

Jora, Octavian-Dragomir; Apăvăloaei, Matei-Alexandru; Ștamate-Stefan, Andreas; Roșca, Vlad I.; Gherghina, Rodica

Article

"Citadel of science" and "cathedral of conscience": The university, as institution, was born to be concerned with sustainable knowledge, long before sustainability became a universal concern

Amfiteatru Economic Journal

Provided in Cooperation with:

The Bucharest University of Economic Studies

Suggested Citation: Jora, Octavian-Dragomir; Apăvăloaei, Matei-Alexandru; Ștamate-Stefan, Andreas; Roșca, Vlad I.; Gherghina, Rodica (2020) : "Citadel of science" and "cathedral of conscience": The university, as institution, was born to be concerned with sustainable knowledge, long before sustainability became a universal concern, Amfiteatru Economic Journal, ISSN 2247-9104, The Bucharest University of Economic Studies, Bucharest, Vol. 22, Iss. 54, pp. 312-329,
<https://doi.org/10.24818/EA/2020/54/312>

This Version is available at:

<https://hdl.handle.net/10419/281499>

Standard-Nutzungsbedingungen:

Die Dokumente auf EconStor dürfen zu eigenen wissenschaftlichen Zwecken und zum Privatgebrauch gespeichert und kopiert werden.

Sie dürfen die Dokumente nicht für öffentliche oder kommerzielle Zwecke vervielfältigen, öffentlich ausstellen, öffentlich zugänglich machen, vertreiben oder anderweitig nutzen.

Sofern die Verfasser die Dokumente unter Open-Content-Lizenzen (insbesondere CC-Lizenzen) zur Verfügung gestellt haben sollten, gelten abweichend von diesen Nutzungsbedingungen die in der dort genannten Lizenz gewährten Nutzungsrechte.

Terms of use:

Documents in EconStor may be saved and copied for your personal and scholarly purposes.

You are not to copy documents for public or commercial purposes, to exhibit the documents publicly, to make them publicly available on the internet, or to distribute or otherwise use the documents in public.

If the documents have been made available under an Open Content Licence (especially Creative Commons Licences), you may exercise further usage rights as specified in the indicated licence.



<https://creativecommons.org/licenses/by/4.0/>

**“CITADEL OF SCIENCE” AND “CATHEDRAL OF CONSCIENCE”:
THE UNIVERSITY, AS INSTITUTION, WAS BORN TO BE CONCERNED
WITH SUSTAINABLE KNOWLEDGE, LONG BEFORE SUSTAINABILITY
BECAME A UNIVERSAL CONCERN**

Octavian-Dragomir Jora^{1*}, Matei-Alexandru Apăvăloaiei²,
Andreas Stamate-Ștefan³, Vlad I. Roșca⁴ and Rodica Gherghina⁵
¹⁾²⁾³⁾⁴⁾⁵⁾*The Bucharest University of Economic Studies, Romania*

Please cite this article as:

Jora, O.D., Apăvăloaiei, M.A., Stamate-Ștefan, A., Roșca, V.I. and Gherghina, R., 2020. “Citadel of Science” and “Cathedral of Conscience”: The University, as Institution, Was Born to Be Concerned with Sustainable Knowledge, Long Before Sustainability Became a Universal Concern. *Amfiteatru Economic*, 22(54), pp. 312-329

DOI: [10.24818/EA/2020/54/312](https://doi.org/10.24818/EA/2020/54/312)

Article History

Received: 17 November 2019

Revised: 20 January 2020

Accepted: 2 March 2020

Abstract

Traditionally, the university is understood to be a custodian/depositary of common values, knowledge and inheritance of human cultures and civilization. In contrast to mere libraries, as well as to the complexity of the Internet, the uniqueness of the university consists of the fact that it coagulates individuals who interact in one-of-a-kind manner with this intellectual treasure. The activities associated with universities reside not only in the rigid preservation of knowledge but also in its flexible rediscovery, i.e., by discerning valuable ideas from the works of past scholars, on top of which comes the exploration of fresh views and their partaking with future generations of peer researchers for keen reflection. Still, judging the university’s performance, which these days focuses chiefly on measurable, quantitative, scientometric indicators, should not obscure one distinctive trait of this institution, namely the sustenance of a tradition, as a qualitative expression of its life. Translating this idea into present verbiage, we identify a sense of “profound sustainability”. In this essay, we have opened up four reflection fronts regarding “sustainable universities”. The first one reviews the conventional literature on sustainability, in the ecological sense, and responds with a broader view: that of a generic socio-cultural ecosystem, that is embodied by both the university itself and the surrounding community which integrates it. The second front outlines the constitutive ingredients of such deep sustainability. Thus, we emphasize two paramount facets: “cultural lastingness” and “academic freedom”. The third front radiographs what is sustainable, broadly speaking, in the institution of the university, identifying it in the societal landscape by the invariant features of time/space that make it both different and desirable in comparison with other educational-cultural forms. Finally, the fourth front highlights a paradoxical posture. We argue that this much-fetishized and politically-charged pursuit for “new sustainability” ends up in eroding “old sustainability”, viz., the cultural/generic/profound meaning of it. The main take of this essay is that we need to wittily defend the very “university tradition” from the excesses of faulty modernity.

Keywords: sustainable university, tradition vs. modernity, conservatism vs. progressivism, theoretical knowledge vs. technocratic management, academic freedom vs. curricular planning

JEL Classification: H52, I20, N30, P46, Q56

* Corresponding author, **Octavian-Dragomir Jora** – octavian.jora@rei.ase.ro

Introduction

The “sustainable university” is a *concept* that invites to both *theoretical* reflection (for example, within the educational or managerial sciences) and *historical* analysis (for example, related to the cultivation by such educational entities of renewable features). However, it is not our intention to write an exhaustive *treatise*, but only to develop an ideal *treatment* of a problem that has been warranted what we consider to be too little attention in the literature concerning “*the university and its sustainability*”. Therefore, the present work will provide only a selective (though not discretionary) train of *features* and *fixtures* regarding this topic. It will naturally intertwine, with the appropriate measure of things, theoretical and historical references (mainly *economic*, due to the tutelary discipline of the authors), filtered by a certain *modus cogitandi*: the “economic way of thinking” (Heyne et al., 1991), or, to put it more aptly, the “economic common sense”.

It does not lack importance to highlight the origin of universities and their form of organization – as self-governing entities (guilds) that could issue scientific titles and diplomas and whose independence from political and religious power was accepted (Kuehnelt-Leddihn, 1999). It might also be worth pointing out that, currently, in most countries, universities are not private entities. Nowadays, higher education is preponderantly a public institution, whose activity is subsidized by the state, while the teaching/research staff is certified by the relevant ministry and has a status similar to that of civil servants. Nevertheless, what must be duly noted is that universities differ in spirit both from research entities and from pure educational units, whether they belong to the public sphere or not (e.g., *think tanks*). Therefore, one of the main concerns of this essay will be to identify the distinctive element that places the university in a *class* of its own.

Today’s universities indeed combine both the role in *research scholarship* and that in *routine schooling*. This Humboldtian model is relatively recent, dating to the beginning of the 19th century. However, what distinguishes a university from a run-of-the-mill “research” institute and “teaching”-focused organizations is not that it combines these two functions. For instance, an independent researcher can offer private tuition himself, and can even personalize his services in accordance with each client’s needs. However, he cannot create a “universitarian community” on his own. Also, it is not a simple matter of cost optimization and economies of scale. That is to say, what distinguishes a university is not its ability to offer services at a lower price than private tutors. If an organization of a specific size could more efficiently provide a product of the same quality, then entrepreneurs would be incentivized to replicate it by adequately sizing their firms.

In the following, we are going to point out that the *university*, with its distinctive form that has survived to this day, allows two types of *sustainability* relations to coexist, both within its walls and in connection with actors from its surrounding reality. First, we have the sustainability given by the *inbuilt tradition* specific to this type of universe. It is a sustainability based on a deep framework of meanings and values, and of science and conscience. The second kind of sustainability stems from the *artificial viability* made possible by quasi-monopolistic regulation and/or public subsidization. This sustainability is connected with the logic of public goods and positive externalities, as higher education is seen as conducive to higher economic productivity and to functional democratic order and rule of law. Although apparently convergent, the two types of *sustainability* most often enter into a heavy counter-resonance.

The mainspring of this essay is to draw attention to some rhetorical “*false friends*”, showing that *natural/innate sustainability* is eroded, not aided, by an *artificial/constructivist push for sustainability*. We will start by delimitating our approach from the narrow idea of sustainability qua environmental sustainability of the university, as the term is usually employed. Here we will point out that concerns about the university’s sustainability do not address worries concerning durability qua *institutional sturdiness*. Then, on these grounds, we will accredit the idea of idiosyncratic *cultural sustainability* implicitly claimed by the social aggregates, including the educational, universitarian ones. Later, we will identify, within this broader understanding of sustainability in a cultural sense, aspects that make the modern university *apparently durable*, despite the failure of its *raison d’être*. Finally, we will return to the trendy idea of sustainability and show why it *surreptitiously threatens* the vividness of the original universitarian spirit.

1. A brief review of the scientific literature dedicated to “sustainable university”: from new titles to old themes

Many authors attribute the concept of “*lastingness*” (in scientific wording, *sustainability*, meaning an organization’s ability to maintain its long-term economic stability) to postmodernism (Huckle, 1999; Oppermann, 2008). The rapid development of capitalism in the midst of a Cold War “stirred” on both sides of the confrontation by (Neo-)Marxist ideology, determined art people and scholars to question the metanarratives of modernism. In this context, pleads were advanced for the return to a kind of rationality in terms of enlightenment, whose role was to encourage a long-term judgment of the effects of momentary decisions (Thomas, 1997; Browne, 2010). If the accelerated accumulation of wealth was attributable to capitalism (with its epicentre in the USA), while the unrefined expansiveness rhymed well with Soviet socialism (emanating from the USSR), postmodernism appeared as an interesting alternative. Postmodernism was calling for a more peaceful, more humane, and future-oriented approach than what could be found in the Cold War clinches. The postmodernist assertion would be broadly outlined around judgments such as those of David Orr, according to whom modernism was not a culture capable of resisting in time (Prakash, 1995). The economy needed a modified paradigm that would allow a better understanding of the scarcity of resources and its integration in management decisions: economic and political decision-makers had to understand that their organizations would not be able to survive (by themselves) unless they paid more attention to how they used the resources, *par excellence*, limited.

Higher education institutions were no exception, as sustainability itself is a concept with profound academic/university “pedigree”. The institution of the “sustainable university” or “ecological integrity” (Warwick et al., 2017; Morris et al., 2018) aims to produce significant changes on three main levels and without delay. *On the first level*, the use of natural materials in campus constructions, of “green” energy sources and of recyclables are considered instrumental in creating a study environment suitable for shaping the characters of eco-responsible leaders. *On the second level*, the university curriculum should include disciplines that would familiarize students with environmental problems (somehow caused by too much economic freedom) and with the solutions proposed (political and technical). *On a third level*, both teaching staff and students should be encouraged to be continually interested in environmental issues and become the driving force behind attitudinal changes

for all internal and external *stakeholders* of the university. *Anthropocentric* ideas and confidence in progress and reason must be replaced by a *geocentric* approach, in which care for the environment and for the habitat of future generations becomes the great mission of education. However, such a spirit mixes prudential attitudes with exaggerations (some not at all disinterested). Furthermore, the fixation on normalizing the relationship with the environment is not the only way to “make the university sustainable”.

There are also *societal* components that respond to such demands, considering that the human resource itself is scarce in any ecosystem we can imagine. In the logic of university’s “lastingness” or “sustainability”, we may also include the attempts to conclude partnerships with organizations at the primary and secondary levels of the educational scale, as well as with the administrative-public and productive-private environment. The stake behind these endeavours is to firmly root the university in the *human capital structure* of society. The first steps towards forging sustainable societal links were taken by universities, especially those in the free world, before concerns about eco-sustainability even began to surface.

- *To begin with*, we may refer to the links on the vertical axis of education. These links allowed universities not only to improve the way of teaching courses, but they were also able to provide, to a certain extent, a basis for the selection of future students (Anderson, 1961; Metzner, 1970). There are several aspects worth noting: (a) through the links established with other educational institutions, universities reinforced their main objective of training, in due time and thoroughly, young people to become good members of society; (b) universities were both beneficiaries and contributors to the concluded alliances (take, for instance, the knowledge gains and organizational good practices that could be learned from partner universities).

- *Second of all*, universities began seeking alliances with institutions operating in related sectors, thus trying to obtain financial robustness. The sustainability of a university must also account for its long-term financial resilience (Bowden, 1982). Such an objective implies both a constant number of annual enrolments and ensuring the permanence of the teaching and administrative staff. If sustainable production had to resort to comparing the input and output of economic activity, then a sustainable university implied using its resources to train graduates equipped with the skills necessary to produce improvement once they reached the labour market (Wright, 2010).

Universities have increasingly become an integrated part of the extended society. As such, the university is expected to take stock of its new position and reflect this in the way in which it defines its social role. The university’s social contribution (human, territorial, cultural, political, institutional, environmental, etc.) is now viewed as a key factor when it comes to measuring societal performance. Thus, universities are forced to define themselves not only from the point of view of the education offered to students, but also through their civic engagement. According to Sarip et al. (2019) and to Sasson (2019), a modern university should be involved in close community partnerships. The authors argue that the universities’ resources are better allocated and monitored via relationships with other actors within their area of activity. This allows for the pooling of resources (otherwise spread among several institutions), which gives more weight to the projects envisaged and increases their chances of success. Also, partner institutions can act as supervisors and monitor the good distribution of resources, thus identifying errors that the university might fail to notice.

Moreover, forming an institutional “ecosystem” may lead to obtaining support services from other institutions within the network in order to better meet the needs of students and staff (Nookhong & Nilsook, 2017). When the university cannot invest alone in improving the educational process, it receives the support of its partners (Turan et al., 2016). While partners are expected to gain knowledge from universities (in the form of applied research or young workforce) in exchange for supporting academic endeavours, society, in the broader sense, expects universities to support the sustainable developmental effort of the community, thus higher education institutions being regarded as leaders of societal sustainability. If social harmony and economic well-being were the classic pillars of these efforts, currently, more and more analysts believe that, in order to comply with its civic duty adequately, the modern university must also take into account the aforementioned “ecological integrity” (Gilbert, 2019).

Table no. 1 summarizes concepts related to “ecological virtuosity”, embodied by the top ten universities worldwide according to *Times Higher Education World 2020*, while also observing, implicitly, another component, that of “educational venerability”, as a *proxy* for a different type of sustainability, that of *academic tradition*.

What we shall try to revisit here is the idea that, as an institution, the university has much deeper measures and markings of sustainability, which are not so clearly visible today. In other words, before being ecologically sustainable (i.e., in the widely accepted sense of the term), the university must remain *epistemically, ethically, and economically* sustainable in a primary, fundamental sense.

2. The *classical* culture, education, university. The school of tradition and some of the foundations of lastingness

Is there *sustainability* in a broader sense than *environmental protection*? The *university’s* answer to this question is affirmative and refers to its founding element: *knowledge*. It could be argued that, originally, the (generic sense of) sustainable university project entails the knowledge and respect for the truth. Whoever acquires knowledge in the logic of the classical trinity (*truth, goodness, and beauty*) is implicitly engaged along the pathway of sustainability. Thus, a possible broad definition of sustainability emerges: *to be in possession of a culture of ideas that cultivates truth, goodness, and beauty*.

If we consider education to be the primary purpose of the university (in a traditional sense), then the sustainable university becomes an Agora that provides such ideas, supplying a system – or vision-type (*Weltanschauung*) of knowledge, and less likely a fragmented, specialized or technical know-how.

Table no. 1: University performance – top 10, *Times Higher Education World 2020* –, between old and new sustainability

No.	University	Sustainable approaches
1.	<i>University of Oxford</i> (f. 1096)	With 38 colleges, 51 faculties, and approximately 100 major academic departments, Oxford University must constantly provide funding sources that will enable it to remain among the top universities of the world. Some of the challenges thus arise from the need to identify viable funding sources and from ensuring that the pedagogical legacy accumulated in so many generations of teachers and students will be continued. The income of the university comes from the commercialization of research publications, but also from organizations and charities, foundations, or economic agents. As far as the environment is concerned, the university has aligned itself with global trends, promising a 50% reduction in carbon emissions by 2030.
2.	<i>California Institute of Technology</i> (f. 1891)	The California University of Technology is committed to contributing to the creation of an environment as sustainable as possible by establishing an institute dedicated exclusively to this topic: Resnick Sustainability Institute (RSI). RSI's mission is to produce research and innovation in sustainability issues, such as climate change, building a smart electrical infrastructure, treating water, or converting solar energy into fuels. One of the projects explores how climate change and resources influence ecological relationships and the biosphere, leading to discoveries that improve the quality of life and preserve the integrity of nature.
3.	<i>University of Cambridge</i> (f. 1209)	Cambridge University adopted a sustainability strategy for 2015-2020, which aimed at the implementation of environmental criteria with the help of policies and action plans that targeted, among others, the reduction of carbon emissions by 34% by 2020. By 2050, the desire is to bring these emissions to zero. Another noteworthy direction is the reduction of water consumption by making consumption more efficient. The university is also actively involved in waste management through reduction, reuse, and recycling.
4.	<i>Stanford University</i> (f. 1885)	Much of Stanford's funding comes from donations, which, in 2018, raised \$1.1 billion thanks to the goodwill of over 72,000 donors. The university is actively involved in the on-going search for new sources of funding, and environmentally, it is concerned with adopting those effective climate or agricultural policies that will increase the prosperity of students, and of teaching and administrative staff.
5.	<i>Massachusetts Institute of Technology</i> (f. 1861)	With annual investments of over \$600 million in research, MIT is actively involved in renewable energy projects, adaptation to climate change, or water and food security worldwide. The main contribution to global sustainability comes from the research that scientists use to benefit the wider community, in a way, fulfilling the mission with which this institution started in 1861: accelerating the progress of the American nation. More than 11,000 students study today at MIT in various education cycles.

No.	University	Sustainable approaches
6.	<i>Princeton University</i> <i>(f. 1746)</i>	The fourth oldest higher education institution in the USA, Princeton University, has an annual budget of more than \$2 billion, much of which is allocated to the civic participation of the institution. The university’s sustainability plan includes actions aimed both at reducing greenhouse gas emissions from the campus by 2046, as well as reducing indirect emissions from the electricity purchased by the university, considering the elimination of fossil fuels. At the same time, by 2046, the university aims to reduce water consumption by 26% compared to the reference year 2008, trying to manage rainwater as efficiently as possible. The University is also considering creating connections with the natural habitat, with a particular focus on forests.
7.	<i>Harvard University</i> <i>(f. 1636)</i>	This university has one of the largest higher education budgets in the world; for the fiscal year 2019 alone, the university’s operating revenues rose to \$5.5 billion, while the operating expenses to \$5.2 billion. The university is involved, as a partner, in many public projects, committing itself to build a healthier future, by eliminating fossil fuel, and by making more efficient use of the buildings, as well as by promoting renewable energies. The complete elimination of fossil fuel is planned by 2050. One of the flagship projects of the university is Solar Weld Hill, a solar installation built at the Arboretum. The project, which came to completion in the fall of 2019, provides up to 30% of the energy used by the Weld Hill Research and Education Building in Roslindale. Developed on approximately 1.2 acres adjacent to the facility, the solar project is one of the most ambitious sustainability initiatives of the university so far.
8.	<i>Yale University</i> <i>(f. 1701)</i>	The university has broad sustainability objectives based on identifying, testing, and adopting innovative solutions, mainly in the area of environmental policies. Yale addresses viable renewable energy and carbon management solutions while also analysing the impact of climate change. The university’s vision of sustainability takes into account nine plans that will have to be completed by 2025: leadership, empowerment, health and well-being, climate actions, administration, built environment, mobility, materials, technology.
9.	<i>University of Chicago</i> <i>(f. 1890)</i>	The institution’s sustainability plan is organized on several levels, including climate change, energy efficiency, transportation, waste reduction, water conservation, etc. The budget for 2019 presented both revenues and total expenditures of around \$4.8 million.
10.	<i>Imperial College London</i> <i>(f. 1907)</i>	Through the Grantham Institute, the Imperial College holds the largest research program in the UK for carbon capture and storage. The program covers several topics, including earth systems science, irreversible changes and their environmental risks, the transition to a low carbon economy, vulnerable ecosystems, and human well-being.

Source: Own processing, starting from Times Higher Education World, 2020

“Culture and technique. They are matched by two parallel types of intelligence, with their different reporting to the world, and two special ways of being in the world. The first type of intelligence is based on the need to obtain a vision, the second, on the need to invent a mechanism. The first is holistic in its essence (i.e., it works according to the principle that the whole explains the part), the second is essentially atomistic (according to the principle that the part explains the whole). Culture creates the cultivated man. Technique creates the technical man. The first is encyclopaedic by vocation, because it seeks to know the meaning, that is, something alike the general. The second is specialized by nature, because it seeks to explain a mode of operation that is alike the specific. The cultivated man has the strength and the weakness of culture, which confers the kind of prestige from which one cannot really benefit. The specialized man has the strength and the weakness of technique, which improves life without really being able to [be a] better [human]. Culture is like a religion. The technique is like a craft” (Patapievici, 2008, p. 286, translated from Romanian).

Moreover, (vocational) specialization is by no means the attribute of the university (academic education) in a classical sense (Sanderson, 1993). If we consider classical education, such as it was consolidated during the medieval period, it must be said that, before the student learned about the elements which described nature (astronomy, arithmetic, geometry, music – called *Quadrivium*), he needed to complete an intensive curriculum that aimed at mastering the language (grammar) in a logical (dialectical) and expository (rhetorical) manner, a kind of science of learning (called *Trivium*) (Sayers, 1947).

The two curricula are closely related to Greek philosophy and patristic tradition: education for sustainability would become the education of the free man, and this opposes the sustainability in its narrow sense, or the education of the “slave” (who, being permanently involved in labour, does not have any free time).

The sustainability of a culture depends on the freedom of the cultivated people

The education of the free man aims to acquire the virtues which, in the Hellenistic tradition, referred to prudence, justice, strength, and temperance (the acquisition of the latter can be linked with sustainability in its narrow understanding of environmentalism). *Phronesis*, or practical wisdom, implied the acquisition of these indivisible virtues. None makes sense without the others. At the opposite end, the “slave” is he who does not invest in the acquisition of virtues but remains at the stage of purely technical knowledge, through his political condition. In the modern age, “slavery” is rather understood as a choice not to cultivate oneself, to remain the man of a single practice, the stupid man (Cavamos, 1987).

In the patristic tradition (which builds on Greek philosophy, reorienting it theocentrically), temperance could be associated with the virtue of abstention (thus, fasting has an “ecology” of itself). A set of indivisible virtues can be added to temperance: faith, hope, love, mercy. Refrainment is desirable only in conjunction with the other virtues; otherwise, it becomes a personal purpose, a simple self-centred, egocentrically-oriented self-improvement. By analogy, sustainability in its narrow sense (environmental protection) risks to become self-centred and totalitarian (Tupy, 2017), needing to be (re)incorporated in the larger sustainability (what is the purpose of protecting the environment?), which is no longer a purely technicist project, but a cultural one.

The university can support sustainability through knowledge

The philosophical and moral implications previously described show us that the science of sustainability in its narrow sense (environmental protection; by analogy, an ecological *Quadrivium*) is conditioned by sustainability in the broader sense (meta-science?). In the latter sense, the relevant questions or assumptions can be formulated as follows: what is man?; what are the ultimate responsibilities of man?; is there God?; why does nature exist? So, there is a science of sustainability (how do we allocate resources so as to protect the environment?) and a metaphysics of sustainability (what is the purpose of environmental protection?) (Pyra, 2004). The mean of the segment between science and metaphysics can be occupied by the ethical-juridical perspective (who is entitled to allocate resources in such a way as to protect the environment?). Being educated in the spirit of sustainability means – as a university project – being comfortable with these three levels or being aware of the assumptions of a societal project (assumed and political) in the direction of sustainable development.

By analogy with the classical education, we would say that the tier of grammar represents the science of sustainability, the ethical-juridical perspective represents the tier of the dialectic, and the metaphysics of sustainability, the tier of the rhetoric. The direct implication is that we cannot deal with the project of sustainable development without knowing its ethical-juridical and moral presuppositions. The university fulfils its sustainable cultural role if it limits itself to the systematization and transmission of this kind of knowledge set, without necessarily having the practical objective of adopting a certain behaviour. The university cannot be responsible for implementing sustainable development solutions, but, given the three-dimensional nature of the problem, its role is exclusively descriptive. The issue of implementation remains purely political. Otherwise, by investing it with the prerogatives of assuming sustainable development, the university will be divested of its founding mission, *knowledge*.

3. Contemporary culture, education, and university. Modern man’s school and (extreme) progress(ivism)

The idea we are trying to outline is that, despite the relatively lower quality of teaching services offered by tertiary mass education and the possibility of reducing the costs involved in providing teaching services by exploiting economies of scale and streamlining teaching activities by entrepreneurs – *via* the practice of profit-based management, as opposed to bureaucratic management –, the educational offer of universities continues to have value. This value extends to students and their families, as well as to potential employers. However, the value that university life provides to students does not consist only in the knowledge they are delivered with.

Signalling

The assumption that university education is important for reasons other than the ones we normally think about, namely the knowledge that students acquire strictly as a result of the act of teaching and learning, is also discussed by Caplan (2018). Among the arguments offered by this author to prove that the education system is inefficient is the so-called

“*sheepskin effect*”. For Caplan, the diploma (which, in the past, was written on a strip of parchment produced from sheep leather) is a *signalling* method by which graduates let potential employers know that they have the skills necessary for a *job*.

By holding a diploma, graduates signal that they possess three attributes: *intelligence*, *conscientiousness*, and *conformity*. If a candidate’s intelligence can be tested relatively quickly, the only way an employer can form an opinion about the conscientiousness (work ethic, personal discipline) and conformity (respect for social norms, team player) that characterize the person in front of them is to test him or her *à la longue*. The effort involved in completing the university study cycle and the need to collaborate with one’s peers, to assume a criticism from a teacher constructively, and to comply with the minimum standards presupposed by life in common lodgings can illuminate these valences.

However, if we consider that university education is a signalling method rather than a method of accumulating human capital and directly increasing graduate productivity, then tertiary education faces a paradox. If obtaining a diploma is mainly a matter of transmitting information, it means that the wealth of a nation is not increased by raising the number of graduates (provided the productivity of the work is not improved). With the increase in the number of individuals completing tertiary education, the intensity of the “signal” transmitted by a diploma diminishes. The pursuit of such signalling tools is a “net cost” for society.

Subsidies

If signalling does not amount to a sufficient explanation, and if we recognize that universities are not necessary for accrediting certain skills, given the existence of private alternatives, an additional question remains. Is there a need that only university education can meet, and which private tutors, research institutes, or civil society (family, church, clubs etc.) cannot address? The answer to this question is “Yes”, but it is an affirmative answer that must be qualified. We consider that the current supply of services that mass universities provide is over-sized and somewhat inadequate to the needs of the beneficiaries (Pană, 2014; Topan, 2016). The explanation of this phenomenon is the *subsidization* of university studies, a political action motivated, in turn, by the *theory of public goods*.

However, an inevitable question remains: do we have a point of reference when it comes to tertiary education, and how can we tell if the state’s actions did not lead to an over-supply of this public good? We do not claim that there is a definitive answer to such a question. All we can do is observe that the decision to intervene to supplement the supply of this public good above what the market would provide is a normative judgment, which is informed by a certain philosophy, or theory, in Nock’s terms (1932). Such a policy is based on three fundamental ideas: *equality*, *democracy*, and *holding in high esteem the importance of having educated citizens as a precondition for a system of effective governance*. (The three assumptions hide several weaknesses too: indifference to abilities, uniformizing anti-elitism, ignoring self/informal instruction.) The moral of this philosophy: all are apt to qualify; all must be aided to qualify; only so all can qualify as true citizens.

If Nock’s understanding of the historical phenomenon of university education and of the philosophy behind it is correct, then we can consider that the state’s decision to encourage the production of education has led to an over-sizing of the sector. Currently, there is “too

much" tertiary education. In turn, this systematically leads to the exacerbation of the signalling problem and to wasted resources. Basically, the state acts in the direction of reducing the cost of attending a university, thus pushing the number of enrollees above its natural level, i.e., above the level assumed by the theory of comparative advantage. Because of this political decision, individuals who have no inclination to follow university studies are incentivized to attend tertiary education. Moreover, individuals who work in universities have a vested interest in maintaining this high level of students and, therefore, are encouraged to continually lower their requirements.

Given these qualifications, what is the need that only universities can address and, more importantly, how can we prove this given the distortion introduced by the state's educational policy?

Tradition

First of all, it should be noted that tradition is not an easily reproducible element. Second, we consider that the effect of state intervention through subsidies does nothing but undermine this tradition. We only have to think about the prestige of the university just a century ago in order to better understand this. Both the idea of equality and that of democracy have had adverse effects on the *esprit de corps* that unites the professors associated with the university, while also perverting the way students relate to the teachers and to the years of study.

"Traditionally, the university was an association of scholars, grouped in four faculties: Literature, Law, Theology and Medicine. When I say an association of scholars, I mean that it was not quite precisely what we understand by a teaching institution. The interest of the students was not the first interest of the institution. Putting it roughly, the scholars were busy about their own affairs, but because the Great Tradition had to be carried on from generation to generation, they allowed certain youngsters to hang about and pick up what they could; they lectured every now and then, and otherwise gave the students a lift when and as they thought fit. The point is that the whole burden of education lay on the student, not on the institution or on the individual scholar. Traditionally, also, the undergraduate college put the whole burden of education on the student. The curriculum was fixed, he might take it or leave it; but if he wished to proceed bachelor of arts, he had to complete it satisfactorily. Moreover, he had to complete it pretty well on his own; there was no pressure of any kind upon an instructor to get him through it, or to assume any responsibility whatever for his progress, or to supply any adventitious interest in his pursuits. The instructor usually did make himself reasonably helpful, especially in the case of those whom he regarded as promising, but it was no part of the institution's intention or purpose that he should transfer any of the actual burden of education from the student's shoulders to his own, or contribute anything from his own fund of interest in his subject by way of making up for any deficiency of interest on the part of the student" (Nock, 1932, p. 72).

What students stood to gain from this was the benefit of sitting in the midst of scholars and of studying the traditional disciplines at their feet. Being around people who dedicated their lives to studying was considered a formative experience that allowed the student to gain knowledge from what the professors were willing to offer, possibly following a discussion on a topic of common interest. In turn, the professors could devote themselves to studying, without being constrained by the interference of the authorities and benefiting from the opportunity to participate in discussions with other scholars. From this type of attitude, the

tradition of the universities is drawn. It is an entirely different specimen than the “modern”, “progressive” one. We do not discuss how effective the student learning process was *at that time*. All that we wish to emphasize is that universities offer, *despite* the undergone “modernization”/“progress”, a special institutional context.

Of course, such a statement is a judgment of subjective relevance. So, we are outside the scientific sphere. However, we want to underline that it is a judgment that starts from an empirical phenomenon: the demonstrated action of students and of the business environment. Of course, we are aware of the issues of subsidization and signalling, but we cannot ignore the fact that university education continues to be a service that is appreciated, cherished by many, and which the business environment tends to take into account. After all, it continues to have a trace of economic value, considering that it is not viewed as a free good and that it still requires a price. Subsidizing leads to oversupply, waste, and the (relative) collapse of the quality of services provided, but that does not mean that in the absence of these distortions, the market would allow universities to wither away – they would remain attractive through the specific difference: *vivaciousness qua tradition*.

4. Perennial culture, education, university. The school of authentic vs. illusory sustainability

The *specific difference* of the university, as an institution, is, therefore, the *tradition* particular to this type of environment. The tradition is the element that sets the university apart from the alternatives (both private and public) that (seemingly) offer substitutable education and research services. Yet, we still have to consider whether the idea of a *sustainable university* fits with that of the *university tradition*, even if sustainability and tradition seem to share some commonalities.

The *sustainable university* comes with the implementation of some radical changes regarding the space in which tertiary education is conducted, but it also has implications that concern what can be discussed in this space and, more importantly, in what spirit such discussions should be conducted. From a philosophical point of view, such a working premise highlights lots of problems. We do not intend to discuss all of them here. Our intention is rather modest, and it will resume itself to identifying some dangers derived from the concept of a “sustainable university” that threatens the continuity of the institution of the university, given that the implementation of such a philosophy risks to undermine the university tradition itself. We will not challenge this philosophy, but we will highlight its consequences on that particular element that (still) distinguishes the institution of the university from its direct competitors.

The first danger that threatens the university tradition with disappearance, from the moment when the concept of a sustainable university would be consistently implemented, is *the change of focus that is no longer placed on theoretical, but on technical problems*, such as the mechanistic “cost-benefit analyses” (Jacob, 2016). The university ceases to be a forum in which the great ideas of humanity are discussed without any bias, the spotlight now residing in pragmatic issues, streamlining implementations (Crețan, 2015). In a sense, we can talk about a paradox of the “green university”: solutions for the big problems of humanity are sought, but the discussion is concerned with small technical issues, and it takes place at a low intellectual level. With this change in target, the discussions move from

abstract thinking into the sphere of mechanisms. The ideas involved are small; only the scale of action is large.

Another danger concatenated with the transition from mainly theoretical studies to predominantly applied studies is the *transition from “I studied under”, valid for the traditional approach, to an approach of the type “I studied at”, which dominates in the paradigm of the sustainable university*. If in theoretical matters it was more important which master guided the student in order for the latter to understand how he could become a complete individual, in practical matters the emphasis is placed on adaptability and on the fellow people that the student can surround himself with in order to change the outside world. Introspection, the effort to understand, tolerance, and personal change are replaced by a given problem and by the specific effort to solve it. The university ceases to be a forum in which ideas are refined and in which the intellectual efforts of the master are continued and becomes a place that facilitates the organization of collective action.

As a parenthesis, this was also the spirit which consecrated the idea of *technocracy* (Wood, 2014), namely that system of apolitical experts who invoke a political mission solely on the basis of their knowledge (Carlisle, 1974). This ideology originated in the United States of America with the “*Technocracy Inc.*” movement, established by Howard Scott, an engineer and one of Thorstein Veblen’s disciples (Stabile, 1986).

“The system of tomorrow will be a system of operation and control of energy and things, wherein decisions will have to be rendered as the closest approximation of the next most probable energy state [...]. Technocracy has proposed the design of almost every component of a large scale social system. True, it would require a technological orchestration of all physical operating factors, but a technological socialization is far more reaching, more drastic and more pervasive than anything that Marx or any socialist ever thought of” (Scott & Faulkner, 1965, w.p.).

Frederic Winslow Taylor is another well-known name that can be considered a precursor of the idea of sustainability, in its narrow sense. Taylor invokes the idea of the scientific management of the society in such a way as to avoid wasting and depleting resources, a problem that he implicitly sees as being generated by the capitalist system. The concept of “sustainable development” is closely linked to this idea.

“In the past the man has been first; in the future the system must be first (...). We can see our forests vanishing, our water-powers going to waste, our soil being carried by floods into the sea; and the end of our coal and our iron is in sight. But our larger wastes of human effort, which go on every day through such of our acts as are blundering, ill-directed, or inefficient, and which Mr. Roosevelt refers to as a lack of «national efficiency», are less visible, less tangible, and are but vaguely appreciated” (Taylor, 1911, p. 7).

Referring to the applicability of scientific management, Taylor continues:

“It is hoped, however, that it will be clear to other readers that the same principles can be applied with equal force to all social activities: to the management of our homes; the management of our farms; the management of the business of our tradesmen, large and small; of our churches, our philanthropic institutions, our universities, and our governmental departments” (Taylor, 1911, p. 7).

The university tradition is also based on the possibility of challenging any idea. For precisely this reason, the third danger we want to point out is related to the *place of scepticism in the “green university”*. Can ecological ideas be challenged in such an

institution? How open to criticism is the intellectual environment of a “green university”, and what sort of people does it prepare – tolerant or uncompromising? How compatible is the idea of a sustainable university with the hedonistic philosophy or with the understanding of how an internal combustion engine operates, considering that the most effective method of eliminating such anthropocentric concepts would be to stop teaching them? Moreover, even if discussing and criticizing such concepts were allowed, how mature should we assume the students to be in order to distinguish between manipulation and a meaningful discussion that has a serious stake?

Moving on to the fourth danger, closer in spirit to the “*dismal science*”, how can we know that *the decision to establish sustainable universities is more appropriate than using the respective resources directly, for instance, to plant trees*? Computations targeting the amount of carbon absorbed by planting “n” trees compared to the amount of carbon that is no longer generated as a result of the modernization of campus buildings is a technical problem that does not raise insurmountable problems for an engineer. Nevertheless, the problem we refer to is more subtle and represents a direct threat to the tradition behind the institution of the university: the documented inefficiency of university staff in influencing students’ political choices. Let us take, for instance, the case of the US higher education, with its well-known sympathies for left-wing politics and where professors can present their views in front of a captive audience.

“Even if teachers avoid blatant proselytizing, ideological neutrality requires Vulcan self-discipline. Won’t the subtlest slant, maintained year after year, win students’ hearts and minds in the end? Apparently not. In the data, the well-educated are only microscopically more liberal. In the *General Social Survey*, people place themselves on a seven-step scale, where 1 is «extremely liberal», 4 is «moderate», and 7 is «extremely conservative». An extra year of education seems to make people .014 steps more liberal. Taken literally, over seventy years of education are required to shift ideology a single step. Statistical corrections make this effect look stronger, but it stays weak” (Caplan, 2018, p. 251).

Conclusions

In this essay, we have presented four imminent dangers to the *university tradition*, i.e., the only element that continues to be of value to students and stakeholders in the current context of tertiary education. Although state subsidies, by their very nature, undermine the tradition of the university, we believe that the new paradigm of the *sustainable university* would eradicate even the last vestiges of this tradition. In other words, the consistent adoption of the mission and philosophy behind the idea of a “green university” would eliminate the only element that would further distinguish the institution called university from other private and public organizations that offer lectures or carry out scientific research activities.

The *university tradition* still provides a formative element for young generations. Thanks to it, students are still willing to take lectures under the aegis of this institution, while employers are still interested in hiring graduates, although there are more effective forms of staff training within business organizations. Tradition represents the competitive advantage of the university. Moreover, it is an advantage that cannot be easily replicated. It is the hypostasis of that type of sustainability that the university had pre-coded throughout the years in its genome, and which represents the university’s most important institutional

asset, and all of this long before the modern meaning of sustainability became prominent in theories and practices.

For this reason, adopting a paradigm that further contributes to undermining this tradition is nothing else than the definition of non-sustainability. If the *sustainable university* is a concept which involves (1) focusing on technical, not theoretical problems, (2) abandoning the idea of "I studied under" for "I studied at", (3) combating scepticism with regard to the most appropriate method to address environmental problems, and (4) which might even open a Pandora's box when the question arises as to which subjects are still worth of teaching in the new paradigm, then the useful recommendation would be to treat this concept not with enthusiasm, but with a healthy portion of caution.

"Science without conscience is but the ruin of the soul", François Rabelais once said. In the logic of sustainability, the traditional university has got signs of both the old *citadels* (as a metaphor of the civil, secular, material order of *science*) and of the old *cathedrals* (as a metaphor of the spiritual, transcendent order of *consciousness*). The real sustainability of a university is born out of this equilibrium of truth and virtue. It comes prior to the ecological science and consciousness that are currently grafted upon it. If sustainability is not forced and fetishized, it comes to fulfil the condition of man as a fully responsible master – with oneself, fellows, and successors – and of all natural belongings.

References

- Anderson, R. H., 1961. School-University Cooperation and the Lexington Project. *The Journal of Educational Sociology*, 34(8), pp.382-386.
- Bowden, H. L., 1982. *Boards of Trustees: Their Organization and Operation at Private Colleges and Universities*. Macon, GA: Mercer University Press.
- Browne, C., 2010. Postmodernism, Ideology and Rationality. *Revue Internationale de Philosophie*, (1), pp.79-99.
- California Institute of Technology, 2019. *Ten Years of Research Through the Resnick Sustainability Institute*. [online] Available at: <<https://www.caltech.edu/about/news/ten-years-research-through-resnick-sustainability-institute>> [Accessed 22 December 2019].
- California Institute of Technology, 2020. *Financial Statements for the Years Ended September 30, 2019 and 2018* [online] Available at: <<http://finance.caltech.edu/Resources/financials>> [Accessed 22 December 2019].
- Caplan, B., 2018. *The Case Against Education: Why the Education System is a Waste of Time and Money*. Princeton, New Jersey: Princeton University Press.
- Carlisle, R. B., 1974. The Birth of Technocracy: Science, Society, and Saint-Simonians. *Journal of the History of Ideas*, 35(3), pp.445-464.
- Cavarnos, C., 1987. *Dostoevsky's Philosophy of Man. A General Discussion of Dostoevsky's View of Man's Nature and Destiny, Together with Pertinent Discussion-Reviews of Six of His Works*. S.I: Institute for Byzantine and Modern Greek Studies.
- Crețan, G. C., 2015. "Finanțarea universităților" vs. "finanțarea conectării universităților cu piața muncii". *O temă critică de reflecție pentru România europeană*. Bucharest: Editura ASE.

- Gilbert, B., 2019. Cultivating a Community of Resilience for Transgender Collegians Through the Practice of Sustainable Leadership. *Leadership for Sustainability Education Comprehensive Papers*, 13 [online] Available at: <<https://archives.pdx.edu/ds/psu/28804>> [Accessed 22 December 2019].
- Harvard University, 2018. *Harvard's Sustainability Report*. [online] Available at: <<http://report.green.harvard.edu/>> [Accessed 22 December 2019].
- Harvard University, 2019. *Financial Report, Fiscal Year, 2019*. [online] Available at: <https://www.harvard.edu/sites/default/files/content/fy19_harvard_financial_report.pdf> [Accessed 22 December 2019].
- Heyne, P. L., Boettke, P. J. and Prychitko, D. L., 2013. *The Economic Way of Thinking*. S.I: Pearson Series in Economics.
- Huckle, J., 1999. Locating Environmental Education between Modern Capitalism and Postmodern Socialism: A Reply to Lucie Sauv . *Canadian Journal of Environmental Education (CJEE)*, 4(1), pp.36-45.
- Iacob, M., 2016. *Costuri  i beneficii ale analizei cost-beneficiu.  nainte de pragmatism,  napoi la principii*. Bucharest: Editura ASE.
- Imperial College London, 2018. *Carbon Management & Sustainability Activities Report 2017-2018* [online] Available at: <<https://www.imperial.ac.uk/sustainability/>> [Accessed 22 December 2019].
- Imperial College London, 2019. *Grantham Institute – Climate Change and the Environment 2018-2019, Outlook*. [online] Available at: <<http://www.imperial.ac.uk/grantham/publications/institute-reviews/grantham-institute-outlook-2018-19.php>> [Accessed 22 December 2019].
- Kuehnelt-Leddihn von, E. R., 2017. The Cultural Background of Ludwig von Mises. *Procesos de Mercado: Revista Europea de Econom a Pol tica*, 14(1), pp.543-560.
- Massachusetts Institute of Technology, 2019. *About MIT*. [online] Available at: <<https://web.mit.edu/about/>> [Accessed 22 December 2019].
- Massachusetts Institute of Technology. *Resources: Explore MIT's Rich Landscape for Innovation and Entrepreneurship*. [online] Available at: <<https://innovation.mit.edu/resources/?topics=financial-services>> [Accessed 22 December 2019].
- Metzner, S., 1970. School-University Partnership: A Tale of Dichotomous Desires. *Phi Delta Kappan*, 51(6), pp.328-329.
- Morris, A., Zuo, J., Wang, Y. and Wang, J., 2018. Readiness for Sustainable Community: A Case Study of Green Star Communities. *Journal of Cleaner Production*, 173, pp.308-317.
- Nock, A. J., 1932. *The Theory of Education in the United States*. New York: Harcourt, Brace and Company.
- Nookhong, J. and Nilsook, P., 2017. Green University Resource Planning on Cloud Computing. *International Journal of Information and Education Technology*, 7(10), pp.722-727.
- Oppermann, S., 2008. Seeking Environmental Awareness in Postmodern Fictions. *Critique: Studies in Contemporary Fiction*, 49(3), pp.243-253.
- Pan , M. C., 2014. Institutional Economics and Education: The Case of Early School Leaving. *Economica*, 23(3), pp.5-16.

- Patapievici, H.-R., 2008. *Omul recent. O critică a modernității din perspectiva întrebării Ce se pierde atunci când ceva se câștigă?* Bucharest: Humanitas.
- Prakash, M. S., 1995. Ecological Literacy for Moral Virtue: Orr on [Moral] Education for Postmodern Sustainability. *Journal of Moral Education*, 24(1), pp.3-18.
- Princeton University, 2019a. *Sustainability Action Plan*. [online] Available at: <<https://www.princeton.edu/news/2019/04/22/princeton-university-sustainability-plan-aims-net-zero-emissions-2046>> [Accessed 22 December 2019].
- Princeton University, 2019b. *Budgeting and Planning, Operating Budget Overview*. [online] Available at: <<https://finance.princeton.edu/budgeting-financial-management/budgeting-and-planning/operating-budget-overview>> [Accessed 22 December 2019].
- Pyra, L., 2004. The Metaphysical Foundations of Environmental Philosophy. *Analecta Husserliana*, LXXIX, pp.739-744.
- Sanderson, M., 1993. Vocational and Liberal Education: A Historian's View. *European Journal of Education*, 28(2), pp.189-196.
- Sarip, A., Shaari, R. and Royo, M. A., 2019. Investigating Human Resource Roles in Research-Based University: An Evidence from Malaysia. In: J. Kantola, S. Nazir, S. and T. Barath eds., 2019. *Advances in Human Factors, Business Management and Society. International Conference on Applied Human Factors and Ergonomics 2018*. Cham: Springer, pp. 508-515.
- Sasson, I., 2019. Building a Sustainable University-Community Partnership: Case Study in Science Education. *Studies in Higher Education*, 44(12), pp.2318-2332.
- Sayers, D., 1947. *The Lost Tools of Learning*. [pdf] S.I: E.T. Heron Publisher. Available at: <<https://www.pccs.org/wp-content/uploads/2016/06/LostToolsOfLearning-DorothySayers.pdf>> [Accessed 22 December 2019].
- Scott, H. and Faulkner, W., 1965. History and Purpose of Technocracy. *The Northwestern Technocrat*.
- Stabile, D. R., 1986. Veblen and the Political Economy of the Engineer: The Radical Thinker and Engineering Leaders Came to Technocratic Ideas at the Same Time. *The American Journal of Economics and Sociology*, 45(1), pp.41-52.
- Stanford University, 2019a. *Finances, Fundraising* [online] Available at: <<https://facts.stanford.edu/administration/finances/>> [Accessed 22 December 2019].
- Stanford University, 2019b. *Stanford Woods, Institute for the Environment* [online] Available at: <<https://woods.stanford.edu/research/focal-areas/sustainability>> [Accessed 22 December 2019].
- Taylor, F. W., 1911. *The Principles of Scientific Management*. New York and London: Harper and Brothers Publisher.
- The University of Chicago, 2016. *Sustainability Plan Baseline Report* [online] Available at: <<https://sustainability.uchicago.edu/sp/>> [Accessed 22 December 2019].
- The University of Chicago, 2019. *Annual Report, Financial Results for Fiscal Year 2019* [online] Available at: <<https://annualreport.uchicago.edu/financial-results-for-fiscal-year-2019/>> [Accessed 22 December 2019].

- Times Higher Education World, 2020. *World university rankings* [online] Available at: <https://www.timeshighereducation.com/world-university-rankings/2020/world-ranking#!/page/0/length/-1/sort_by/rank/sort_order/asc/cols/scores> [Accessed 22 December 2019].
- Thomas, D. E., 1997. Deconstruction and Rationality: A Response to Rowland, or Postmodernism 101. *Philosophy & Rhetoric*, 30(1), pp.70-81.
- Topan, M. V., 2016. Școlarizare sau educație? *Æconomica*, 25(1-2), pp.127-129.
- Tupy, M. L., 2013. *The Totalitarianism of the Environmentalists*. S.I: Foundation for Economic Education.
- Turan, F. K., Cetinkaya, S. and Ustun, C., 2016. A Methodological Framework to Analyze Stakeholder Preferences and Propose Strategic Pathways for a Sustainable University. *Higher Education*, 72(6), pp.743-760.
- University of Cambridge, 2019. *Reports and Financial Statements* [online] Available at: <https://www.cam.ac.uk/system/files/reports_and_financial_statements_2019_final.pdf> [Accessed 22 December 2019].
- University of Cambridge, n.d. *The Cambridge Green Challenge, Environmental Sustainability Vision, Policy and Strategy, Strategy 2015-2020* [online] Available at: <https://www.environment.admin.cam.ac.uk/files/environmental_sustainability_vision_policy_and_strategy_for_web.pdf> [Accessed 22 December 2019].
- University of Oxford, 2019. *Financial Statements 2018/19* [online] Available at: <<https://www.ox.ac.uk/about/organisation/finance-and-funding?wssl=1>> [Accessed 22 December 2019].
- University of Oxford, 2019. *Environmental Sustainability, Strategies and Policies* [online] Available at: <<https://www.ox.ac.uk/about/building-our-future/environmental?wssl=1>> [Accessed 22 December 2019].
- Warwick, P., Wyness, L. and Conway, H., 2017. “Think of the Future”: Managing Educational Change from Students’ Perspectives of an Undergraduate Sustainable Business Programme. *The International Journal of Management Education*, 15(2), pp.192-204.
- Wood, P., 2014. *Technocracy Rising. The Trojan Horse of Global Transformation*. S.I: Coherent Publishing.
- Wright, T., 2010. University Presidents’ Conceptualizations of Sustainability in Higher Education. *International Journal of Sustainability in Higher Education*, 11(1), pp.61-73.
- Yale University, 2019. *Yale Sustainability Plan 2025* [online] Available at: <<https://sustainability.yale.edu/resources/yale-sustainability-plan-2025>> [Accessed 22 December 2019].