

Article

# Towards a Sustainability-Based Society: An Analysis of Fundamental Values from the Perspective of Economics and Philosophy

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**Abstract:** Sustainability faces numerous challenges when applied to the real-world global economic model of capitalism. In implementing sustainability planning based on the triple bottom line (TBL), the prevailing trend of the economic pillar compromises both the environment and society. A new vision of enduring sustainability is proposed in this paper to address such challenges by first considering the global economic model in the real world and, second, having strong core values of sustainability. To evaluate the first characteristic, a review of the literature regarding capitalism and TBL-sustainability has been conducted. For the second characteristic, a historical–philosophical discussion around the role of society and the economy has been conducted. The results suggest that a realistic sustainable society requires a fixed and sustained focus on environmental and social pillars together with a flexible organisation of society (including its economic model).

**Keywords:** strong sustainability; society; capitalism; TBL; philosophy



**Citation:** Hereu-Morales, J.;

Valderrama, C. Towards a Sustainability-Based Society: An Analysis of Fundamental Values from the Perspective of Economics and Philosophy. *Sustainability* **2022**, *14*, 8722. <https://doi.org/10.3390/su14148722>

Academic Editor: Jacob Arie Jordaan

Received: 26 May 2022

Accepted: 13 July 2022

Published: 16 July 2022

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## 1. Introduction

The word sustainability means “the quality of being able to continue over a period of time” [1]. Following this definition, a sustainable society is one that endures over time. However, the actual growth-based economy is causing ever-increasing environmental degradation to the point of emergency [2], decreases in social wellbeing and equality [3], and consecutive economic recessions [4]. This compromises society’s endurance, resulting in an unsustainable global situation, and opens the door for debate regarding the foundations of modern society.

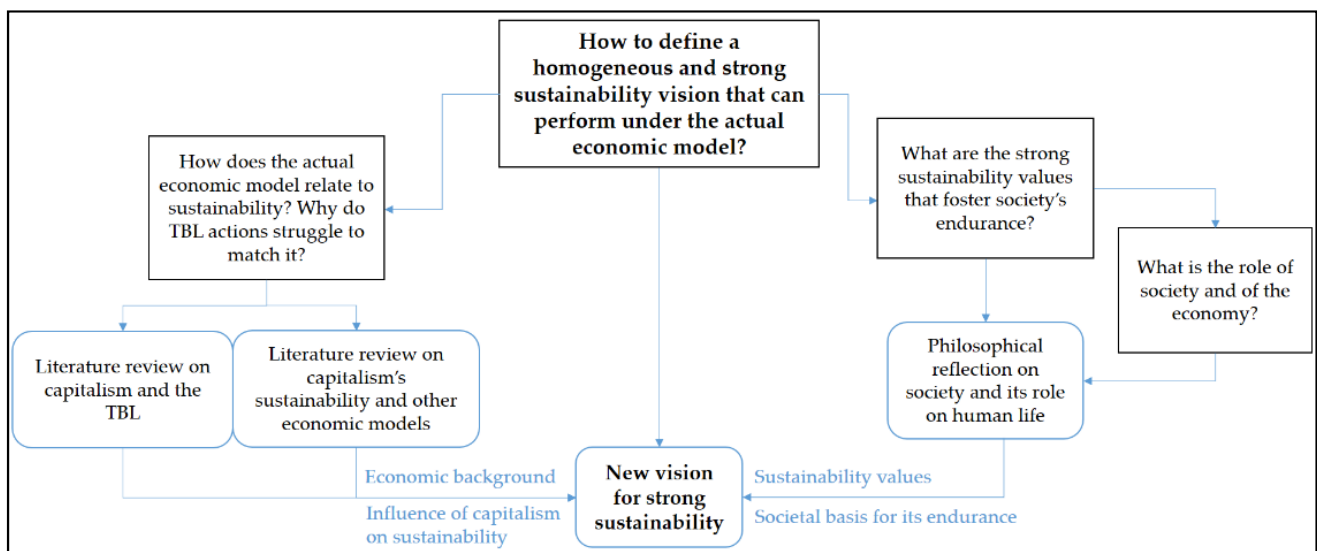
On a theoretical basis, sustainability depends on various factors; on an academic basis, this translates into different definitions. On the one hand, sustainability is a transformation of human lifestyles that optimises the likelihood that living conditions will continuously support security, well-being, and health, particularly by maintaining the supply of non-replaceable goods and services [5]. On the other hand, it also requires human activity to be conducted in a way that conserves the functions of the earth’s ecosystems [6]. Furthermore, notions based on the triple bottom line (TBL) divide sustainability into three different pillars, representing it as a balanced integration of environmental, social, and economic sustainability [7–9]. Indigenous notions separate the concept from economic growth [10]. In addition to the concept of sustainability, sustainable development is defined as a search, thought, and design process towards a just and sustainable society [11].

The lack of homogeneity and clarity in the definition of the sustainability concept, together with the increase of new field concepts, i.e., circular economy and sustainable development, represent a challenge in implementing public planning and policy-making for sustainability [12,13]. Addressing this challenge, sustainability science explores the field of sustainability through transdisciplinarity, understanding it as a trans-discourse that

connects individual discourses into a single whole, and systems thinking, understanding society as interconnected systems [14]. In this field, it is common to find recent literature centred on the TBL of sustainability. However, despite the fact that most efforts in public policy formulation aim to address all three pillars of the TBL, the economic pillar appears to have broken the balance, becoming nearly the sole focus of effort [15,16]. The influence of the global economic model of capitalism on the TBL represents a challenge in the implementation of TBL-based measures towards sustainability.

This work aims to propose a vision of sustainability within the field of sustainability science that: (i) considers the global economic model in a real-world approach and (ii) has strong core values of sustainability. Such a vision aims to provide a common ground within the field of sustainability with regard to its core objective, aiming to facilitate consensus on a conceptual basis. By reformulating TBL principles and substituting them for enduring core values of sustainability, this vision also aims to strengthen sustainability by increasing its resilience to the influences of the actual economic model.

The analytical framework of this work is depicted in Figure 1.



**Figure 1.** Analytical framework.

In the first stage (left part of Figure 1), this work includes a literature review, which first explores capitalism, sustainability, and the TBL to identify the challenges of TBL sustainability within the global economic model of capitalism, while understanding the TBL to be one among several different approaches towards sustainability. Next, this work looks at the challenges of capitalism with regards to sustainability, and the sustainability potential of different economic solutions.

In the second stage (right part of Figure 1), this work aims to highlight the core values that sustainability models should pursue to increase society's endurance over time. To achieve this, we present a historical and philosophical reflection on the roles of society and the economy in human life.

Combining the results from the first and second stages, the main contribution of this work within the field of sustainability science is a vision of sustainability which is resilient to and independent of economic models, as well as strong on core philosophical and foundational values of a society that facilitate its endurance over time. Such a vision is a re-formulation of sustainability that aims to overcome the main challenges encountered by the actual vision and trend of the TBL, and, at the same time, contributes to the homogeneity of the field of sustainability science.

This work is apportioned as follows: firstly, a review of the literature on the global social and economic model (capitalism) and its relationship to sustainability and the TBL is

presented in Section 2. Secondly, Section 3 reviews the primary philosophical reflections on the roles of society and the economy throughout history, from ancient views on society to modern reflections on capitalism, and identifies the main societal values required for sustainability. Then, based on previous findings, Section 4 presents a new vision of sustainability, including both its opportunities and challenges, as well as a reflection on its implementation in the actual economic–political model.

## 2. Literature Review on Capitalism and Global Sustainability

Capitalism as an economic model has its roots in the 18th century [17]. Over the last two centuries, it has materialised as the global economic model. The current predominant model of capitalism is based on neoclassical economics, which promotes a growing linear economy that transforms natural capital, or resources, into other forms of capital (manmade capital) to meet the needs of humans [18]. Intrinsicly, this model of take–make–dispose transforms natural resources into waste [19].

Recent literature has established that different types of capitalism exist in the world, and that they are distinguished from one another according to their social relationship with the environment and their consequent mode of regulation; the main global economies are distinguished in this work [20]. Despite the current debate around the capitalism of the Chinese economic model—considered out of the scope of this work—this work acknowledges considerations that place it on a capitalist approach [21–23]. Furthermore, this work considers a general global approach towards a capitalist economic model based on linear and growth-based neoclassical economics.

This global model is conceptually opposed to the principles of environmental sustainability. In addition, the constant need for growth rooted in global capitalism implies unlimited growth in the use of natural resources and waste disposal, seriously affecting natural ecosystems and the services that these provide to sustain human life [24]. Added to this environmental degradation is the pollution derived from economic activities.

This model's social impacts include increased inequalities and poverty, which are prolonged by climate shocks derived from the environmental crisis [25]. In addition, extra-activist and unlimited growth capitalism fosters an individual lifestyle based on materialism and consumerism, which has a negative impact on human wellbeing [26]. Thus, capitalism compromises not only the endurance of the natural environment, but also the endurance of socially healthy lifestyles.

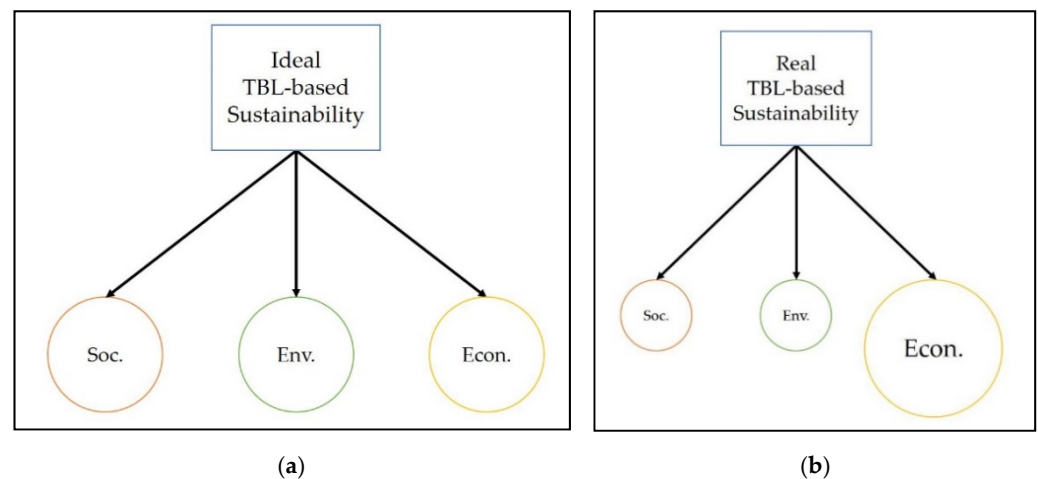
At an economic level, the recessions of recent decades have revealed the instability of the economic model; the most recent global examples are the financial crisis of 2008 and the crisis of 2019 derived from COVID-19, with both having had severe social and economic impacts [4,27]. These crises highlight instability and a lack of endurance in the sustainability economic pillar, which is conceptually linked to the global economic model of capitalism.

Hence, the global capitalist model compromises all three levels of the TBL, contradicting sustainable development and challenging society's sustainability and the very existence of the human species in the future.

### 2.1. Capitalism and the TBL

Actions to implement a TBL sustainability approach in public planning face challenges under the global economic model of capitalism. One example is the case of the EU finding economic growth as a barrier to implementing their own TBL-based sustainability plans [28,29].

Figure 2 depicts ideal TBL approaches vs. real-world approaches under capitalism; the size of the spheres graphically represents both the importance and level of focus of each approach in public planning and policy-making. Figure 2b is based on the results of reports on the performance of TBL-based approaches for sustainability in the EU [28,29] to depict real-world approaches.



**Figure 2.** Ideal (a) vs. real-world (b) TBL-based sustainability approaches.

Based on reports that monitor the implementation of TBL approaches in European public planning [28,29], and on principles of sustainability science [14], it was deduced that the most difficult challenges of TBL approaches that currently hinder their implementation under the global economic model are, first, a persistent public effort for economic growth, despite the negative environmental, social, and economic aspects of such growth, as described above, and, second, a lack of effective monitoring and tracking of sustainability-based goals. This includes properly monitoring sustainability parameters at the environmental, social, and economic levels, as well as implementing mechanisms to ensure that the monitored objectives are met (penalties, incentives, or others). Sustainability initiatives often remain as simply a series of good intentions, with no mitigation strategies available when failure to achieve goals is predicted. Finally, there is also the challenge of the lack of a systems thinking approach to better identify synergies between different objectives within different pillars.

The challenges mentioned above have, so far, reduced the effectiveness of TBL-based approaches in transitioning society towards a more sustainable model.

## 2.2. Variations within Capitalism for Higher Sustainability

Over the last decades, capitalism has experienced variations to increase its sustainability and facilitate the implementation of the TBL. As one example of the former, there exists a trend based on green capitalism and the potential of innovation in clean tech [30]; this is based on technological progress toward reducing the negative environmental and social impacts of this model. However, clean tech solutions are sometimes contradictory when it comes to environmental and social impacts [31,32].

As an example of the latter action, existing plans for a circular economy aim to decouple economic growth from using natural resources through their reduction and recirculation [33]; however, a circular economy is not sustainable by itself under the actual economic context [6]. To increase its sustainability, circular economy drivers should more closely consider their actual environmental performance [34], their inclination to foster economic growth over environmental and social benefits [35], and the underexplored systemic changes it requires in order to exploit its full potential [36].

In addition to green capitalism and circularity, in recent years, actions have been taken toward achieving a collaborative economy to tackle hyper-consumerism and the irrational consumption of goods [37,38]; however, these actions have been successfully reframed by regime actors as purely economic activity, and are, thus, unlikely to lead to sustainability [39].

### Other Economic Solutions

Other economic solutions and theories have the potential to reduce the negative impact of the global economy on sustainability, but are not yet included in public planning efforts, as per the findings of this literature review. Such solutions are found within the field of ecological economics (EE), as opposed to the neo-classical economics (NCE) field that currently dominates, and which understands the economic system as a sub-system of the environment [18]. In EE, natural capital can be transformed without crossing ecological limits. Furthermore, EE puts qualitative development above quantitative growth [40], despite money being a quantitative rather than a qualitative category. Theories regarding the bio-economy and the role of forests also fit well within the ideas present in EE [41–43].

In relation to the field of sustainability science, EE has a direct connection to strong notions of sustainability, which emphasise a minimal substitution of natural capital for man-made capital. On the other hand, NCE is more associated with weak sustainability, and leads toward completely replacing natural capital with man-made capital [2,11]. Between EE and NCE exists, among others, the concept of minimum vital capital, but determining such a minimum rate is challenging [18].

EE positions argue that as the biosphere is a limited system, the economic systems within it must also be limited. Once this limit is exceeded, the economy must reduce its natural capital consumption rate, which implies going through a period of economic decline [2] and becoming a steady-state economy (SSE). Such economic positions are also referred to in the literature as “post-growth” economics [3,44].

For instance, Jackson and Victor [45] simulated a macroeconomic model for Canada based on three scenarios: a baseline (growth-based) scenario, a carbon reduction scenario, and a sustainable prosperity (quasi-stationary economy at the end of the period) scenario. The results showed that well-being, quality of life, and environmental performance could be achieved in the sustainable prosperity scenario. One report defined an SSE as a gateway to freeing oneself from material needs [44], with materialism having a negative impact on wellbeing and sustainable lifestyles [26]. In contrast, SSEs present challenges to welfare systems at five different levels: funding, rising relative costs of welfare, growth dependencies, growing needs on a finite planet, and political barriers toward transforming the welfare state [3].

### 3. A Philosophical Discussion on Society, the Economy, and Sustainability

The previous section of this work reflected on the challenges of TBL-based sustainability with respect to capitalism, i.e., the current global economic model. This section aims to broaden the scope of this reflection by discussing both the role of the economy on society and the role of society on human life, such that society may endure over time and, hence, be sustainable.

Accordingly, this section reviews and discusses philosophical reflections on society and the economy throughout history, with two main objectives: (i) to understand how the current economic model compromises the sustainability of society and, therefore, its endurance; and (ii) to highlight the values on which sustainability plans and actions should be based in order to facilitate them.

The main question addressed in this review is: what is the value of a sustainable society on the endurance of human life? The initial hypothesis of this work was that society is a resource, a way of organisation for human beings to facilitate human life and, hence, its endurance. Furthermore, this work questions the role of the economy in a sustainable society.

#### 3.1. Historical Review on Society and the Economy

The first philosophical reflections on society come as early as the 6th century B.C., by Confucius (K'ung Fu Tzu) in East Asia, who emphasised the role of the rulers of society in facilitating the daily lives of human beings [46].

In Western cultures, the Ancient Greeks set the foundations of thought. Plato described his pragmatic vision of a strictly organised society, in which education played a key role in the division of work, assigning persons to different tasks according to the characteristics of their souls [47]. Like Confucius, Plato identified society's role as satisfying human needs, both material needs and needs for a happy life. Furthermore, Plato identified economics as an organisational tool with which to facilitate society. Plato also envisioned an aristocracy of the wise as the best system of government, expressing that rulers would be denied possession of private goods, dedicating their life to ruling and learning how to rule in society. In doing so, Plato established a solid barrier between economics and public government, protecting rulers from being influenced by material greed. The happiness of the rulers and the ruled, other than through materialism, should be achieved through personal development and harmony in life.

Aristotle, Plato's disciple, elaborated on the role of society to guarantee the supreme good of its human beings, being it their moral and intellectual life. For Aristotle, man is, by nature, a social and political animal; hence, it naturally depends on society. Regarding the economy, Aristotle identified natural and unnatural ways of enrichment: the former counted on grazing, hunting, fishing, or agriculture, whereas the latter included lending and exchanging, except exchanges leading to the satisfaction of a need [48,49]. Moreover, he identified the heterogeneous display of wealth as a cause of conflict within society; democracy was his preferred way of ruling, since it favored a homogeneous display of wealth. Like his mentor, Aristotle highlighted the importance of the economy within society by identifying private enrichment as a challenge for fulfilling its role.

The Middle Ages passed without relevant contributions on the topic. The historical context of absolutism encouraged philosophers in the Modern Age to reflect on the figure of a single ruler over society [50]. Machiavelli, Spinoza, Hobbes, and others identified society as a mediator of conflicts, as a central point of order from a chaotic natural state of humanity; order could serve to satisfy human needs [50–52]. Locke changed the discussion by moving toward democracy and liberalism, introducing the separation of powers and the natural right to private property [53]; this was later discussed by other authors, including Montesquieu, Voltaire, Hume, and Kant [54–57].

Private property constituted the basis of what would later become the economic system of capitalism. Despite being conceived as a way to take power away from central rulers, Rousseau identified private property as the origin of inequality, anticipating a trade-off between capitalism and welfare [58]. As the use of natural resources started to increase due to private interests, Hans Karl von Carlowitz introduced the concept of sustainability through the silvicultural principle that the amount of wood harvested must not exceed the volume that grows back [59]. At this time, the economy began to gain importance within society, as a means of fulfilling the basic needs of human beings at the same time that economic consequences are experienced by the environment.

Shortly after the beginning of the industrial revolution in 1760, Adam Smith published *The Wealth of Nations* [17], laying the foundations for capitalism and modern economic policy. Smith introduced economic growth through division of labour and accumulation of wealth as the key to social wellbeing. The economic system is seen as a way for human beings to satisfy both material and affective needs, thus fulfilling the role of society according to the hypotheses in this work. Despite this, Smith anticipated the struggles of the working class, stressing the need for public education to prevent alienation.

During the following centuries, as industrial society evolved, the philosophical debate revolved around the freedom and equality of human beings. Society was seen by authors such as Kant, Jefferson, Mill, and others as a facilitator of these rights, and introduced new concepts such as freedom of expression or women's rights [57,60,61]. They discussed how the powers of the state were divided and the involvement of the state within the economy. As it happened, the economy was already understood as a source of power, and discussions around economic philosophy and economic democracy gained prominence. The objective of society evolved such that, in order to fulfil basic human needs, human beings should

have both freedom and equality; the debate regarding the power of the economy over that of the state anticipated a turning point in societal powers, to the detriment of public governments and the benefit of economic powers.

Economic growth was already a subject of debate in the 19th century. John Stuart Mill argued that unlimited growth would end up destroying the natural environment, which had more value than just a material basis; he introduced the concept of a stationary economy, preferred over unlimited growth [61]. Mill also introduced other innovative concepts that remain subjects of debate today, such as birth control (as control over the growth of the population) and a tax on capital accumulation. Along with David Thoreau, Mill envisioned environmental problems if society focused merely on economic power; in the 19th century, growth-focused capitalism was envisioned as environmentally unsustainable [61,62].

However, it was the social unsustainability of capitalism that attracted the most attention in the 19th century. Throughout the socialist revolution, Marx aimed to end the oppression of the working class by a classed society and avoid the resulting human alienation (as predicted by Smith). According to Marx's theses, the working class were not free, as the results of their work did not belong to them but to the capitalists; for capitalism to be humane, the results of such work must be the property of the workers; thus, being a free activity [63]. These ideas positioned Marx as a materialist who considered the key to social freedom to be the material product of work, which he identified as the main activity of human beings. Furthermore, Marx introduced systems thinking by highlighting the relationships of production within society. Thus, Marx saw the economy as intrinsically bound to the main function of society, and as a tool of both oppression and freedom. In summary, Marx's position, as pertaining to the scope of this work, was that society would be able to fulfil human needs, to the extent that the oppression of social classes was eliminated, by rethinking the economic system and its basic relations of production. The means towards achieving this goal was revolution.

Authors in the 20th century discussed political and economic systems. On the one hand, Ayn Rand defended a "laissez-faire" capitalism, a liberal social order without government intervention that maximised the rights of humans and the benefits of private property; to her, one's freedom could only be realised through private property [64]. On the other hand, John Rawls understood a reasonable society as a society of equals, with justice as a referee to avoid inequality [65]. The key issue of the socialist/liberalist debate was how to distribute goods in a way that does not restrict the freedom of human beings (liberalist argument), while also minimising or avoiding inequalities (socialist argument). Both liberalist and socialist positions defended key aspects of social welfare; the challenge of society in facilitating human needs was, thus, based on social sustainability.

Also in the 20th century, Jean Baudrillard distanced from the liberalist/socialist debate and reflected on Marx's theses by stating that consumption, rather than production, was the main driver of a capitalist society [66]. The key to this paradigm change rests on Baudrillard's four value-making processes for objects (functional, exchange, symbolic, and sign), for which the value of an object transcends from its genuine use into its socially constructed uses. Consumerism is, hence, the driver of societies in the late 20th and early 21st centuries.

### *3.2. Contemporary Notions around Society and the Economy*

After the failure of the Soviet Union and its satellites, which defended the socialist idea of equality over freedom in the 20th century, the philosophers of the 21st century currently reflect on societies either for or against capitalism, the global economic system. After centuries of development and integration within functioning societies, capitalism is rooted within societal powers, and is, therefore, connected to social and environmental problems.

Following this trend, Slavoj Žižek discussed the "rule of capital", or how capital limits the decision-making power of democratically elected politicians on issues related to capital. The dominance of capital affects public life at practically all levels, and has grown during

the last financial crises [67]. With democracy as the dominant political system throughout the world, and capitalism as the global economic system, the impact of the rule of capital on public life is severe.

The impact of COVID-19 on public life is another topic of discussion. On this topic, Byung-Chul Han argues that the pandemic has reinforced authoritarian regimes, such as China's, and weakened freedom for citizens in exchange for physical security. Furthermore, he argues that COVID-19 acts as a mirror to reflect that survival in society is based on a fear of death while ignoring the principles of living a good life. In this society, vulnerability and mortality depend on economic and social status. For example, the virus spreads to workers who depend on the subway to go to work, while the upper class move to safe country villas [68].

Changes at the anthropological level (how a human being is constituted and understood) influence the efficacy of the capitalist free market; phenomenological anthropology addresses such changes [69]. Following this line of thought, which began in the 20th century but is gaining momentum in the 21st, human beings are understood as changing subjects conditioned by exposure to the various others who inhabit the same world, as well as to the world itself. Such changes on the human subject have an impact on the economic dimension of society and, hence, on its sustainability. Human beings should not be considered as unchanging.

Comparing contemporary notions with the hypotheses of this work, it is apparent that society in the 21st century does not fulfil the role of facilitating human life. Following Zizek's thesis, the rule of capital has shifted the focus of society toward satisfying economic power instead of basic human needs; this was anticipated by several philosophers throughout history, as stated in the previous section. Following Han's thesis, the fear of physical security has diverted the focus from other needs of human beings, and has merely focused on a specific environmental issue, as said fear responds to issues related to the pandemic, but not to other environmental hazards to human life.

### 3.3. Discussion

Reviewing the roles of society and the economy from a philosophical perspective, it has been verified that the main role of society has been understood as facilitating the satisfaction of human needs. In the past, this was achieved through the organisation, order, and guarantee of the rights of human beings to freedom and equality. The growing importance of capitalism after the industrial revolution affected the role of the economy in public life, where it has gained power and relevance and diverted the focus of society towards economic aspects. Consequently, the main objective of current globalisation is not to increase welfare at a global level, but to maximise profit [68], which feeds into Zizek's theory of the rule of capital. As a practical example, the rule of capital can be observed in public lobbying by private entities.

Zizek's view on the rule of capital ties in well with Plato's concern regarding economics and how rulers had to be protected from material ends by forbidding their claim to material profit. Despite the ancientness of Plato's concern compared with Zizek's contemporary theses, the different societies to which they belong, and the differences in other aspects of their authors' theses, e.g., Zizek's egalitarian and democratic society vs. Plato's aristocracy and its privileges, the potential of this solution on separating economic influence from the public ruling is at least a matter for debate. This is also well aligned with the results in Section 2 concerning the bias of growth-based capitalism on implementing TBL-based sustainability planning.

This is not the only example of anticipated trade-offs in global capitalism with respect to societal sustainability. Smith anticipated oppression as an alienation of the working class, identifying the possible negative social consequences of capitalism. Mill and Thoreau anticipated the severe degradation of natural resources by a capitalist model based on unlimited growth; earlier, von Carlowitz introduced the concept of natural yield limit [59]. The unsustainability of capitalism in the 21st century is, thus, not a new trend.



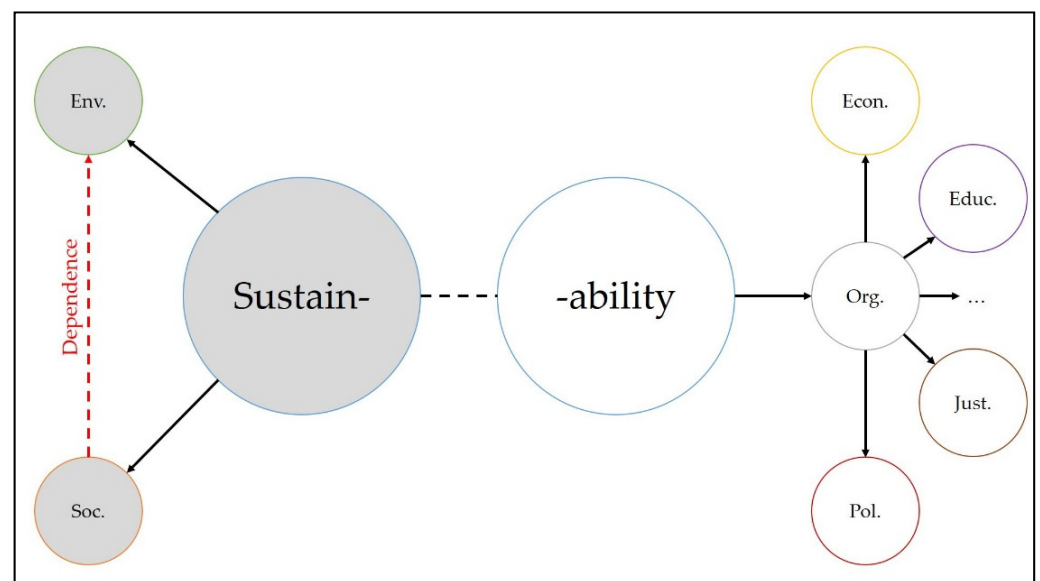
Regarding the three pillars of the TBL and their importance in philosophical reflection, our review has shown that social concerns were concentrated on the social pillar when discussing the role of the economy in society. This may be because environmental consequences arising from the structuring of society have not occurred until recently, climate change being an example. In contrast, social consequences were tangible from the very beginning of society. Furthermore, the economic consequences have not been discussed in philosophical reviews; the fact that the economy is seen as an organisational tool but not as a priority, nor a basic human need, may explain this.

Regarding the sustainability of society, it has been observed that for a society to endure over time, it needs to ensure the satisfaction of the human needs of its human beings. Human needs include biological needs, such as breathing oxygen or drinking water, but also emotional, existential, intellectual, cultural, or spiritual needs. Biological needs relate directly to environmental sustainability, since human beings cannot survive without the environment enduring over time; the other needs relate directly to social sustainability, including individual well-being and the social cohesion of human beings.

The main values for sustainability are, thus, environmental and social sustainability. Economic sustainability has not been considered a priority in this philosophical review. Hence, it should not be considered a priority of society at the same level as the environmental and social pillars. This approach to sustainability opposes the TBL and is discussed in more detail in the next section.

#### 4. Society-Based Sustainability

This section aims to introduce a vision of sustainability based on the analyses made in Sections 2 and 3. On the one hand, in Section 2, it has been verified that the TBL remains an idealistic approach when subjected to the global economic model of capitalism, which forces an imbalance in favour of economic aspects. Moreover, these aspects tend to be counterproductive to society and the environment. On the other hand, in Section 3, it has been shown that social and environmental sustainability should be precisely the focus of society, aligned with notions of sustainability that prioritise environmental and social aspects over economic ones [11]. In alignment with these results, the proposed model of sustainability is presented in Figure 3.



**Figure 3.** Model of sustainability based on an actual society, both on its economic model and its philosophical views.

The definition of the model is structured according to the word sustainability itself, which is divided into two parts: sustain and ability. The sustain part defines the key issues

that a society needs to endure and promote to remain sustainable, i.e., to endure over time; here, the environmental and social pillars are found. The ability side defines the organisational part, which consists of tools, mechanisms, and systems, among other pieces, that society needs to develop and put into practice to sustain the key objectives; these objectives include—but are not limited to—the economy, education, justice, planning, and policy-making.

The sustain side is fixed; it represents undeniable, inflexible goals that society must pursue. Such goals are defined through sustainability indicators that measure the performance of society. In contrast, the ability side is flexible; all systems can be reformed, adapted, and re-designed to meet society's goals. The ability side should also have indicators to monitor its performance. However, these indicators should not be placed on the same level of importance as those on the sustain side, since the former is not vital to a sustainable society, whereas the latter is.

The main objective of this model is an enduring sustainable society; that is, to reinforce the endurance of society over time. To this end, society needs to address both the biological and emotional needs of its human beings. The two pillars of this model are, then, the environmental pillar for biological needs, and the social pillar for emotional needs. There is, however, a logical preference and an imbalance in the importance of such pillars, putting biological needs before emotional and, hence, putting the environmental pillar as the first priority and the social pillar as the second, depending on the fulfilment of the environmental pillar.

According to the description of sustainability positions, as defined by Michelsen et al. [11], the model depicted in Figure 3 is based on strong and bi-dimensional sustainability. In such an approach, the environment is established as the priority, and the substitution of natural capital is considered limited; it can be substituted as long as it does not compromise ecosystem services to meet human needs. This model presents various opportunities in the field of sustainability science. First, it contributes to strengthening sustainability at a global level by: (a) establishing environmental performance as the priority, and (b) reinforcing social sustainability as the second priority, favouring individual empowerment through structuring society on values that favour human well-being. Second, such an approach would contribute to establishing a clear vision of the objectives pursued by sustainability, around which field research should be structured. This can help consolidate a common ground: a consensus on sustainability values and goals for academia to pursue that are not currently found in the literature. This can also open debate around such goals and values, which already represents a step forward in the now-heterogeneous academic field of sustainability science. Third, the model aims to integrate sustainability science within societal thinking and, consequently, in formulating policies, integrating key points such as transdisciplinarity and systems thinking. This model envisages society as a complete system with different disciplines (economy, justice and education, among others) that work together to achieve its endurance.

However, this sustainability vision also faces challenges to be taken into account. The first relates to clearly defining the indicators for environmental and social objectives, as well as for organisational aspects, since this is a complex task and must involve many field actors, which may make it difficult to reach a common ground when so many different viewpoints are integrated. The second challenge concerns lobbying by economic powers. With the economy being the ruling power in today's society, it can be difficult to overcome the dominance of capital by structuring a society on values based not on economic aspects, but environmental and social ones. Finally, the third challenge relates to the implementation of such a model in the current global socio-economic context, while also considering the diversity of societies worldwide; this is considered in further detail in the following sub-section.

### *Society-Based Sustainability in the Actual Economical-Political Model*

The vision of a sustainable society described in this work differs from the current model of global NCE and the strong influence it has on public decision-making. Hence, some aspects should be taken into account to create such a vision, being related to the resistance to change of the current model.

The first issue concerns the functioning of the consumption model and the materialistic consumption patterns that constitute it. For this sustainability vision to thrive, consumers have to move away from materialistic goals in consumption, and towards more humanistic values; it is important to understand the irrational part of consumer behaviour, and the social fears and complexes behind it [37,38]. Such change might require a re-invention of the ways of constituting a human person, which might involve the method of philosophical phenomenology. In addition to that, the attitude-behaviour gap should be addressed through clear and effective information for consumers [70,71]; this would require more transparency on production processes, supply chain, and workforce management on a lifecycle basis. More information for consumers and citizens can help increase their pro-activeness on sustainability issues.

The second issue concerns academics and the required consensus among them with regards to the role of sustainability in society and on the indicators that define sustainability. This consensus should consider the perspectives of different fields included within sustainability science, i.e., biology, psychology, philosophy, or economics, through trans-disciplinarity. Amplifying the consensus on sustainability issues should facilitate the participation of academics in public decision-making to strengthen the sustainability of public policies. Whether this is a priority for current decision-makers remains open.

## 5. Conclusions

This work aimed to tackle challenges in the field of sustainability science through a formulation of a new sustainability vision. The literature review on capitalism and sustainability in Section 2 concludes that the global model of capitalism is nowadays unsustainable, and solutions to tackle this issue have, so far, fallen short. The philosophical review and discussion around the roles of society and the economy in Section 3 concludes that, historically, different societal structures have played a role in facilitating human needs, and these are encountered within the environmental and social pillars of sustainability; the economy does not include human needs, and is, hence, not a pillar of sustainability.

This work's main contribution to the sustainability science field is the new vision of society-based sustainability reflected in Section 4, which is based on the results of Sections 2 and 3. This model reflects strong and bi-dimensional sustainability, with the environmental pillar being the priority, and the social pillar being the second; in contrast with the TBL, the economy is not considered a pillar, but a flexible organisational feature of society.

This work aims to provide discussion elements in the field of sustainability science, forming a new vision of sustainability, and establishing a common basis for integrating sustainability science into social structures. Future studies are needed to develop indicators and quantification methods to complement the new sustainability vision and facilitate its development in a real-world economic-political model, as well as in the discussion of the economic, philosophical, social, and even anthropological aspects around the required transformation of the status quo towards a sustainable society.

**Author Contributions:** Conceptualization, J.H.-M.; methodology, J.H.-M.; formal analysis, J.H.-M.; investigation, J.H.-M.; writing—original draft preparation, J.H.-M.; writing—review and editing, J.H.-M. and C.V.; supervision, C.V.; funding acquisition, C.V. All authors have read and agreed to the published version of the manuscript.

**Funding:** This research was funded by Universitat Politècnica de Catalunya, grant number 373-713, and by the Catalan Government, project 2017-SGR-312. The APC was funded by Universitat Politècnica de Catalunya.

**Institutional Review Board Statement:** Not applicable.

**Informed Consent Statement:** Not applicable.

**Data Availability Statement:** Not applicable.

**Acknowledgments:** The authors would like to gratitude the Catalan Government for the project 2017-SGR-312. Joan Hereu-Morales also acknowledges UPC for the grant 373-713. The authors would like to thank the four reviewers of this paper for their contribution, with a special remark on reviewer 4 for adding more depth and wideness on the philosophical discussion. Finally, the authors would like to thank Carlos Jurado-Tapiador for the kind support on the philosophical field.

**Conflicts of Interest:** The authors declare no conflict of interest.

## References

- Cambridge English Dictionary. Sustainability | Meaning in the Cambridge English Dictionary. 2020. Available online: <https://dictionary.cambridge.org/dictionary/english/sustainability> (accessed on 6 August 2020).
- Daly, H. A note in defense of the concept of natural capital. *Ecosyst. Serv.* **2020**, *41*, 101051. [CrossRef]
- Walker, C.C.; Druckman, A.; Jackson, T. Welfare systems without economic growth: A review of the challenges and next steps for the field. *Ecol. Econ.* **2021**, *186*, 107066. [CrossRef]
- Schutzer, P. How the US Got Out of 12 Economic Recessions Since World War II. 2021. Available online: <https://www.history.com/news/us-economic-recessions-timeline> (accessed on 19 November 2021).
- Kellar, K.J.; Langley, A.E.; Marks, B.H.; O'Neill, J.J. New Visions for Addressing Sustainability. *Science* **2003**, *187*, 746–748. [CrossRef]
- Geissdoerfer, M.; Savaget, P.; Bocken, N.M.P.; Hultink, E.J. The circular economy—A new sustainability paradigm? *J. Clean. Prod.* **2017**, *143*, 757–768. [CrossRef]
- Jasiński, D.; Meredith, J.; Kirwan, K. Sustainable development model for measuring and managing sustainability in the automotive sector. *Sustain. Dev.* **2021**, *29*, 1123–1137. [CrossRef]
- Sala, S.; Ciuffo, B.; Nijkamp, P. A systemic framework for sustainability assessment. *Ecol. Econ.* **2015**, *119*, 314–325. [CrossRef]
- Wichaisri, S.; Sopadang, A. Trends and Future Directions in Sustainable Development. *Sustain. Dev.* **2018**, *26*, 1–17. [CrossRef]
- Virtanen, P.K.; Siragusa, L.; Guttorm, H. Introduction: Toward more inclusive definitions of sustainability. *Curr. Opin. Environ. Sustain.* **2020**, *43*, 77–82. [CrossRef]
- Michelsen, G.; Adomßen, M.; Martens, P.; von Hauff, M. Sustainable Development—Background and Context. In *Sustainability Science: An Introduction*; Heinrichs, H., Martens, P., Michelsen, G., Wiek, A., Eds.; Springer: Dordrecht, The Netherlands, 2016; pp. 5–29.
- Barbosa, G.S.; Drach, P.R.; Corbella, O.D. A Conceptual Review of the Terms Sustainable Development and Sustainability. *Int. J. Soc. Sci.* **2014**, *3*, 1–15. [CrossRef]
- Glavič, P.; Lukman, R. Review of sustainability terms and their definitions. *J. Clean. Prod.* **2007**, *15*, 1875–1885. [CrossRef]
- Heinrichs, H.; Martens, P.; Michelsen, G.; Wiek, A. *Sustainability Science: An Introduction*; Springer: Dordrecht, The Netherlands, 2016.
- Helmer, T.; Hirvilammi, T. Wellbeing and Sustainability: A Relational Approach. *Sustain. Dev.* **2015**, *23*, 167–175. [CrossRef]
- Smythe, K.R. An Historian's Critique of Sustainability. *Cult. Unbound* **2014**, *6*, 913–929. [CrossRef]
- Smith, A. *The Wealth of Nations*; W. Strahan and T. Cadell: London, UK, 1776.
- Von Hauff, M. Sustainable development in economics. In *Sustainability Science: An Introduction*; Heinrichs, H., Martens, P., Michelsen, G., Wiek, A., Eds.; Springer: Dordrecht, The Netherlands, 2016; pp. 99–107.
- Smol, M.; Marcinek, P.; Duda, J.; Szołdrowska, D. Importance of Sustainable Mineral Resource Management in Implementing the Circular Economy (CE) Model and the European Green Deal Strategy. *Resources* **2020**, *9*, 55. [CrossRef]
- Cahen-Fourot, L. Contemporary capitalisms and their social relation to the environment. *Ecol. Econ.* **2020**, *172*, 106634. [CrossRef]
- Trotsuk, I. Discursive Representations of the (Capitalist) Results of the “Chinese Economic Miracle”. *Russ. Sociol. Rev.* **2020**, *19*, 310–347. [CrossRef]
- Lardy, N. China's economic reforms and growth prospects. *China Econ. J.* **2015**, *8*, 95–108. [CrossRef]
- Oh, S.-Y. China's Race to the Top: Regional and Global Implications of China's Industrial Policy. *World Trade Rev.* **2021**, *20*, 169–185. [CrossRef]
- Von Wehrden, H.; von Oheimb, G.; Abson, D.J.; Härdtle, W. Sustainability and Ecosystems. In *Sustainability Science: An Introduction*; Heinrichs, H., Martens, P., Michelsen, G., Wiek, A., Eds.; Springer: Dordrecht, The Netherlands, 2016; pp. 61–70.
- Diwakar, V.; Lacroix, A. Climate shocks and poverty persistence: Investigating consequences and coping strategies in Niger, Tanzania, and Uganda. *Sustain. Dev.* **2021**, *29*, 552–570. [CrossRef]
- Isham, A.; Gatersleben, B.; Jackson, T. Materialism and the Experience of Flow. *J. Happiness Stud.* **2021**, *22*, 1745–1768. [CrossRef]
- Felsenthal, M. COVID-19 to Plunge Global Economy into Worst Recession since World War II. The World Bank. 2020. Available online: <https://www.worldbank.org/en/news/press-release/2020/06/08/covid-19-to-plunge-global-economy-into-worst-recession-since-world-war-ii> (accessed on 19 November 2021).

28. European Commission and European Environment Agency, Mid-Term Review of the EU Biodiversity Strategy to 2020—EU Assessment of Progress towards the Targets and Actions. 2015. Available online: <https://www.eea.europa.eu/themes/biodiversity/mid-term-review-of-the> (accessed on 25 May 2022).
29. European Environment Agency. Environmental indicator report 2018. In *Support to the Monitoring of the Seventh Environment Action Programme*; European Environment Agency: Copenhagen, Denmark, 2018. [CrossRef]
30. Bosch, S.; Schmidt, M. Is the post-fossil era necessarily post-capitalistic?—The robustness and capabilities of green capitalism. *Ecol. Econ.* **2019**, *161*, 270–279. [CrossRef]
31. Collotta, M.; Champagne, P.; Tomasoni, G.; Alberti, M.; Busi, L.; Mabee, W. Critical indicators of sustainability for biofuels: An analysis through a life cycle sustainability assessment perspective. *Renew. Sustain. Energy Rev.* **2019**, *115*, 109358. [CrossRef]
32. Dhar, A.; Naeth, M.A.; Jennings, P.D.; El-Din, M.G. Perspectives on environmental impacts and a land reclamation strategy for solar and wind energy systems. *Sci. Total Environ.* **2020**, *718*, 134602. [CrossRef] [PubMed]
33. Corona, B.; Shen, L.; Reike, D.; Carreón, J.R.; Worrell, E. Towards sustainable development through the circular economy—A review and critical assessment on current circularity metrics. *Resour. Conserv. Recycl.* **2019**, *151*, 104498. [CrossRef]
34. Haupt, M.; Hellweg, S. Measuring the Environmental Sustainability of a Circular Economy. *Environ. Sustain. Indic.* **2019**, *1–2*, 100005. [CrossRef]
35. Kirchherr, J.; Reike, D.; Hekkert, M. Conceptualizing the circular economy: An analysis of 114 definitions. *Resour. Conserv. Recycl.* **2017**, *127*, 221–232. [CrossRef]
36. Kalmykova, Y.; Sadagopan, M.; Rosado, L. Circular economy—From review of theories and practices to development of implementation tools. *Resour. Conserv. Recycl.* **2018**, *135*, 190–201. [CrossRef]
37. Yu, W.; He, L.; Lin, X.; Freudenreich, T.; Liu, T. Irrational Consumption during the COVID-19 Period. *Int. J. Environ. Res. Public Health* **2022**, *19*, 5031. [CrossRef]
38. Min, W.; Juan, Y. Irrational Tourism Consumption of Zero Inclusive-fee and Negative Inclusive-fee: Reflection and Measurements. *Energy Procedia* **2011**, *5*, 1416–1424. [CrossRef]
39. Martin, C.J. The sharing economy: A pathway to sustainability or a nightmarish form of neoliberal capitalism? *Ecol. Econ.* **2016**, *121*, 149–159. [CrossRef]
40. Daly, H.; Morgan, J. The Importance of Ecological Economics: An interview with Herman Daly. *Real World Econ. Rev.* **2019**, *90*, 137–154. Available online: <http://www.paecon.net/PAEReview/issue90/DalyMorgan90.pdf> (accessed on 28 September 2021).
41. Hetemäki, L. Forest-based Bioeconomy and the Green Deal. 2020. Available online: [https://www.researchgate.net/publication/341510727\\_Forest-based\\_Bioeconomy\\_and\\_the\\_Green\\_Deal](https://www.researchgate.net/publication/341510727_Forest-based_Bioeconomy_and_the_Green_Deal) (accessed on 25 May 2022).
42. Palahí, M.; Hetemäki, L.; Potočník, J. *Bioeconomy: The Missing Link to Connect the Dots in the EU Green Deal Bioeconomy*; Euractiv: Brussels, Belgium, 2020; pp. 1–3. Available online: <https://pr.euractiv.com/pr/bioeconomy-missing-link-connect-dots-eu-green-deal-202385> (accessed on 25 May 2022).
43. Verkerk, P.J.; Costanza, R.; Hetemäki, L.; Kubiszewski, I.; Leskinen, P.; Nabuurs, G.J.; Potočník, J.; Palahí, M. Climate-Smart Forestry: The missing link. *For. Policy Econ.* **2020**, *115*, 102164. [CrossRef]
44. Mair, S.; Druckman, A.; Jackson, T. A tale of two utopias: Work in a post-growth world. *Ecol. Econ.* **2020**, *173*, 106653. [CrossRef]
45. Jackson, T.; Victor, P.A. The Transition to a Sustainable Prosperity—A Stock-Flow-Consistent Ecological Macroeconomic Model for Canada. *Ecol. Econ.* **2020**, *177*, 106787. [CrossRef]
46. Confucius. *The Analects*; Chin, A., Ed.; Penguin Classics: New York, NY, USA, 2014; ISBN 978-0143106852.
47. Plato; Jowett, B. *The Republic*; Independently Published: Chicago, IL, USA, 2020; ISBN 978-1774260616.
48. Aristotle. *Ethica Nicomachea*; Oxford University Press: Oxford, UK, 1920.
49. Aristotle; Stalley, R.F.; Barker, E. *Politics*; OUP Oxford: Oxford, UK, 2009; ISBN 978-0199538737.
50. Hobbes, T.; Brooke, C. *Leviathan*; Penguin Classics: New York, NY, USA, 2017; ISBN 978-0141395098.
51. Machiavelli, N.; Bull, G.; Grafton, A. *The Prince*; Penguin Classics: New York, NY, USA, 2003; ISBN 978-0140449150.
52. De Spinoza, B.; Shirley, S.; Gregory, B. *Tractatus Theologico-Politicus: Gebhardt Edition (1925)*; BRILL Deutschland GmbH: Paderborn, Germany, 1991; ISBN 978-9004095502.
53. Locke, J. *The Two Treatises of Civil Government*; Independently Published: Chicago, IL, USA, 2017; ISBN 978-1521817759.
54. De Montesquieu, C.S. *The Spirit of Laws*; Andesite Press: Warszawa, Poland, 2015; ISBN 978-1296606268.
55. Arouet dit Voltaire, F.-M. *Philosophical Letters on the English*; Independently Published: Chicago, IL, USA, 2022; ISBN 979-8837955372.
56. Hume, D. *Essays—Moral Political & Literary*, 2nd ed.; Liberty Fund Inc.: Carmel, IN, USA, 2022; ISBN 978-0865970564.
57. Kant, I. *Kant's Prolegomena To Any Future Metaphysics*; Independently Published: Chicago, IL, USA, 2021; ISBN 978-0865970564.
58. Rousseau, J.-J. *Du Contrat Social, Ou, Principes Du Droit Politique*; Wentworth Press: St. Albans, UK, 2018; ISBN 978-0274227716.
59. von Carlowitz, H.C.; von Rohr, J.B. *Sylvicultura Oeconomica*; Nabu Press: Charleston, SC, USA, 2012; ISBN 978-1277527599.
60. Princeton University. *The Papers of Thomas Jefferson*; Princeton University Press: Princeton, NJ, USA, 1950.
61. Mill, J.S. *Principles of Political Economy*; John W. Parker: London, UK, 1848.
62. Thoreau, H.D. *Walden; or, Life in the Woods*; Andesite Press: Warszawa, Poland, 2015; ISBN 978-1298613523.
63. Marx, K.; Engels, F. *Manifest Der Kommunistischen Partei*; Independently Published: Chicago, IL, USA, 2021; ISBN 979-8704604754.
64. Rand, A. *Capitalism: The Unknown Ideal*; New American Library: New York, NY, USA, 1966.
65. Rawls, J. *A Theory of Justice*; Belknap Press: Cambridge, MA, USA, 1971.

66. Baudrillard, J. *The Consumer Society*; SAGE Publications Ltd.: Thousand Oaks, CA, USA, 1998.
67. Žizek, S. How Capital Captured Politics | Slavoj Žižek | . The Guardian. 13 July 2014. Available online: <https://www.theguardian.com/commentisfree/2014/jul/13/capital-politics-wikileaks-democracy-market-freedom> (accessed on 9 November 2021).
68. Sigüenza, C.; Rebollo, E. Byung-Chul Han: COVID-19 Has Reduced Us to a 'Society of Survival' | Outstanding | English Edition | Agencia EFE. 2020. Available online: <https://www.efe.com/efe/english/destacada/byung-chul-han-covid-19-has-reduced-us-to-a-society-of-survival/50000261--4244328> (accessed on 15 November 2021).
69. Throop, J.; Zigon, J.; Diemberger, H.; Stasch, R.; Sanchez, A. Phenomenology. *Camb. Encycl. Anthr.* 2021. [CrossRef]
70. Sánchez-Bravo, P.; Chambers, E.V.; Noguera-Artiaga, L.; Sendra, E.; Chambers, E., IV; Carbonell-Barrachina, Á.A. Consumer understanding of sustainability concept in agricultural products. *Food Qual. Preference* **2021**, *89*, 104136. [CrossRef]
71. Young, W.; Hwang, K.; McDonald, S.; Oates, C.J. Sustainable consumption: Green consumer behaviour when purchasing products. *Sustain. Dev.* **2010**, *18*, 20–31. [CrossRef]