

## Article

# Sustainable Healthcare Education as a Practice of Governmentality?

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**Abstract:** Sustainability as a concept is found across a multitude of sectors in today's society. This 'sustainability turn' as we might call it, has made its entry into educational paradigms such as 'education for sustainable development'. The healthcare sector has embraced the notion of sustainability primarily by emphasizing how climate change impacts human health. Epitomized in the new paradigm of sustainable healthcare education (SHE), or education for sustainable healthcare (ESH), the sustainability turn has arrived with full force within medical education. This article will argue that sustainable healthcare education may be analyzed as a governmental practice. We ask: by what governmental techniques does one seek to create sustainable health subjects, i.e., self-leading future doctors? On the one hand, sustainability is a call for global engagement that goes beyond the health of the singular patients within the paradigm of SHE. On the other hand, it can risk producing individual doctors and students that are responsabilized in the name of sustainability to take on ever-increasing tasks to foster human and planetary health. In this way, we argue that the SHE paradigm might risk transferring responsibility from the state to the individual to achieve 'sustainable health'.

**Keywords:** sustainability; Foucault; governmentality; healthcare education; higher education



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## 1. Introduction

In the face of climate change and the impact of human activity on the Earth's ecosystem, the concept of sustainability has emerged as a keyword within the lexicon of our current age. Sustainability as a concept can be found across a multitude of sectors and spheres in today's society. Moreover, sustainability and sustainable are often found as compound terms, i.e., they are more often than not combined with other terms. Such compound terms range from corporate sustainability, sustainable development, environmental sustainability, social sustainability, economic sustainability, and cultural sustainability to mention but a few. This 'sustainability turn' as we might call it, has also made its entry into educational paradigms such as 'education for sustainable development' [1–3]; a framework intended to foster sustainability thinking in higher education. As a logical extension perhaps of this turn towards sustainability, the healthcare sector has also embraced the notion of sustainability primarily with regard to how climate change impacts human health. Epitomized in the new paradigm of sustainable healthcare education (SHE), or education for sustainable healthcare (ESH), the sustainability turn has arrived with full force within medical education. Sustainable healthcare education is often defined as 'education about the impact of climate change and ecosystem alterations on health and the impact of the healthcare industry on the aforementioned' [4]. Another definition is 'the organization of health professions education to develop knowledge, skills, and attitudes about the interdependence of human health and planetary ecosystems, including the effects of rapid climate and environmental changes on health, and conversely, the environmental impacts of health systems' [5]. Through such definitions, SHE is seen as a paradigm shift in medical education towards the focus on the effects of climate change on human health and how to teach medical students about these effects and more generally, how to practice medicine and healthcare within planetary boundaries and without compromising future generations.

This article will argue that sustainable healthcare education may also be analyzed as a governmental practice. We ask: by what governmental techniques does one seek to create sustainable health subjects, i.e., self-leading future doctors? Moreover, is this part of a larger governmental strategy that seeks to form non-state actors and citizens to become not only self-responsible for human health but indeed for planetary health? Moreover, we will ask, what does sustainable mean in sustainable healthcare education? Finally, what kind of practices of ethical-self fashioning [6] take shape when sustainability meets healthcare education? We might argue that such governing of the conduct of medical students is a form of pastoral power [7,8] wherein medical students are thought to lead other subjects as well as themselves, towards better somatic health, but also lead others towards greener lives which are ultimately sustainable.

Our analysis is based on a literature review and text analysis of scientific articles and grey literature which focus on SHE pedagogy. Methodologically, we utilize Carol Bacchi's framework of what is the problem represented to be [9,10] to analyze precisely how sustainable healthcare education is framed as a solution to different kinds of problems. We follow Bacchi and to an extent, Foucault, in analyzing SHE by thinking about it as a form of 'problematization' [11,12]. Through our analysis, we will argue that while there are certainly many good and important reasons for a turn towards sustainability in medical education, we will also highlight some of the paradoxes and blind spots that emerge in this new healthcare education paradigm. Finally, we will show how this paradigm creates certain forms of ethical imperatives as well as a certain set of subject positions through what Foucault called 'subjectivation' [7].

As such, this article draws on the concept of governmentality as it has been formulated by Michel Foucault [13–16]. Moreover, it will draw upon research literature that has looked at the emergence of what has been called 'green governmentality' or 'environmentality' [17–20]. In combining these strains of thought we will argue that sustainable health education can be analyzed as a form of governmentality, but a specific one, one which plays on both environmentalism and healthism. We understand here healthism to be "the preoccupation with health as a primary—often the primary—focus for the definition and the achievement of well-being; a goal which is to be attained primarily through the modification of lifestyles, with or without therapeutic help" [21] (p. 368). Following from this definition, "the individual not only becomes the privileged terrain of medical explanation and intervention, but also the subject of responsibility for their health" [22] (p. 17). Finally, the turn towards health as a new form of ethos signaling 'the good life' generates a new form of moralism, according to which "healthy behavior (becomes) the paradigm of the good living" [21] (p. 380). The point here is to argue that sustainable healthcare education not only sees health as the paradigm of the good life but fuses this with a concern with environmentalism thus the good life is a form of behavior that is both healthy for the human body and also for the planet and the climate.

In environmentalism, understood as a moral paradigm, the good life is one in which the subject makes environmentally sound actions. We argue that under the umbrella of sustainability and sustainable health, the good life is a life wherein subjects take actions that are deemed sustainable and fuse environmental concerns with healthy choices. It is here that the medical students become trained, we argue, in becoming the guides towards this new lifestyle, both for themselves and for their future patients. Ultimately, we aim to map what we see as an ideological conflict embedded within discourses on sustainability which might even hamper the realization of sustainability itself. On the one hand, sustainability is a call for global engagement that goes beyond the health of the individual patients within the paradigm of SHE. Yet, on the other hand, we will argue that it can risk producing 'docile bodies' [23] that are responsabilized in the name of sustainability to take on ever-increasing tasks to promote human and planetary health. In this way, we argue that the SHE paradigm might risk transferring responsibility from the state to the individual to achieve 'sustainable health'.

## 2. Background: Sustainable Healthcare Education (SHE) and Health in the Anthropocene

The introduction of SHE pedagogy and sustainability thinking into medical education seems to follow logically from the increased awareness of the impact of climate change and environmental degradation caused by human action. The last ten to fifteen years have seen an ever-increasing focus on the entanglement between human health, the environment, and animal health. Such entanglement can be seen through the introduction of new fields such as ‘eco health’ [24,25], ‘planetary health’ [26,27] and ‘One Health’ [28], all of which signal a shift towards understanding and mapping the complex interdependence between different systems upon human health. This can also be linked to the introduction of the concept of the Anthropocene which has heralded a new way of looking at humanity’s impact on the planet and its ecosystems. Even though medicine has ever since Hippocrates been preoccupied with the influence of the environment on human health, the new shift also signals a focus on the impact that human activity has upon the environment and how this action in turn impacts human health. The call for sustainable health education can as far as we can tell, be traced back to around 2008 with a recent explosion in the literature and focus on the topic. Since 2008, sustainable healthcare education (SHE), or education for sustainable health (ESH), has emerged as a new paradigm within healthcare education. Primarily aimed at medical education for medical doctors and post-graduate education, its scope has now come to include nurses and other healthcare professions. While the SHE paradigm is relatively new, its main field of impact has been in the U.S, England, and Australia [29,30]. Yet, countries like Canada and Norway are following suit [31,32]. Since its inception, the SHE paradigm has developed into formalized courses, networks, and even dedicated centers which are all dedicated to implementing and developing the SHE paradigm within healthcare education. As such, the SHE paradigm represents an important turn in medical education and the field of healthcare in general.

## 3. Governmentality and Pastoral Power: A Short Primer on Conceptual Tools Used

As a conceptual tool for framing the SHE paradigm in medical education, we apply the lens of governmentality as launched by Foucault [8,14]. Studies on governmentality have become a vast field itself [15,16,33–35] and as such we will not rehearse here the arguments made in this literature, however, to frame our analysis we will give a brief account of governmentality to connect it to our analysis later on.

When scholars speak of governmentality they often return to one of Foucault’s most famous definitions of the term which he launched in his lecture series *The Birth of Biopolitics* which ran from 1978 to 1979 at the *Collège de France* [14]. In it, he states that he has tried to use the term governmentality as a way of looking at “how one conducts the conduct of men” [14] (p. 186). As Foucault states

*“This word must be allowed the very broad meaning it had in the sixteenth century. ‘Government’ did not refer only to political structures or to the management of states; rather, it designated the way in which the conduct of individuals or groups might be directed—the government of children, of souls, of communities, of the sick [...] To govern, in this sense, is to control the possible field of action of others”.* [7] (p. 221)

This play on the word ‘government’ becomes even clearer in French. As Sokhi-Bulley states, it can mean “‘to direct or move forward, or ‘to provide support for’. It can have a moral meaning of ‘to conduct someone’ in a spiritual sense or, tangentially, to ‘impose a regimen’ (on a patient, perhaps) or to be in a relationship of command and control” [36]. This brings us back to the dictum that governmentality is in its most condensed and perhaps simplistic form, the study of how one conducts the conduct of humans. Governmentality is focused on producing subjects, which can be governed towards different goals and along different lines depending on the multitude of fields of power in which subjects are entangled. As such, governmentality is of course also a form of power relation which in turn implies certain power/knowledge couplings, a matrix which Foucault worked with throughout his entire career [37–39]. The conduct of conducts is reliant upon different

knowledge regimes to produce various subjects and guide them towards certain goals or practices. To conduct the conduct of humans, one must not think that this is solely a problem written in the singular, nor a reductionist problem of the State as such. Rather “the ‘problem of government’ then, does not refer only to the government of the state (by the Prince); it is not one but many problems” [36]. Examples from Foucault would here be the many problems in the governing of children through pedagogy and schools [37,38]; the government of the sick [40–42]; the government of the criminal [23] and, through his later writings, the government of the Self [43–45]. We should of course note that governmentality is not just about practices of conducting the conduct of others or oneself, it is also a way of thinking, a set of governing rationalities as several authors have called it [46–48]. Indeed, the very word governmentality points towards this as it is also a neologism that plays on ‘government’ and ‘mentality’. We can note as Sokhi-Bulley does that “the word ‘govern/mentality’ refers to both the processes of governing and a mentality of government—i.e., thinking about how the governing happens” [36]. It is as such, both an ‘art’, that is, various practices concerned with governing the conduct of people, and a set of rationalities, i.e. a way of thinking about governing the conduct of people. It is thus both forms of ‘doing’ and ‘thinking’ about the governing of the conduct of people.

Another part of Foucault’s governmental matrix and one which oftentimes receives less attention than it perhaps should get within governmentality studies is the concept of pastoral power and its impact on modern governmentality. As is well-known by now, Foucault delineates a transformation of the pastoral power found in Christianity and into the modern Western form of governing [7]. Pastoral power in Christianity

*“is presented as distinctive in the role it bestows on certain individuals—pastors—in instructing, caring for, and deriving legitimacy from the communities they serve. Pastoral power is distinctive in the way it attends to the wellbeing and moral propriety of both individuals and communities simultaneously”*. [49] (p. 1293)

Moreover, Foucault states that pastoral power in its Christian enactment indicates a power that

*“seeks to deliver the individual to salvation in the next world; it is not just a power which commands, it is also prepared to sacrifice itself for the life of the flock; it is a power which is equally concerned for the one as for the many, the part and the whole; and it requires knowledge of the conscience, the inside of people’s minds, and the ability to direct it”*. [7] (p. 214)

However, this form of power has changed within the modern episteme. First of all, we can note that the object of salvation which was central to pastoral power in Christianity, no longer focuses on the salvation of the soul of the individual but according to Foucault, is now geared towards a form of secular salvation [7]. Subsequently, ‘salvation’ in modern governing comes to take on different meanings; health, well-being, security, and protection against accidents [7] (p. 215). In this transformation, the religious aims has in the modern era have come to be substituted by largely secular aims. Secondly, within this shift, Foucault notes that the custodians of pastoral power has increased within modern forms of governmentality; pastoral power was now exercised by the state apparatus, the police, private ventures, welfare societies, medicine, and public institutions such as hospitals [7] (p. 215), and may we add here, schools and universities [50]. As Howley and Hartnett state concerning the pastoral power of the university: “such institutions assume a pastoral position as a means to confer salvation on their students. Their fundamental concern is with the improvement rather than the containment of students; like the church, these institutions wield normative rather than carceral power” [50] (p. 271). Furthermore, pastoral power functions to “counsel and guide them, and, through this process, ensures, sustains, and improves their lives” [7,50].

These points, alongside the overarching optics from governmentality, are key in analyzing the SHE paradigm and highlight how the SHE paradigm opens up new spaces of governing medical education as well as forming new subjectivities as we shall see later.

In the following analysis, we will argue that the SHE paradigm can be seen as an emerging governmental strategy that seeks to influence the conduct of medical students and teachers alike toward specific aims. Sustainability in this framework becomes a key conceptual bedrock upon which this new governmental field produces certain governable subjects and guides them toward the goal of ‘sustainable healthcare’ through education.

#### 4. Materials and Methods

Since we were interested in the paradigm of SHE pedagogy and how sustainability has entered the medical curricula, we wanted to investigate how this type of thinking is framed within academic journals. The focus on academic journals served as several focal points for us. First, by looking at academic journals we could better get a sense of the various enactments of the SHE paradigm. However, rather than conducting a narrative review or a scoping review of the topic, we were interested in doing close readings of the literature through Carol Bacchi’s ‘what is the problem represented to be’ approach which we will return to further down. Secondly, since the SHE paradigm is rather new, scholarly literature serves as an excellent entry point to gain a sense of its development, the rationales for developing it as well as the various academic contestations that might be found. Due to its relatively new nature, the SHE paradigm is far from uniformly implemented into standardized medical curricula, and as such, we did not conduct a curricula analysis. However, we did supplement our search with materials from key actors such as The Planetary Health Alliance, Center for Sustainable Healthcare, Sustainable Healthcare Education Network, and UCSF’s Planetary Health Report Card. All of these provide additional educational tools or frameworks which focus on sustainable healthcare education and as such served to supplement our literature search.

We searched SCOPUS, Web of Science, and PubMed for articles on the topic of sustainable healthcare education. The search terms we used were “sustainable healthcare education” OR “sustainable healthcare” AND “medical education” OR “sustainable healthcare” AND “curriculum” OR “sustainable medical education” OR “teaching sustainable healthcare”. We excluded book chapters, books, and book reviews but included a broad range of other texts on the topic found through our search. These included original research articles, commentary pieces, editorial, and literature reviews. Our initial search, after removing duplicates, yielded a total of 59 texts. After reading for relevance and topics, we ended up with a total of 53 articles that were analyzed. The criteria for relevance was that the articles focused on education within the medical field, here understood broadly to also include nursing and medical doctors as well as adjacent fields of healthcare education. Moreover, articles that were discarded were those that initially came up in the search but that after closer reading of abstract and main text proved to actually focus on sustainable healthcare systems and quality improvement rather than education per se.

Since we were interested in why sustainable healthcare education or education for sustainable healthcare has become a new form of medical pedagogy, we followed Carol Bacchi’s ‘what is the problem represented to be’ (WPR) approach. We wanted to investigate what ‘problems’ sustainable healthcare education seeks to solve and how it is framed as a solution to the problem. Moreover, following Bacchi and Foucault, we sought to analyze SHE as a form of ‘problematization’, i.e., how this problem arises as a productive discourse. This is particularly important and relevant regarding our argument that the SHE paradigm has ushered in a new form of governmentality, one that combines the imperative for health and the imperative of environmentalism.

The WPR approach proposes a “challenge to the conventional view that policies address problems”, and instead argues that policies are “problematizations that produce ‘problems’ as particular types of problems” (Bacchi & Goodwin 2016 [51]). Bacchi, influenced by Foucault, states that we need to pay attention to that which is taken for granted, the ‘silences’ found in discourses, and the implications of looking at a problem in certain ways (Bacchi, 2012 [10]). Linking to the problem of governmentality, Bacchi argues that governance takes shape by way of problematization (Bacchi in Bletsas, 2016 [52]). This



places the key focus on understanding how social problems are ‘created’ in the policy. We argue that the governing of medical education can be analyzed in much the same manner. Educational policies, strategies, frameworks, and curricula can all be seen as playing a similar role to policy in political governance in as much as these influence the governing of in this case, medical education. Concerning this, such documents and texts articulate and form the conduct of conducts within medical education and subsequently also the medical profession writ large.

Returning to the WPR approach, we see the approach as one that offers a semi-structured analytical entry point in the form of a targeted inquiry with six questions. Those questions, taken from Bacchi (2012) [10] are:

1. What’s the ‘problem’ represented to be in a specific policy or policy proposal?
2. What presuppositions or assumptions underpin this representation of the problem?
3. How has this representation of the ‘problem’ come about?
4. What is left unproblematic? Where are the silences? Can the problem be thought about differently?
5. What effects are produced by this representation of the ‘problem’?
6. How/where has this representation of the ‘problem’ been produced, disseminated, and defended? How has it been (or could it be) questioned, disrupted, or replaced? (p. 21)

Since we want to connect and focus on how the SHE paradigm can be linked to governmental practices within higher education and in particular how sustainability figures as governing topos within this paradigm we will primarily focus on questions 1 and 5. We are particularly interested in how the SHE paradigm produces normative and prescriptive subjects within the framing of SHE and what it is. Through this analysis, we will seek to link how SHE seeks to solve a set of problems by implementing certain forms of norms and pedagogies as well as delimiting a set of health issues that need governance. In short, the SHE paradigm can be seen as a form of conducting the conduct of medical students, teachers, and future doctors towards various aims related to health and environmentalism.

## 5. Results

### 5.1. *What Is the Problem Represented to Be?*

A basic analytical question to ask in our context is: what problem(s) does the SHE paradigm try to answer? After all, the emergence of a new educational paradigm seems to postulate that other ways of teaching are lacking in some way or form. Through our analysis, the problem that the SHE paradigm seeks to answer is the problem of climate change and environmental degradation due to human action. The framing is clear that climate change represents the ‘most urgent threat to human health and the health of the planet’ [53] and subsequently ‘we need to reform medical curricula to include teaching about the impact of climate change upon health’ [54]. Finally, we can read that ‘physicians will be called upon to care for patients who bear the burden of disease from the impact of climate change and ecologically irresponsible practices which harm ecosystems and contribute to climate change [4]. The ‘problem’ that the SHE paradigm sees as the most pressing concern is climate change and its effect on human health and that of the planet. Yet, the issue lies deeper than that; to confront climate change, ‘medical students need to be taught the entanglements between human health and climate change as well as that of environmental degradation [55]. As such, ‘curricula reform is necessary as the current medical curricula are not adequate in addressing the new issues emerging from climate change’ [56]. The problem then is at its most distal, climate change writ large, and proximally, to medical education at least, that medical education is failing to include these perspectives into their curricula.

As such, it is worth noting what ‘sustainability’ as such means in this context and how it acts as an ‘answer’ to the ‘problem’ of climate change and medical education. Sustainability connotes issues surrounding climate change, climate gas emissions, and pollution. In many ways, the sustainable part of sustainable healthcare education seems almost exclusively to focus on environmentalism. Very few articles we analyzed take a broad stance

on what sustainable means and most of the articles focus on 'green healthcare' and ways of making the healthcare sector greener and how medical students can learn to reduce climate emissions and reduce waste in the healthcare sector itself. One of the key issues that are highlighted in several articles pertains to the healthcare sector's climate emissions and frames this as 'non-sustainable' [53,56]. Sustainable and sustainability as such become closely associated with environmentalism and climate issues. Less is said about other aspects of sustainability, albeit some articles include a focus on economic sustainability and 'quality improvement' in the healthcare sector as part of 'greener healthcare'. Indeed, quality improvement, or QI as it is abbreviated in many of the articles [57,58], shows an interesting example of how sustainability becomes 'translated' as it were into 'quality' or rather, that quality improvement in the healthcare sector also has to be sustainable or lead to sustainability. Some of this is also about ensuring economic sustainability signaled through the rhetoric of 'green and lean' pathways to healthcare discourse [59]. As such, while the term sustainable in sustainable healthcare education might predominantly focus on climate and the environment, it also at the same time acts as a way of opening up the 'field of control' so that other domains can be addressed within medical education. Governing healthcare education in the name of sustainability becomes a way of governing not just health, but also a form of 'environmentality' in that sustainable healthcare education instills an ethos aimed at steering the conduct of the healthcare sector towards greener healthcare.

Secondary to this we can note that a few articles note the problematic overuse of medical services such as overdiagnosis and overtreatment which is seen as non-sustainable [57,60]. Surprisingly few articles note economic and social sustainability and as such, the most dominant discourse is one that focuses on environmental issues. To solve these issues medical education needs to focus on new topics in teaching students how to provide sustainable healthcare to the community. However, this then is primarily seen as teaching students how to make choices that mitigate or reduce the impact of climate emissions both in general and in the clinical setting. Moreover, if we see the SHE paradigm as a form of governmental practice in medical education, then the governing of conduct here clearly steers medical educators and students alike towards taking direct action towards climate mitigation. A second point that also pertains to governmentality is that such a 'translation' of sustainability implies shifting the responsibility from the collective onto the individual. As such, this might reproduce what others have argued, is a neoliberal version of sustainability wherein sustainability becomes an individual responsibility rather than a state and systemic responsibility [61,62]. By identifying climate change as a threat to human health, climate change is problematized in the material in such a way that someone needs to take responsibility for mitigating and preparing for the impact of this problem. In problematizing climate change as a threat to human health, the SHE paradigm stipulates that doctors need to be made responsible for combating climate change and environmental degradation. This leads to a proliferation of who should and can take ownership of a problem in the name of sustainability. From a centralized conception of governmentality, we are here witnessing the capillary mechanisms of power and governmentality [63] in that the SHE paradigm transfers responsibility for sustainability into more and more capillary spaces in society, thus this can also be seen as what Foucault called the micro-practices of power within society, in this case, medical education [13,38]. The transference of responsibility for sustainability can be seen as not dictated by a centralized state in this case, but a transference through capillary governmentality; from university curricula to teachers, to students, and finally, to patients who are to be guided by the future doctors to make choices that are both good for their health and the environment.

Indeed, we argue that one of the productive effects of this way of framing the problem of sustainability in healthcare education opens up a new space for governing medical students, teachers, doctors, and even patients as we shall see later. If governmentality is both a set of practices within a given field and a form of rationality, then the SHE paradigm opens up and fuses two different forms of rationalities; what Deborah Lupton has called 'the imperative to health' [64], which other have called 'healthism' [21] and on the other

hand, the rationality of environmentalism. Since sustainability is understood and framed as being predominantly about the environmental effects on human health and the healthcare sector's contribution to this, the governmental effects of introducing sustainability into healthcare education provide a space for new problems to be addressed within medical education and indeed the profession. By making a compound word, sustainable healthcare education, new problems can be addressed and added to the medical curricula. In this way, sustainability in medical education functions in a way that produces discursive effects and problems in need of solving. Epstein and Mamo have forcefully argued that the compound term sexual health has served to both 'sanitize sex' through healthism, and also allowed for a productive proliferation of sexuality across different fields [65]. Moreover, sexual health as a compound term opens up various social issues to be addressed through the umbrella term of sexual health [65]. Similarly, the compound term sustainable healthcare education fuses environmentalism with healthism creating a new pedagogical space to govern the conduct of medical students, teachers, doctors, and patients. Moreover, representing the problem in this manner produces several effects which make it possible to govern the environment in the name of health care and vice versa, governing human health in the name of environmentalism. Sustainability becomes a powerful semiotic sign which signifies different forms of meaning allowing for a diverse, yet limited set of issues to be connected to medical education. In this sense, sustainable 'environmental' health, or rather a health education; allows for new problems to be addressed and governed in the name of human health. Once again, we need to highlight that such a governmental practice of sustainability in healthcare education might risk reproducing individualized responsibility rather than state responsibility. Rather than teaching students about the systemic drivers of climate degradation and climate emissions, the SHE paradigm in its most explicit form might be critiqued for focusing too much on individual human action and lifestyle changes. In such a move, sustainable healthcare becomes the responsibility of the individual doctor and ultimately also the patient, and the systemic drivers and the state's responsibility become relegated to the background.

One productive way in which the problematization of sustainability in medical education produces effects can be seen in how responsibility also become actualized. More specifically, no longer are medical teachers only responsible for teaching students pathology, anatomy, epidemiology, and other more classical medical domains, but they also become responsible for teaching students about the impact of climate on health. Moreover, through a focus on reducing climate emissions from the healthcare sector [66], reducing the use of anesthesia gases which are polluting [67], reducing waste from the clinic [68], as well as reducing overuse of healthcare resources [57], sustainability becomes a term which responsabilizes medical students to internalize certain ways of acting and thinking about healthcare, i.e., their conduct. The governing of sustainable healthcare education produces new obligations for future doctors and as such the obligation is no longer only to provide good somatic healthcare to patients but to do it in a very specific manner, one which is also good for the environment and the planet's ecosystems. One might say that this fundamentally also alters the Hippocratic Oath, the ancient bedrock upon which doctors are indeed governed and are expected to govern others. An oath can be seen as a powerful governmental practice; a speech act intended to both be prescriptive in terms of obligations towards the individual onto him/herself, but also towards the relationship the individual is to have with others be that the State, the community and his/her fellow humans. For instance, the quote "I will apply dietetic measures for the benefit of the sick according to my ability and judgment; I will keep them from harm and injustice" [69] originally pertains to helping sick humans and keeping them from harm. However, with the SHE paradigm, this is no longer enough; it is not just humans that we need to cure, and keep from harm, it is the environment and the climate as well. While in our material there is no mention as such of the Hippocratic Oath, elsewhere authors have argued for a new Hippocratic oath which includes taking into consideration climate and the effects of climate change upon the lives of the generations not yet born and their health [70–72].



If governmentality can be seen as the conduct of conduct, then the SHE paradigm has ushered in a form of educational perspective which fuses the ‘imperative to health’ with environmental concerns, a form of ‘environmentality’. Environmentality can be understood here as a concept used to analyze and describe an approach to investigating the complex interplays of power within environmental governance of human-environment interactions [18,19]. Typically, this has looked at the various ways in which governmental practices aim at directing the conduct of conducts of subjects when it comes to various environmental issues such as waste management, responsible and green consumption, climate emissions, and energy conservation. Of particular interest here is how environmentality aims at producing various subjectivities, or how the individual becomes an instrument of environmental government by engaging in practices aimed at self-regulating their behavior to further the environmental objectives of the governing body. We should note that the governing body here should not only be understood as the ‘state’ per se but could include a broad range of actors who engage with environmentalism. A case in point would be how environmentality produces subjects who engage in various forms of self-regulation and discipline to reduce waste [73,74]. Such self-regulation we argue is also found within the SHE paradigm; ranging from educating medical students to regulate the waste from the hospital sector to instructing them to conserve energy and limit harmful gasses used in anesthesia, sustainable healthcare education implores and instills in students a form of environmentality, conducting the conducts of medical students towards environmental ends. That being said, the students are also thought to lead patients and communities as we shall see, reminiscent of the pastoral power described by Foucault.

As such, in the name of sustainable healthcare education, medical students, teachers, and future doctors become engaged in a form of ‘pastoralism’ or pastoral power [7] which seeks to guide or lead patients and the broader population both to healthier and greener lives. SHE seeks to shape pedagogy and teaching thus also changing the role of the doctor and indeed the subject position of doctors. A form of ‘subjectivization’ or shaping of the Self.

### *5.2. Effects and Subject Formation: Forming the New Medical Professional*

If governmentality can be condensed down to the dictum of ‘the conduct of conducts’ then the SHE paradigm within medical education can be seen as a way of conducting the conduct of students and future doctors alike. As we have argued above, sustainability in almost all of the articles analyzed becomes equated with issues about environmentalism and issues of climate change, and pollution. This has implications for the kind of governing practices to which the subject is exposed and expected to conform to. There are several interesting ways in which the SHE paradigm with its focus on ‘green healthcare’ produces practices that guide the medical student and doctor and informs the conduct of medical students. Governing medical students under the rubric of sustainability leads in many of the articles to the production of ‘climate champions’ [55], students who are thought and expected to ‘lead others towards climate mitigation and climate action’ [75]. Moreover, part of the pedagogy calls for ‘eco-ethical leadership; leading both self and patients towards climate change action which reduces carbon footprint and gains health benefits [53]. Sustainability, through its translation, into mainly environmental and climate issues produces subjects who are to govern themselves and their patients towards climate action in the name of both human health and the health of the planet. One might here draw attention to how medical students are being hailed into a subject position close to the pastoral power described by Foucault [8]. This might not be a problem in and of itself as this optic is transferable to all forms of education. Rather, our point here, which is in line with our main argument in this article, is that such pastoral power and its governing of it invokes a shift in the discourse on sustainability. Specifically, we argue that the overwhelming focus on climate and environmentalism within the SHE paradigm produces a reductionist understanding of what sustainability can and should mean. Moreover, this reductionist conceptualization of sustainability as mostly or even predominantly about climate and

the environment might contribute to marginalizing other aspects which are crucial to sustainability such as social inequality, social justice, and its direct relevance to human health and subsequently also to the health of the planet. It also, as we have argued, transfers responsibility for sustainability from the state to the individual through the investiture of medical education.

The SHE paradigm can be seen as a form of pastoral power in at least two ways. First, it explicitly calls for an educational paradigm within medicine which is to produce as we have seen, 'change agents', 'climate stewards', and 'eco-ethical leaders' who can lead both themselves and other towards making 'better' and indeed 'wiser' choices. Medical students are to be trained to counsel and guide their communities toward both healthier lives and greener lives which is in line with the Foucauldian definition of pastoral power. This is of course all the more obvious in that the SHE paradigm is found within the institution of higher education and medicine, two classical examples of institutions of power and governmentality within Foucault's scholarship. In the name of sustainable healthcare, the conduct of conducts here is a form of rationality and practice, a pedagogy if you will, which both informs how doctors are to take care of the health of their community members, but also how to take care of the environment of their community. The pastoral power, or guidance, in this case, is aimed at producing not only stewards of human health but indeed 'climate stewards' [67]. Indeed, in several of the articles, the call is to educate medical students who are leaders in their communities and who can lead climate action and activism [76,77]. Such calls for leadership in medical education and learning how to lead on climate shows, we argue, how the SHE paradigm produces subjects capable of not only leading themselves as ethical and autonomous subjects [43,78] but also as subjects whom can lead others towards a more sustainable future. This type of governing pedagogy can be seen as a form of pastoral power in that the medical students are thought to lead by example and by ensuring that they guide 'their community' [66] both towards healthier lives and greener lives. One limiting factor of our analysis is of course that the SHE paradigm to a large degree only focuses on medical education in a narrow sense, i.e., medical doctors and perhaps to a lesser extent, nurses. However, this is problem mainly related to the field itself and less so to our argument. Indeed, one would perhaps have wanted the SHE paradigm to have a broader base but as it stands, and perhaps a finding in our study, is that SHE as an educational paradigm seem mostly concerned with medical education of medical doctors and not as a broader field across healthcare in general.

Another example of the pastoral power which the SHE paradigm seeks to invest in medical students is how they are expected to, in the name of sustainability, guide the conduct of patients so that they make good health choices which at the same time is also good for the environment. A case in point would be how medical students are seen as requiring teachings that will make them capable of both empowering patients and instructing patients on how to engage with self-care to reduce the burden of the healthcare system and thus also carbon emissions [59,60]. Examples of such pastoral guidance and care can be seen in the call for teaching medical students to learn about and later on, instruct patients to 'walk to work or 'increase biking' and switch to a vegetarian diet [79]. While these are all good advice, we could problematize this as a way of transferring responsibility from the state and structural issues about climate emissions and instead focus on individual choice and lifestyle. While it might not be the SHE paradigm's main task, these responsibility shifts can obscure the structural issues and the responsibility states and the private sector has in climate contributing to climate emissions. The focus on individual action and choice, rather than structural reform could at its most extreme lead to a heightened focus on the role of the individual, both doctor and patient, rather than on the responsibility of state and private actors.

In this way, sustainability becomes a form of pastoral power in which there is an investiture of power, from teachers to students, and then an expectation that future doctors will guide their communities toward health and environmental benefits. This is a clear departure from earlier pastoral power invested in the medical profession. Doctors have

had a form of pastoral power in Western society, a point Foucault himself has well noted. Moreover, this power is both disciplinary and pastoral in that it comes with certain investments of professional expertise, power, prestige, and knowledge. Hence, the new turn towards sustainability builds on but expands the pastoral power of doctors. It expands on the possible fields of control to speak with Foucault.

A similar form of call is made in some of the articles that address the need to teach medical students to 'choose wisely' to reduce medical over-activity such as overdiagnosis and overtreatment of patients [80]. The focus on 'choosing wisely' is part of an ongoing international campaign spurred on by the need to reduce 'low quality and expensive medical investigation and treatments'. Choosing wisely, however, can be cast both in terms of its effect on economic sustainability, i.e., unnecessary and over-use of the healthcare system is costly. Here, we are referring to overuse of antibiotics, or the use of CT/MRI imaging modalities where it is not indicated, or the overuse of referrals to specialist wards where this is not indicated.

However, it can also be cast as a problem of environmental sustainability wherein unnecessary investigations and treatments contributes to the climate emissions and waste produced by the healthcare sector. It is mainly the latter that is mentioned in our material, i.e., to choose wisely in terms of medical care is also to choose environmentally friendly and low-emission procedures in the name of sustainable healthcare. Now, we are not stating that this is somehow a problem, on the contrary, reducing the usage of unnecessary medical investigations and treatments is key for both economic and environmental sustainability. Moreover, reducing climate emissions and waste from the healthcare sector is also a laudable goal in as much as the healthcare sector is a rather large contributor to climate gas and waste production globally [81]. Yet, what we are more interested in here, and which we want to point out is that the SHE pedagogy in its capacity to produce governable subjects focuses to a large degree on producing future doctors who not only guide patients towards healthier lives but also govern the conduct of environmental practices aimed at combatting climate change and waste.

## 6. Conclusions

In the above analysis, we have argued that sustainable healthcare education as it is taking shape within medical education can be seen as a form of governmental practice, one which also plays on forms of pastoral power. Moreover, in asking what sustainable means in sustainable healthcare education, we have come to argue that it mainly pertains to issues of environmentalism and climate change. This is not to say that sustainability only comes to signify this in the material this is by far the most dominant framing. That being said, we have also noted that sustainable and sustainability in sustainable healthcare education also open up spaces for addressing other issues that should be included in medical education such as reducing medical overuse through 'choosing wisely' teaching as well as waste management and quality improvement of the hospital sector. As such, sustainability can be seen as a term that allows for various issues to be addressed within medical education. More importantly, we have argued that sustainability within medical education acts as a way of governing teachers, students, and ultimately also patients toward healthier and greener lives. In this way, sustainable healthcare education merges both concern health and environmentalism under the umbrella of sustainability. From its inception, the SHE paradigm has primarily been preoccupied with climate change and the impact of climate on human health. In some sense, it remains an open and important question whether or not sustainable healthcare education, and indeed, sustainable healthcare as such, can solve the issues which it sets out to solve; climate change and emissions from the healthcare sector itself. The paradigm has focused tremendous amounts of energies of also focusing on the climate emissions of the healthcare sector itself and how to reduce these emissions as part of 'green healthcare'. The SHE paradigm as it is implemented and conceptualized thus plays on environmentalism and healthism and fuses these to produce a new form of healthcare, and in the process, new forms of healthcare providers, i.e., new subjectivities.

If seen as such, the SHE paradigm can perhaps be connected to a broader governmental strategy that seeks to recruit and shape non-state actors and subjects into self-regulating and self-disciplinary subjects both in terms of health and in terms of the environment. Such a strategy would echo recent scholarship on the shaping and construction of self-regulating subjects to ‘green and healthy cities’, ‘healthy workspaces’, and healthy environments in general. Perhaps our main argument can be formulated as a way of analyzing how the SHE paradigm fuses the imperative of health with an imperative of environmentalism. Moreover, this imperative is seen as being about implementing educational techniques which instill in medical students an ethos wherein human health needs to be contextualized within the health of the planet. This last point is of course paramount in today’s world. While we have offered what may seem like a critique of the SHE paradigm, it is important to note that we fully endorse the need to see human and planetary health in unison. Part of our contribution to the field would perhaps be to suggest that a crucial element of SHE education lies in also exposing students to the paradoxes and tensions within sustainability so that students can first and foremost develop a form of critical thinking. Through such critical thinking skills, students could perhaps also see the potential pitfalls, which lies in individualizing the responsibility for sustainable healthcare. We would also note that an emphasis to go beyond climate and the environment is necessary in order to truly make healthcare sustainable. As such, systems thinking skills and more holistic thinking is needed to truly bridge the intersecting dimensions associated with sustainability into healthcare.

Yet, we also wanted to note how this paradigm can be analyzed as a form of governmental practice. We have argued that by introducing sustainability into medical education several processes are put into motion. First, by governing healthcare education in the name of sustainability, a dominant framing of the meaning of sustainability can be seen. In our material, that dominant meaning is climate and environmental issues, while other issues become relegated to the margins. In this way, sustainability within the SHE paradigm takes on specific meanings such as green healthcare, waste management, and the reduction of climate gases from the healthcare sector. Our main argument has been that sustainability within this framework might indeed lead to a discourse wherein responsibility for achieving sustainable healthcare is transferred to individual doctors and ultimately patients, rather than focusing on structural reform both in terms of environmental issues, but also in terms of ensuring funding for a well-functioning healthcare sector, as well as addressing social inequality, both of which are important in ensuring health for all.

What is needed in order to develop SHE further is a more differentiated understanding of responsibility for sustaining the health of humans and the planet, an understanding based on a nuanced analysis of the governmentality of SHE, of various layers of meaning inherent in the call for sustainability and the representation of sustainable healthcare as a problem, and of who is responsible for taking which action for putting the vision into action. We hope that this article is a first step in the process for creating such understanding.

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