. We assert that the multilateral instruments generated in the framework of the anti-tobacco convention, as an expression of global biopower, are confronted with marketing, political, and scientific lobbying strategies typical of the biomarket, promoted by tobacco companies that, beyond affecting government regulation of tobacco consumption, are managing to position electronic cigarettes as a public health alternative. Particularly relevant is the upcoming enforcement of Law 2354/2024 in May 2025, which underscores the need for visible advancements in the prohibition and regulation of electronic cigarettes. This law, as an expression of global biopower, confronts a biomarket that continues to position electronic cigarettes as a public health alternative despite growing concerns about their safety and regulation gaps.

From Biopower to Biomarket in Global Health

Michel Foucault defines biopower as “the acquisition of power over man insofar as man is a living being”². While in the premodern era, sovereign power over the biological consisted of absolute rights over life and death, starting from the 18th century, a new modulated dimension of this right over life and death emerged, translating into the power to “make live and let die” to ensure the reproduction and administration of life. To achieve this aim, in the West, biopower mechanisms linked disciplinary power, typical of the 17th century, aimed at regulating individual body-machines, and biopolitics, which, since the mid-18th century, has targeted the population (man-as-species), understood as a biological force that needs to be organized and channeled to be useful to the productive apparatus of nascent capitalism³. In this way, the category of population gains relevance, and via statistics and probability calculations, it becomes the object of knowledge and intervention, based on the collection of data such as birth and death rates, morbidity rates from common diseases, and disabilities⁴.

The aforementioned administration of life, inherent in biopower, implies the emergence of a disciplinary apparatus constituted by institutions such as schools to educate individual body-machines; and in relation to the population, political administration devices that, since the 19th century, have included, among others, demography, public hygiene, and occupational medicine, as constitutive mechanisms of the nascent social medicine that enabled, supported by knowledge/power, the invasion, regulation, and control of bodies and life⁵.

All the above leads to what Foucault defines as the medicalization of society and populations, which began in the 18th century⁵. Even as early as the 16th century, it is possible to see how the doctor and hospitals began to gain prominence in social control, starting with the mandatory control of epidemics in European cities. The collection and centralization of data on hygiene conditions, not only environmental but also of families and individuals, became key inputs for decision-making by central authorities, concerning the distribution, confinement, and segregation through sanitary cordons aimed at containing infections⁶. In this case, the doctor was no longer only responsible for managing the disease of his patient in an individual transaction but was beginning to be part of the decisions of governing life in society^{7,8}.

By the 19th and 20th centuries, the medicalization of society had become much more refined, driven by advances in microbiology and theories of human heredity from the late 19th century, which reinforced the relationship between medicine and society⁹. All this led to the definition of health policies, which ultimately established health as a central interest of States, placing it at the intersection of law and macroeconomics, being conceived as a market good and, consequently, subject to political struggles.

The previously described process led to the definitive institutionalisation of public health in the 20th century, encompassing medical work, training of health personnel, and the establishment of national and international health policies⁹. This was realised through the creation of Institutes and Ministries focused on hygiene and public health, supported by international institutions and States, particularly via the League of Nations and its Health Organisation¹⁰. Philanthropic organisations also provided funding and technical advice, serving as a reference for the World Health Organisation (WHO). Thus, a biopolitical structure was consolidated throughout the 20th century to coordinate medical care, centralise power over bodies and populations, and standardise knowledge in public health¹¹.

This transformation continues, with the rise of neoliberalism in the late 20th century and the globalisation of markets prompting the emergence of Global Health. This concept surpasses the health governance traditionally managed by Nation-States and international organisations, transforming health into a global order¹². By the early 2000s, global health garnered interest from the media, academia, governments, and philanthropic organisations, emerging as an undefined tool to tackle the challenges faced by public health in the new century¹³.

As outlined, Global Health results from the convergence of neoliberalism, international trade, globalisation, and technological development¹⁴. Neoliberalism’s influence is evident in the privatisation and deregulation policies that have affected health systems worldwide, fostering a biomarket where medical care becomes a commodity subject to market laws¹⁵. Technological advancements have improved medicine but have also widened health gaps

between developed and developing nations, privileging the research and development of profitable treatments over prevalent diseases in poorer regions. These inequities are also reflected in smoking cessation, where access to pharmacological treatments and nicotine substitutes (e.g., varenicline, cytisine, NRTs, bupropion) remains limited in many low- and middle-income countries, perpetuating consumption and reinforcing health disparities. Together, these factors create an environment where global health is shaped by economic considerations, technological advancements, and persistent inequities in access to treatment ¹³.

Consequently, alongside its consolidation, structural adjustment processes have arisen, shifting power from governments to markets ¹³. In health, this has involved World Bank-approved reforms linking private markets to the goal of improving health conditions ¹³. Thus, actions by individuals and communities now involve new actors with vested interests in selling goods and services across borders through the “biomarket” ¹³.

In this biomarket, individuals play a more significant role in managing their health. The view of health as a citizen’s right diminishes, leading to the idea that everyone is a global biological consumer ¹³. In the biomarket era, global health thrives, aiming for ambitious goals like eradicating malaria and tuberculosis and controlling the HIV epidemic ¹⁶. This interventionist approach often overlooks fundamental issues, such as the connections between malaria, resource exploitation, and illegal financing ¹⁷, neglecting the broader production matrix and the challenges faced by the global population ¹⁸.

The Framework Convention on Tobacco Control as a Biopower Tool

Paul Farmer notes that not all strategies within Global Health and biopower undermine individual autonomy and state control ¹⁹. Between 2003 and 2008, two significant events in global health occurred, their impact still felt today. The first was the report from the Commission on Social Determinants of Health ²⁰, which introduced concepts like health equity and the socio-economic gradient’s role in creating systematic health disparities. This perspective allowed for a broader understanding of disease processes, incorporating elements such as living conditions and community infrastructure into health discussions, beyond merely access to services and self-care ²¹.

Another crucial instrument in Global Health is the WHO Framework Convention on Tobacco Control (FCTC) (21). This convention represents a landmark development, reflecting the commitment of intergovernmental agencies to “promote life” through regulations on tobacco commercialisation, taxation, and advertising, while addressing potential conflicts of interest in tobacco-related policymaking ²².

The convention’s signing was underpinned not just by good intentions but also by substantial evidence regarding tobacco’s disease burden, which accounted for at least 8 million deaths and over 200 million Disability-Adjusted Life Years (DALYs) lost globally ²³. Beyond its direct health impacts, smoking imposes significant economic burdens on healthcare systems, particularly in developing countries ²³.

However, the FCTC’s journey to ratification faced substantial challenges, primarily from the tobacco industry, which sought to undermine global tobacco control efforts ²⁴. Lobbying groups were pivotal, leveraging their financial and political capital to question proposed anti-tobacco policies ²⁴. The industry engaged in spreading misinformation, casting doubt on the scientific evidence supporting tobacco restrictions, and promoting findings from studies with conflicts of interest, often defended by purportedly “independent” experts, thereby distorting public perception and undermining FCTC backed policies ²⁴.

“Big Tobacco” employed intense lobbying strategies to sway decision-makers on national and international stages, opposing measures like graphic warnings on cigarette packaging and increased taxes ²⁴. A representative example is the case of China, where the government’s link to the country’s tobacco industry constitutes a conflict of interest that ends up making the introduction of the FCTC provisions into national legislation more flexible ²⁵. Although the country has made significant achievements in recent years in terms of regulation, it continues to be one of the regions with the highest consumption rates in the world ²⁵.

E-cigarettes: The New Game of the Tobacco Market

The invention of the e-cigarette is attributed to Chinese pharmacist Hon Lik, who developed the device in the early 2000 ²⁶. Hon Lik designed a system that vaporized a liquid nicotine solution to provide an alternative to tobacco smoke. Since 2003, more than five generations of these devices have been released, improving their presentation, size, and including flavors and scents that make them more attractive to the public, gaining popularity among smokers and non-smokers alike ^{27,28}. Despite the controversies, the e-cigarette has transformed the tobacco landscape under the promise of a smoke-free world, generating new considerations in terms of regulation and health ²⁹.

To achieve this transformation of products and widespread market penetration, tobacco companies have used a combination of old and new commercial strategies, including brand transformation and the promotion of anti-tobacco foundations ³⁰. The loss of credibility and dishonest image that tobacco companies faced during the last decade of the 20th century forced these brands to transform through new figures promoting a fresh, more friendly image concerned with the health effects of tobacco on people, while still selling a product linked to negative outcomes such as lung cancer, throat cancer, tongue cancer, bladder cancer, among others ³¹.

As an illustrative example, Philip Morris International Inc. has invested over \$80 million/year in the Foundation for a Smoke-Free World, under the premise of being part of the solution to the epidemic it helped fuel ³². In turn, this foundation funds other non-profit organizations and private companies, many of which conduct research or promote vaping products and other nicotine products, in which Philip Morris International has a significant interest ³³.

Three key elements have been included in the revamped tactics. First, the terminology used by the tobacco industry has evolved over time, adopting the label “vape” or “vaporizer” for these products to distance them from the direct association with conventional cigarette smoke. This linguistic reinvention seeks to change public perception and dissociate e-cigarettes from the risks associated with traditional smoking.

Second, the reconversion of a concept that appears in the Framework Convention on Tobacco Control, the reduction of risks. While risk reduction refers to alternatives smokers may use to quit the habit, including nicotine replacement therapy in various forms (gum, patches, inhaler, etc.), the invention and commercial development of e-cigarettes have introduced this device as a non-pharmacological method to quit smoking. This approach, based on the concept of harm reduction, argues that while abstinence would be the preferred goal, switching to less harmful alternatives could be a more effective strategy ³⁴. However, it is imperative to recognize that while there is research on the potential role of e-cigarettes in risk reduction, their long-term safety and effectiveness as a smoking cessation tool are still subject to debate and study ³⁵. It is also necessary to emphasize that while e-cigarettes are a commercial product that does not require a medical license, some countries have already decided to provide e-cigarettes to smokers in their smoking cessation programs ³⁶.

The third strategy has been promoting studies and interest groups to highlight the benefits and advantages of e-cigarettes as a smoking cessation method ³⁴. The strategy of several tobacco industries has been to fund and support organizations and research globally to influence public and governmental perception of their products ³⁷. Through grants awarded in more than 40 countries, the foundation seeks to support the idea of “safer alternatives,” providing a rationale for governments to adopt new tobacco products ³⁷.

For example, in 2023, the UK National Health Service committed to the “Swap to Stop” strategy ³⁸. Through this mechanism, it has provided vaping starter kits to smokers who request them from their general practitioners as an alternative to quitting smoking ³⁸. In parallel, they have focused on promoting messages through doctors and key experts, leveraging evidence-based medicine as another mechanism of biopower. The dissemination of study results and systematic reviews aims to persuade doctors, especially those young or initially skeptical about the “benefits” of e-cigarettes, to prescribe these devices as an effective tool for quitting smoking ³⁹.

This strategic approach aims to influence medical decision-making, prioritizing e-cigarettes over other risk-reduction therapies such as nicotine patches, nicotine gum, or medications like bupropion. Evidence-based medicine (though this evidence comes almost exclusively from the Global North, particularly the UK and the US) thus becomes a tool of persuasion, presenting e-cigarettes as an even more effective and safer option for smoking cessation ⁴⁰.

The combination of public persuasion strategies, marketing to young audiences on social media and cultural events, pressure on the legislative agenda through civil society lobbyists (sponsored by the industry), and the introduction of new technologies that aim to dissociate from the tobacco world has managed to persuade a large number of legislators and members of the public, creating an image of being “safer” than traditional cigarettes ⁴¹. The ultimate goal is for them to be considered a category separate from tobacco products, to avoid the regulation proposed in the FCTC.

In addition, there are enormous inequalities in the approach to individual and collective smoking cessation programs, both between countries and between high and low-income populations ⁴². Likewise, these inequalities are manifested in different levels of research on tobacco control and its alternatives, greater or lesser regulation and greater or lesser restriction of the supply of tobacco products ⁴³. This observation is reinforced by the WHO’s Report on the Global Tobacco Epidemic (2025), which documents substantial global progress in graphic health warnings while drawing attention to persistent gaps in cessation services and access to pharmacotherapies (varenicline, cytisine, NRTs, bupropion) in many low- and middle-income countries ⁴⁴.

On March 6th, 2024, Colombia enacted Law 2354/2024, a pivotal amendment to the National Anti-Tobacco Law 1335/2009. The new law expands its scope to include Electronic Nicotine Delivery Systems (ENDS), Electronic Non-Nicotine Delivery Systems (ENNDS), heated tobacco products (HTP), and oral nicotine products (PNO) ⁴⁵. The law establishes for this new system the obligation of neutral packaging, standardized health warnings, and taxation equivalent to that applied to conventional tobacco products. Additionally, it prohibits all forms of “advertising, promotion, and sponsorship”, restricts sales to minors, and highlights that indoor public environments should be labeled as “smoke- and aerosol-free spaces.” By broadening the regulatory framework, this Law aligns Colombia’s legislation with the recommendations of the FCTC, reflecting an effort to safeguard public health in response to the evolving landscape of nicotine and tobacco products.

Of particular significance is the crucial role of local research and civil society, alongside the dissemination of information through academic societies. The evidence from local researchers, the push activity developed by non-governmental organizations, and academic societies serve as cornerstones for evidence-based decision-making in this case in Colombia. ⁴⁵.

Recent global research highlights the varied regulatory landscape surrounding electronic cigarettes across countries. While 68 nations have implemented regulations, the most common measures include sales bans, use restrictions in public places, age-of-purchase requirements, and advertising prohibitions ⁴⁶. However, it is concerning that some countries still adhere to outdated legislation established prior to the emergence of these products.

Finally, there are some debts. The restriction of the sale of SEAN products with flavours seems to reduce the consumption of SEAN and related products, although the impact of taxation and age restrictions remains uncertain, and indoor aerosol-free laws have shown mixed results ⁴⁵.

Conclusions

The analysis of the FCTC and the evolution of electronic cigarettes reveals a complex interplay between public health agencies, commercial interests, and state regulatory capacity, reflecting a contemporary vision of the biopower dynamics. The FCTC has made significant strides in reducing tobacco use and secondhand smoke exposure, but it faces ongoing challenges posed by the tobacco industry through political interference.

The rise of electronic cigarettes as a “less harmful” alternative introduces new concerns. While these devices may offer potential harm reduction, their long-term public health impacts remain uncertain, especially given their promotion by companies historically profiting from smoking. This complex situation may redefine the role of the State from a regulator and tax collector to an active buyer of these products.

This shift highlights the urgent need for multiple adaptive changes in health policies that consider both short-term benefits and long-term implications for public and economic growth. The intersection of biopower, global health, and the biomarket needs a balanced approach, prioritizing people’s health and rights over wellbeing. The experiences with the FCTC and the ongoing debate surrounding electronic cigarettes emphasize the need for a critical, evidence-based approach in public health policymaking.

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Ethical considerations

This essay does not involve human participants, animals, identifiable personal data, or interventions. As it is a conceptual and reflective manuscript, no formal ethics committee approval was required.

Conflicts of interests

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