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# From Viability to Sustainability: The Contribution of the Viable Systems Approach (VSA)

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**Abstract:** The current dynamics of business systems require new ways of conceiving the role of single entities. On this basis, a complex of interactions between the company and the reference context must be activated to guarantee survival dynamics. From these considerations re-emerge the ideas of Peccei (2013) and King (2013) that recognise in the systemic thought the foundations for a sustainable society. The present study derives from these considerations, and aims at contributing to the advancement of the knowledge necessary to overcome the challenges in the sustainability field. The methodological approach, albeit heuristic, can be traced back to the positive scientific and constructivist method. The results of the study showed the prevalence of qualitative and subjective techniques, accompanied by the so-called inductive method, testifying to the intense interaction between the scholar and the object investigated. With regard to future research, it would be interesting to construct a flexible, scalable and extensible model to recover both a database and an ontology for the theoretical framework.

**Keywords:** systemic thought; viability; sustainability; viable systems approach

## 1. Introduction

The complex international landscape—in particular, in recent years—characterises itself by unexpected implications, as well as disequilibria that have complicated life and the evolution of socio-economic systems concomitantly with the predominant growth of economies of emergent countries that are currently taking over the market. It is now clear that the Individualistic Perspective should be substituted with a new way of interpreting the role of the individual in a much larger economic, social and environmental context—a role that projects the subject in a constellation of relations and relationships that involve more actors and economic and social entities, taking into account many more models, theories and points of view.

Cultural integration strengthens specificities and specialisations that characterise different areas of expertise and enable the creation of knowledge that is more valid, from both qualitative and quantitative perspectives. This generates a mobilisation of knowledge that enhances all components of the organisational systems and generates a plethora of areas of study that stimulates new investments in culture and research.

In this scenario, it was emphasised that there is a propensity toward the achievement of objectives that are disjoined from the goal of inclusive and sustainable development [1–4]. For these reasons, the interest in themes such as systems, sustainability and sustainable development issues has grown; the aim is to re-think the very basis of industrial capitalism, hence the necessity for each systemic

component of any environmental, social or economic context to strongly widen its perspective of study. Leaving the individualistic and notional perspective aside, each component must find expression of its own viability not in seclusion but in the interaction, that can be activated in its context. In this way, the thoughts of Peccei [5,6] and King [7], according to which, systemic thinking, and, in particular, the concept of sustainability, is the true core of an incremental and progressive growth of global economies, rather than increasing profits that depend on the qualitative and quantitative enlargement of the volumes of production of goods and services. Only in this way is it possible to enhance the very same advantages that firms would surely obtain from a total process of environmental, economic and social maturation of individuals and organisations. In this scenario, the concepts of sustainability and sustainable development have entered the common language of organisations because of a process of progressive sensitisation, of which an effect is starting to emerge. Starting from the growing concern for the environmental impact of economic/demographic growth, and for the consumption of natural resources [8], the attention widens, considering also the complex interrelations between the natural dimension and socio-economic and natural aspects. The term that aims to qualify, in a general way, the condition of a process or a state to remain at a certain level indefinitely (According to the well-known definition dating back to the 1987 Brundtland Report), is also adapted in the social science field, generating a significant variety of perspectives which are not useful for fully comprehending the problem. There are many definitions of sustainability, both from an operational perspective and from a theoretical perspective, and the adjective sustainable can assume different meanings according to the different fields in which it is used; this testifies to the differences in visions and points of view.

Sustainability, for example, is seen as:

- A non-declining utility function that allows human welfare to stay constant over the course of time [9];
- A condition in which social systems and natural systems thrive together indefinitely [10];
- Resilience, as the capacity of systems to maintain their structural, formal and behavioural integrity also in situations of strong disorder [11]; and
- A process of creation, maintenance and renewal that persists in equilibrium with the process of decline, decay and death [12].

Rullani [13] states that a process is sustainable if it can regenerate its premises, ensuring in this way its ability to last during time. Many times, the definitions that are used show vagueness in the usage of the term [14] and we can find a mode or opportunity effect that generates shallow attention toward the problem, which is often faced in a merely abstract way.

The main reference in any work that studies the origins of the concept of sustainability is the famous report by the World Commission on Environment and Development—“*Our Common Future*”—which, in 1986, represents an historic moment in the history of global literature and concern for sustainable development [15]. Actually, the concept of sustainability in the Brundtland Report is more practical and operational than theoretical. In fact, the report is about sustainable development, which is described as a more specific concept with respect to the one of sustainability and is considered as a “process of change in which the exploitation of resources, the direction of investments, the orientation of technological development, and institutional change are made consistent with future, as well as present needs” [15]. This definition denotes a non-theoretical extension of the concept of sustainability, which is distinctive of operations and which cannot be interpreted and understood through a mere methodological definition. Thus, sustainability is founded on concrete circumstances rather than on expressly stated rules [16].

Considering sustainable development as the organising principle of sustainability, in a perspective that has progressively expanded because of the environmental impact of development, the field of interest has broadened toward other subjects in a global vision of progress and development that includes not only the environmental conservation aspect, but also themes of social justice and environmental economics. With these many different interpretative approaches and methods

of representation, a new vision of sustainability has become preponderant; a vision that includes environmental, economic, social and cultural aspects, which has significantly modified the conception of growth and development. It is a design that has made the traditional representation of growth and richness based on GDP inadequate for representing the economic situation and wellbeing of a country [17].

It is possible to see the signs of an ongoing deep cultural shift, which have many implications that are not easily predictable, and which are still not understood by many. These changes will produce many transformative effects over the predominant economic, environmental and social models. The sustainability assessment of a process is based on a wide range of interrelated aspects and elements in which connections that are often nascent, should be strongly considered. This aspect highlights the necessity to overcome the deterministic approach, that is, based on the linear cause–effect logic, which still dominates many fields of research and study. It adapts a new systemic perspective able to understand and explain the essence of the studied phenomena connecting all relevant information units. Sustainability represents indeed:

- An incredible challenge to our cognitive ability;
- An acquiring of knowledge;
- A complex phenomenon that cannot be faced with incomplete tools;
- A fascinating risk concerning our ability to leave long-established old paths and start new ones;
- A total refusal of the idea of taking personal advantage from naivety or misfortune of the others; and
- An overcoming of our beliefs and our capability to create new ones.

Since we know that the models adopted up until now cannot guarantee prosperity over the next millennia, it is a must to turn the tide. It is clear that, to create a new sustainable society—one that can be prosperous in the future without depleting the resources from which we all derive our viability—we must rebuild the dominant culture. Indeed, it seems necessary to promote the emergence of a new paradigm of sustainable living that might be more appealing than the consumer lifestyle. This is a difficult challenge since there are many interests involved and, at the same time, there are many pressures from the lobbies that currently dominate the global economy. What is clear is the fact that the current imbalance in the relationship between man and nature, to the detriment of the latter, is caused by business organisations and the predominance of the paradigm of profit. The researcher of economics and management of enterprises cannot afford to not offer a contribution to the development of knowledge needed to win the challenge of sustainability. For this reason, the character of originality, intrinsic to the present study, resides in formulating an interpretative proposal that, from the perspective of the systemic life approach, defines an innovative interpretation key to the challenge of sustainability, outlining an evolutionary framework that leads from the concept of vitality to the concept of sustainability, adopting a holistic view of the phenomena.

In practice, we intend to overcome the reductionist view of reality by highlighting, above all, the links between the two concepts and the links between the elements that refer to the two different phenomena, trying to understand the breaking point between the concept of vitality prevailing and the concept of sustainability. The methodological approach, albeit heuristic—because it does not aim to achieve the optimal result but to provide an acceptable solution in the current context, especially in the study of social issues—can be traced back to the positivist scientific method which provides a first phase referable to the sensations and the observation of a phenomenon, ignoring the interpretative aspect [18–20], and the constructivist aspect, which is based on a subjective re-elaboration in function of the informational variety and its own equipment of cognitive resources [21,22]. The combination of these two methods leads the researcher to gain control over the processes of creating the meaning. Therefore, based on these considerations, initially, we proceeded with the research of the concept of sustainability in the perspective of the business economy and the detailed analysis of the influence of the different observational perspectives in the Italian context. Next, the results of the study, initially

aimed at correctly understanding the concept of sustainability, showed us that the prevalence of subjective and qualitative techniques, as well as the so-called inductive method, offers a testimony of the intense interaction between the scholar and the subject of study.

## 2. Sustainability in the Business Economy Perspective

Since the 1970s, the concept of sustainability has assumed different forms and meanings and is linked, in particular, to concepts such as *corporate citizenship*, *social entrepreneurship*, *corporate social responsibility (CSR)* and *corporate sustainability*. Thus, the variety of facets and meaning has generated a certain level of confusion and vagueness of the definition of sustainability [23–26]. Starting with the conceptualisation, proposed by Elkington [27], of the so-called “Triple Bottom Line”, the growing relevance for business of the existing relationship between economic efficiency (profit), ecological protection (planet) and social equity (people) was clear and obvious. This acknowledgement has led to the necessity of a multi-perspective approach that must include an environmental and social perspective, together with the traditional financial and economic view of the accountability system, to analyse and study the behaviours of a business. According to this vision, we can consider as being sustainable only that particular business “that not only is stable in economic terms, but also minimises its negative environmental impact and acts in compliance with social expectations, considering the fact that it must have a more responsible attitude toward future generations not only in economic terms, but also from an ethical, environmental and social perspective” [28].

Many different research approaches emerge from what has been highlighted until now; these approaches pursue different objectives and define different fields of study, even though strongly interconnected [29–32]. According to Golinelli and Volpe [28], there are four prevailing perspectives over the theme of sustainability in the Italian business economy literature:

1. Preservation and regeneration of public good. We can define as sustainable “Only those behaviours that prevent organisations from being responsible for the so-called ‘tragedy of commons,’ since those are contrary to the selfish exploitation of resources and economic goods available to the community” [33–36];
2. Social welfare, which is “a sociological view of sustainability, focused on the contribution of organisations on total social welfare through their activities” [37,38];
3. Welfare of future generations, focused in particular on the Eco-Systemic Vision and so, on the “interactions between social, economic and political contexts on a global scale, all according to an ‘ecosystemic’ point of view, designed to grant and preserve appropriate standards of living for future generations” [37–39]; and
4. Social legitimisation through the identification of a direct linkage between sustainability and the role of institutions, connecting the former to the process of institutionalisation and search for consensus of businesses. In this context, sustainability is the product of a ‘social construction’, a specific pattern of behaviour of the enterprise aimed at the adoption of external norms which grant the stabilisation in a given institutional context [40–45].

Many studies have highlighted the following key points, which determine the sustainability-orientation of organisations: the evolution of the context, social and ethical imperatives, cost-efficiency and effectiveness of management [28]. Those are expressions of the main and dominant perspectives and demands of the organisation; thus, the organisation expects a contribution that comes from paying attention to sustainability.

These perspectives can be reconnected to two main schools of thought that frame sustainability in a broader reflection regarding cornerstones of economic thought, stating the ‘*ontological autonomy*’ of the enterprise with respect to the objectives of the single individual; from a more practical perspective, focusing the attention over those behaviours that contribute to improve the relationship of the business with the relevant supra-systems.

In the business economy, according to a generally-accepted view, sustainability can be interpreted as “a deliberate performance of a series of various activities which testify the inclusion of broader social and environmental finalities in business operations, which are in turn qualified by a relationship based on dialogues, audiences and interaction with many actors” [28]. This perspective leads to another key feature, according to which the “sustainability of a business depends on the sustainability of its relationships with shareholders” [46].

By comparing Italian literature with international cases, it is clear that the latter is richer in terms of contributions and, according to Golinelli and Volpe [28], there are two main schools of thought:

- Theoretical-Qualitative research is focused on the creation of models aimed toward the realisation of sustainability in businesses [47–51].
- Empirical-Qualitative research is focused on the empirical validation of theoretical models and aims to study the relationship between sustainability and financial results [52–54]. In this field, the main international streams of thought are: sustainability and financial performance; sustainability of competitive advantages; ethics and business behaviours; institutionalist approach; social movements.

In this theoretical framework, which is outlined briefly and not exhaustively, it is possible to find the contribution of systemic thinking, which helps for the interpretation of complex phenomena such as those linked to sustainability [55–60].

The systemic vision of sustainability in a business economy framework leads, in a natural way, to recognising the necessity of a multidisciplinary interpretative approach which, in line with the Triple Bottom Line perspective, includes a business economics perspective within a much larger framework, making use also of social and ecological perspectives [44,61].

There is unanimous consent between scholars, managers and business leaders over the fact that, in the existing economic model, which is based on optimisations deriving directly from the “invisible hand”, not everything progresses smoothly and correctly. Many scholars have shown strong worries about the increment of inequalities and the destruction of the social fabric on which both public and private welfare is built [62].

Moreover, discouraging results have been achieved through relevant intergovernmental efforts; thus, the necessity of involving and giving firms responsibility in the decision-making process over the usage of resources and the economic guidelines has been highlighted. Even though firms are the drivers of the economic process and influence the lifestyle of the reference context, they do, in fact, pose a threat for the viability of the whole system with their *modus operandi*. To overcome the impasse in which we find ourselves in today, it is necessary to change the rules and to influence the set of values of decision-makers. The objective is to ensure that organisations are willing to confront themselves on the basis of creativity, innovation, protection of natural resources and also on the satisfaction of expectations of the widest possible number of relevant super systems—rather than on the basis of who can exercise greater pressure on national policies, evade and/or avoid taxes and receive benefits for harmful activities to maximise the utility function of the property supra-system.

As a living being, the business evolves thanks to the continuous environmental changes and stimuli that become more intense day by day. In this way, it is possible to reach, in any field of knowledge, results and products that change behaviours as the society evolves. In this context, we observe a polyphonic creation and a multifaceted and multifunctional utilisation of knowledge that, through multiple relations and interrelations, transforms itself into meta-knowledge and is ready to face and solve extremely complex problems and issues.

In this way, a huge field of research is created, in which it is easier not only to tap immediately into sustainable processes and at lower prices, but it is also easier to access these through confrontations that contribute, in a domino effect, to the creation of strategic paths that can create and improving highly-positive, ethical and creative experiences. We live in a world in which everything is possible and where the only projects that are successful are the ones that try to overcome the limitations, to go even

further through means that offer efficient, effective and sustainable performance. New knowledge, through continuous renovation, provides new ways to understand all phenomena by generating a process that regulates by itself and becomes smarter as it produces overall solutions. It is primarily at the economic level, in which it is necessary to overcome diseconomies, that enormous disadvantages are generated. Modern issues do not have an ideal solution that is based on an ideal “best way”. In this situation, decision-makers should not simply identify and analyse problems from a rational point of view, but they must find a way to make them controllable by reducing uncertainty [63,64].

What we have said has a strong impact over the life of organisations; our businesses prosper when there is progress and, consequently, needs grow with an increment of knowledge. These pre-conditions generate further implications: think about the possibility of a wise utilisation of limited resources and then replicate this on a far larger scale and also for those organisations that allocate them in a suboptimal way. Creation of this kind of habitat is not easy and requires strong measures to regulate [65] charges over those activities that deplete resources in the environment, taxation and advertisement that must be more responsible and reliable. Moreover, a timely reporting of all positive and negative externalities produced by business activities must be provided.

The following four interventions can represent the first steps toward the proposition of a new economic model that can promote social welfare, increasing social equity, reducing environmental risks and fostering sustainable development and the green economy model, in antithesis to the depletion of resources (brown economy).

### 3. The Business Response to the Challenge of Sustainability

The response of the business to the challenge of sustainability can be linked to two main approaches:

- the first qualifies the vision of sustainability from a business perspective;
- the other qualifies the adoption of sustainability in the business.

This pun that distinguishes the two different visions expresses two deeply different approaches regarding the issue of sustainability. The former regards the commitment to sustainability of the business; the latter regards the inclusion of a sustainable perspective in the system of governance and management of the business.

#### 3.1. Sustainability from a Business Perspective

If we consider businesses as a particular category of social organisation whose operations have a significant impact over the natural ecosystems, as well as on economic and social systems, it is useful to consider the progressive involvement of the business in the challenge for sustainable development and sustainability.

Growing attention toward the theme of sustainability has led to two different types of answers. First, there should be a development of a set of initiatives and actions that intervene on the issue, which adopt measures that do not modify the structure of the adopted business model; the objective is to act by regulating the social and environmental impact, not only the financial and economic impact, but also of the activities of the business as they are realised according to the model and without substantially modifying it.

For example, these measures are designed to limit and reduce the usage of scarce and non-renewable resources with a view toward the natural environment and, from a social perspective, are aimed at promoting greater equity or to contributing to combating poverty with philanthropic initiatives.

In this way, managerial models adapted by organisations take into account additional aspects while remaining the same, and new evidence is given to dedication toward these new aspects prominently through means of communication [66]; one thinks, for example, of the introduction of sustainability indicators in the systems of accountability and reporting.

Basically, these initiatives carry out the change that we will qualify as a ‘Type 1 change’, which “occurs in a given system which remains unchanged” [67]. This change usually finds its implementation

in quantitative criteria and in the “do more, earlier” approach, because what is believed is the fact that the solution of the problem lies exclusively in the effort and in the investment of resources dedicated to it [68].

In this case, the dominant perspective is the one of compliance with criteria, indicators, valuation standard of the commitment to sustainability defined by government and accepted, generally on a voluntary basis, by the organisations that are willing to contribute from a sustainable point of view.

To provide answers moving within the same scheme means adopting “adjustment” measures in the limits of “elasticity” of the model currently adopted that can be “adapted” taking into account further acknowledged need within given limits [69]; for example, the reduction of CO<sub>2</sub> emissions. This is a commitment of the business to Sustainable Development in the wider perspective of sustainability. It is important to underline the fact that this commitment does not determine a reconsideration of the ways of doing business or, in a more general way, of the approach of government and management of a firm. It rather implies regulations about the use of resources and of the different productive and organisational solutions implemented as a response to the problems raised by the relevant supra-systems, which might influence not only the company’s survival but also its performance from a reputational perspective, social legitimisation, responsibility and so on.

Even though those measures have contributed significantly in the different fields of action, they are leading us too slowly toward the achievement of the goal of sustainability. Let us just think about the measure that was implemented in Europe: The Emission Trading Scheme [70], which represents the typical example of linear causality between events and bases the whole regulatory action on it. The simple scheme adopted to reduce the emissions is the one based on the “the one who pollutes, pays” logic, which has transformed itself in the logic of “buying rights to pollute”. Due to this logic, a market of emission rights, which are no longer a deterrent for pollution, has been created, in which speculative logics are preponderant; a market that can be considered functional for the achievement of the objective of reduction of pollution but that leaves many doubts regarding the effective attainment of the final, and, more significant and important, the goal of sustainability. These kinds of measures are the so-called “Type 1” policies.

In the far larger perspective of the Millennium Development Goals, and their relative efficiency results [71], the dichotomy appears between actions oriented to produce results in the short term to face serious and pressing problems, and long-term goals that require, as we will see later, more comprehensive and systemic approaches [72]. Poverty, hunger, social inequality, instruction and so on are all sides of the same coin that is an expression of the dominant development model, which is less sustainable.

With this final consideration, the final statement of the agenda of 2015 was reached—a consideration that, as highlighted, has caught many of the criticalities resulting from the “learnt lessons”. Additionally, it appreciated the relevant successes that were achieved, recognising a strong bond between the different global challenges and linking all of them to a single global commitment for sustainable development [73].

In this scenario, firms, in particular, and, more in general, organisations, are identified as key actors in the transition toward sustainability. However, the attention is focused on strategies and measures that follow the “linear” logic of the cause-and-effect relationship in the interpretation of the impact of the actions of the organisations, and “sectoral” in the definition of the fields of action, activating “Type 1” solutions. For their critical role in Sustainable Development, businesses must be involved in a deep reflection that regards the changes needed to fulfil the transition toward sustainability [46,74]. The type of change needed is far deeper than the one achieved through the current measures: This is the change that we define as “Type 2 change”, the one that “changes the system itself” [67]. As Watzlawick stated, a ‘Type 2 change’ verifies itself when we ‘go out’ from the system in which the problem ‘operates’ generating the loss of the ‘rules’ governing its structure [75].

Today we are at a possible turning point, since the need to evolve rapidly toward a more radical change that can be defined paradigmatic is clear. We can note numerous signals of this change, even

though the progress toward its completion is still far from the urgency to face the unavoidable and urgent challenges of our planet and of our society.

From a theoretical point of view, the approaches linked to *Type 1 changes* are those that have their basis in the paradigm of CSR [53,56,57,76–78]. On the other hand, those that might represent a Type 2 change are those linked to progresses in the CSR perspective, which find their origin in the evolution of business models deriving from the emergence of the stakeholder theory [79–81]. This evolution leads to a more extensive implementation of sustainability inside the firm, with respect to the current commitment to sustainability.

### 3.2. The Sustainability Optic in the Firm

A relentless change in the governmental approach of business organisations started from the moment when Stakeholder Theory was stated. This change has created the fundamental condition, seized only by few, for a thorough re-thinking of business models. All the actions put in place according to the wide accountability logic toward new categories of the stakeholders or toward the new expectations of the already existing ones are not expressions of a real and accomplished transition toward sustainability. Those represent, for sure, signals of a growing awareness, but they are often limited to this and, in this way, the accomplishment of a change that must be paradigmatic is delayed. Knowing that this change might never happen, it seems useful to consider those points of reflection that might allow us to recognise its features and promote its development, diffusion and consolidation.

According to the systemic perspective adopted, the key for interpretation lies in the comprehension of the delicate equilibrium between competition and consonance [64]. The orientation toward consonance is now developing in the traditional behavioural scheme of firms; that is, it is based on competitive logic and postulates, in line with market laws, the necessity for the business itself to win in the market against its competitors.

This emerging relational vision [82], which represents a milestone in the adoption of the systemic paradigm in the business economy, highlights the fact that a collaborative approach grants better competitive opportunities. With the understanding that competition should foster improvements and progress in general, it does not mean that those should grant widespread welfare. It makes more sense to assume that competition moves from single entities to the systems that acquire more competitive force from cooperation rather than competition. However, this approach qualifies a relational strategy that is aimed at ensuring growing competition that has almost nothing to do with consonance logic [28].

This is a harmonic vision of the relationship with the economic, social and environmental context that can be realised only by returning to a consonance orientation. This orientation is based on the ability to understand and interpret the laws that regulate all the different dynamics that are at the basis of multiple economic, environmental, social processes and become consonant to these laws or, if possible, exploit them in their business model. This represents the key for a paradigmatic shift in how we conceive the business and in the ways in which it relates to its stakeholders, who are no more qualified than simple counterparts, but who are treated as partners in a network structure [83–90]. This is a conception of the business in which sustainability becomes the paradigm of government actions. In this way, the business shall see sustainability as being intrinsic to its design the condition for survival, linking its own success to the one of its partners in a positive-sum-game scheme.

The characteristics of this model of sustainable and inclusive business are slowly outlining themselves because they do not correspond to already-consolidated interests and structures. Distinguished scholars of business management made commitments to define new business models. Porter and Kramer [78], in particular, have highlighted the fact that the great transformation of corporate thinking has to be found in the principles of ‘shared value’, which foster the creation not only of economic value, but also of value for the society at large. Prahalad and Hart [91] state that already existing models do not take the true challenge of sustainability and globalisation, underlining the fact that a rebuild of these should start from reconsidering the “base of social and economic pyramid”, actuating models based on inclusiveness and the generation of shared common welfare. At the same



time, Nidumolu, Prahalad and Rangaswami [92] show how sustainability can represent, if handled correctly, an important source of innovation both for organisations and society [93], creating new frontiers for development unimaginable so far.

Thus, the transition toward sustainable business models and approaches represents a great opportunity for combining economic needs, social and environmental demands. However, to make this happen, it is necessary for there to be a paradigmatic shift in the ways of conceiving the role of the business in the market according to a model that sees in inclusiveness and in common welfare the guiding principles of all activities [94–96].

The major challenges of the passage from philosophy to operations lie in the transition toward sustainable and inclusive models of business. The current scenario is characterised by:

- all theories regarding the catastrophic environmental situation, during the latest years, have never been transformed in real actions aimed at overcoming the existing difficulties;
- the human race carries out concerning modification over Gaia system [97], validating the statement of Paul Crutzen, Nobel prize awardee in chemistry, that defines the current era “Anthropocene” [98];
- there is a lack of activity of decision-makers, notwithstanding the fact that, in 1972, many scholars had already highlighted the non-sustainability of the predominant and current economic model [99].

In light of what has been proposed, it is clear that a new approach that is inspired by sustainability both in thinking and acting is necessary. In order to outline the traits of a possible systemic approach [59] to answer the challenge of sustainability, we will proceed in the following paragraphs to illustrate the interpretative contribution of the *Viable Systems Approach (VSA)*.

#### 4. The Interpretative Contribution of the Viable Systems Approach

Recognising the deep bond between the concept of sustainability and the concept of business viability, the VSA pays close attention to the study of sustainability from a business perspective. It reaches, in fact, a qualification of sustainability of the business system that is “more general compared to the ones that can be found in the current literature—one that is adequate from a theoretical point of view and complying, from a practical perspective, with the need of improvement for the management practices and business government” [28].

It is in the interpretive system of the VSA and in the business economy perspective that we can find new food for thought regarding the theme of sustainability and in developing a new interpretive key that can help to overcome decisional dilemmas that burden the firm that would want to promote the transition toward sustainability. This interpretive key can be found in the propensity toward consonance—intended as the peculiar attitude of individuals and organisations considered as viable systems, that is, capable of surviving in a context by individuating their own role in the function of the expectation of other viable systems.

This orientation goes beyond the traditional negotiating view, which is transactional and inspired to short-term advantages. In inter-systemic relationships, consonance directs the decision-maker toward the sharing of common values and rules and to the research of ways of aligning its own goals with the ones of the relevant supra-systems. This fosters the growth of the pre-conditions to enact a harmonic interaction based on a balanced representation of interests and needs at stake that goes beyond the short-term horizon. Through the orientation toward consonance, it is possible to realise that “the passage from sustainability [was] intended exclusively as a philosophical and basic concept, to the operational and practical perspective” [28]. This definition of practical and operational perspective is not limited to business practices, techniques and tools to support the orientation toward sustainability, but it embraces also the concrete efforts in the transition toward sustainability, that will find different implementation modalities in operations.

## 5. The Relevance of Context in the Enterprise-System Viability Dynamics

The traditional interpretation of the relationship between enterprise and environment, from a systemic perspective, is now redesigned to stress the interpretation of the environment of the decision-maker (constructivist) that identifies the set of potential partners with whom he can start a relationship, defining in this way its own operational context. The evaluation of the relevance of each counterpart regarding the final aim of the firm, allows the decision-maker to define appropriate strategic relationships.

To understand the logical foundation of sustainability issues, we must consider that each social context is characterised by habits that differentiate it from the others and are learnt through functions and different roles exercised in a social context. This allows all actors operating in the reference context to learn several rules that cannot be examined, in general, exclusively epistemologically [100]. This learning can be realised only within the reference context, which shares schemes and values and simplifies, in this way, the conceptual metabolism in a sort of post-Darwinian Kantianism [101]. The *context* is the very entity that, more than the single actor (individual, firm and so on), should be studied in order to understand how sustainability is realised and how its collective and social function is enhanced [102]. Moreover, a context in which it is possible to realise a given type of sustainability is not the result of a volitional act, single action or a single decision, taken based on conventionally-prescribed principles, but is the result of an historic process that culminates over time. For this reason, it is necessary to know that sustainability is not limited to single, even if relevant, simple actions, but it imposes a *valorous* transformation.

Moving the focus from the single subject to the context in the adoption of the Viable Systems Approach is at the basis of a crucial passage in the interpretation of the sustainability issue. It highlights the fact that the decision-maker's attention should be focused on the context in which the organisation operates, in which it dynamically becomes a component of a variety of viable systems in which it realises its own role. In other words, the survival of the organisation depends on the survival of the context in which it operates. In these terms, the issue of sustainability seems clear, as it happens often for many conceptualisations that are reinterpreted according to the VSA and it clearly shows a more evolved conception of survival of a business, which is deeply connected to concept of viability. Besides, according to what is stated in the first assumption (of survival), the firm, as a viable system, aims to survive in the context in which it operates. Considering the relevance of the context, based on the definition of viable system, it is possible to state that: A business is viable if it is able to dynamically survive in its own context by carrying out a role that effectively connects it with other viable-systemic entities with which it interacts by reconciling harmonically-mutual goals and expectations.

The viability of a business is the compound result of different structural and systemic conditions that characterise its existence and its acting in a specific context. Considering the Isotropy principle (II Postulate of Isotropy) viability of a business comes out of the capacity to decide and act by creating the structural (Functional Complementarity/Compatibility-Consonance) and systemic (value co-creation—resonance) conditions needed to connect it with the other viable entities with which it relates in the supra-systemic context in which it operates. We recall the II Postulate of interaction to help the reader comprehend the relevance of relations for the business in achieving viable survival.

We realise that the harmonic accordance with the context corresponds to an assessment of the harmonic conformity of business processes with the laws, rules and regulations that are accepted and shared by the community, in which the dominant valorous system is reflected. Clearly, in the behaviour of the business, the specific conditions of the context are reflected, which can vary through space and time, characterising different scenarios. Thus, viability is closely linked to the capacity of the system to survive, which depends in turn on:

1. The ability of a firm to fulfil its role in the context, by relating efficiently with supra-systems by developing relationships based on consonance; and
2. The possibility for these conditions to be maintained through time [103].

The concept of survival introduces the variable time and a probability evaluation that requires the adoption of a medium-long perspective, moving the attention of the Governance Body on the necessity to evaluate the risk of survival of the organisation [104].

## 6. The Advancement of the VSA toward the Sustainability Optic

The viable system paradigm formalises an interpretative approach that is already well-established in managerial sciences, which reconsiders the role and the representation of businesses inside the economy and inside the society. It overcomes the traditional view that looks exclusively to short-term advantages, and embraces a new, evolved vision in which managerial and entrepreneurial ability is expressed through the creation of new business models that take into account a wide variety of interests of different subjects involved in different ways in the dynamics of the business [105]. In this way, the classical economy assumption that is based on the maximisation of profit (Viable System business) and utility (Viable System consumer) is now exceeded.

Going beyond stakeholder theory and CSR perspectives, the viable systems paradigm is intended to be the interpretative reference for an evolved conception of businesses. According to this approach, the line of sight of the decision-maker moves from a perspective focused on the financial-economic performances of the system-firm (in which the conditions of managerial efficiency are fulfilled), to a perspective that also embraces social context (in which conditions of managerial effectiveness are fulfilled) up to and including the much wider perspective of natural environment (in which conditions of environmental sustainability are realised through time). However, the possibility that a firm uses this perspective in space and time strictly depends on the relevance evaluation made by the decision-maker regarding the different instances in the context.

As a result of expectations and emerging pressures in the context [103], in the evaluation of viability of businesses, evaluations of social and environmental “impact”, directly linked to the issue of economic, social and environmental sustainability can be added to the typical measure used to evaluate economic and financial performances. From the VSA point of view, the theme of sustainability finds a precise place, enriching its framework and contributing to specify its postulates.

The concept of sustainability, broadly intended, is attained by qualifying the possibility to maintain over time, compatibility conditions with laws, standards and rules that dynamically characterise the context in which business processes are realised; it also defines conditions and the survival probability of the firm, commending, in this way, the concept of viability.

However, in practice, this might not happen and the VSA approach can explain the reason. Analysing the concept of sustainability according to the VSA approach, we can find an interpretative key that explains why in general it is difficult for “the passage from philosophy to operationality” to happen. ASV clarifies that, in reality, the behaviour of the firm is aligned with the conditions (economic, social, environmental) found in the context, if, and only if, the decision-maker:

1. “sees” the need for sustainability; and
2. considers assuming responsibility about sustainability to be “relevant”.

These two conditions reflect a “supra-systemic” pressure that leads firms to sustainable behaviour through a “prize/penalty” system. A typical example can be the Emission Trading System, which characterises a “Type 1” response, regarding the challenge of sustainability. The possibility for these systems to work is strictly linked to the existence of a supra-systemic “entity” that must be perceived by the decision-maker as relevant, and as the owner of critical resources and authority.

Supra-systemic subjectivity that is typically recognisable in actions for sustainability can be found in institutions, policy-makers, agencies, organisations, as well as in associations (for example, environmental ones), that are “committed” to acting in favour of sustainability and trying to lead their counterparts toward more sustainable behaviours. However, in general, these subjects—even if, in many cases, they hold significant institutional authority (for example, United Nations)—often fail to take such relevance to induce desirable behaviours. Thus, these do not represent the typical

supra-system with which the firm is related, even though their pressure, especially regarding specific objectives, can be really significant, thanks to the usage of instruments that have a large media-impact. This explains why a business can only “survive” and have good economic performance without paying attention to sustainability. However, it is necessary to underline that being sustainable is different from having a commitment to sustainability. A significant effort for sustainability (like huge investments in sustainable technologies) can be (economically but also organisationally) “not sustainable” for the firm.

In fact, the sustainable behaviour of a business should be induced “from outside”, through a system of incentives when sustainability is not recognised by the very firm as valuable and thereby practiced spontaneously in its operations. If sustainability is considered as valuable, it should not be necessary to induce sustainable behaviours through prize/penalty mechanisms because there would be an auto-regulation of the behaviour. In an ideal representation of a “Maslow’s Pyramid” referring to the business and its needs, we might see sustainability as the self-realisation step of a firm that takes it on once its needs of economic, financial and organisational “survival” in the marketplace are fulfilled. However, the ranking of priorities of different “needs” is always defined subjectively; therefore, we get back to the interpretative scheme of the VSA.

### 7. “Viable” Business and “Sustainable” Business: Toward a Synthesis

In light of what we have seen, it seems clear that the concept of sustainability is included, even if implicitly, in the interpretative paradigm of VSA and its postulates. Furthermore, making the role of sustainability explicit in the VSA framework can represent a clear development that clears out the characteristics of a “viable” business and a “sustainable” business, highlighting a deep link and a mutual reinforcement of the two concepts of viability and sustainability.

VSA, in particular, underlines this relevant link by contributing to clarifying the interpretation of sustainability in the firm: Viability is the result of strategic choices taken by the decision-maker, who chooses on the basis of his/her own capabilities of reading the context and understanding and interpreting the rules, laws and regulations that limit and bind the range of possible actions, and which define the trajectories of Sustainable Development of the firm.

The paradigm of viability is enriched in this way, with precious indications for the behaviour of the decision-maker that, including in the definition of the strategy a sustainability evaluation [106], enhances the survival probability of the firm. This magnifies the viable capacity of the business, activating a virtuous circle of sustainable development.

In viable systems, growth and development must always be connected, determining an evolution in the reference context to generate welfare, not only a growing consumption of available resources. Coherently, with what we have just stated, it is possible to identify two important effects for the economic system: (1) the paradigm of unlimited growth must be revised; and (2) the theory of the economic cycle, according to which the demand encourages the production process, and the latter is the one that sustains, by providing needed income, the demand in an endless loop (demand–production–demand), should be reshaped toward a new integrated cycle that includes appropriately also environmental “externalities” [107].

The relationship between viability and sustainability is circular and qualifies a virtuous connection. In fact, viable systems evolve not following a deterministic chain (linear causality), but through continuous exchanges of information (circular causality) [108].

In conclusion, sustainability, through the concept of survival, is implicit in the definition of *viability* [103] and, therefore, in the paradigm of VSA. However, making it explicit represents important progress because it specifies the survival conditions of the business, allowing the determination of probability and risk.

In practice, even if a non-sustainable business can survive (probably to the disadvantage of society and environment), according to the VSA formal paradigms, and be “viable” in its context, it is not possible to generalise, in terms of behaviour schemes, the relationship between viability and

sustainability, since the conditions for these two are specific and different in each context. In this sense, VSA “explains” how sustainability is not objective, contextualised and constructivist.

For every VSA that clarifies the reason for which it is desirable to move toward a full and significant of the relative contribution, when it highlights that, at the very base of choices taken by any Viable System, there is always the value system (value-based categories) [109]. The decision-maker who is willing to create viability conditions for its own business through commitment to sustainability, recognised as a value, even when he/she is not led to do that for a mere convenience logic, represents a model of far-sightedness of a governing body able to grant higher probability of survival to its firm in accordance with the highest possible number of viable systems and components that qualify the context in which it operates.

The effort toward sustainability for the business translates into higher probabilities of survival for the context in which it operates. This generates a typically recursive link in which the effort toward sustainability of the business increases its probability of survival through the survival of the context in which it operates and, recursively, the survival of those higher-level contexts within which the context of the business is placed.

Sustainability is that process activated by the viable-systemic components of a larger Viable System, of a higher level (until the larger and inclusive vision of the environment), in the desire to grant survival.

## 8. Conclusions and Further Developments

This work has presented a conceptual framework for the description of the concept of sustainability that is tailored from the systemic perspective. In the future, it might be interesting to recover, in order to build a flexible, scalable and extendable model, both a data basis and an anthology for the theoretical framework. Further steps of the formalisation activity of the viable-systemic paradigm will be oriented toward the analysis of the concept of redundancy and slack (tangible and intangible) to better understand the potentiality in an extended structure; and this is essential for the creation of sustainable organisations. We will develop methods, techniques and instruments to deploy acceptable structures of the business system.

In conclusion, we consider that, in the forthcoming years, we will witness a continuous evolution of organisational forms that, as Benkler [110] states, will show a radically-decentred, collaborative and nonproprietary production, based on resource and output sharing between individuals, scattered in the workspace and diversely connected, that cooperate independently from the market and perform according to orders coming from a manager. We can expect a progressive affirmation of contexts characterised by cooperation between distinct systems that cooperate thanks to the possibility of accessing and sharing remote resources to achieve coordinated results. The passage from an isolated, closed and deterministic system to a distributed, open and potentially not deterministic system, determines an exponential increase in complexity. Thus, a new and more effective point of view is asserted; a solution that is broader and more decisive, which aims to combine systems of systems, and through which we arrive at a global and sustainable vision that tries to take into account all elements and factors that might determine the occurrence of an event—even if those have an aleatory, casual and subjective nature.

Any organisation shall assume a more important role that leads it to especially deepen its own capacities in a systemic perspective that puts aside unilateral, partial and speculative points of view. For sure, further legislative changes are needed—changes that might widen the application horizons in other fields, such as in the world of business, that should be adequately defined in that sense. The results will be all the more positive and the stronger and more critical the commitment of all countries will be to overcome today’s limits and barriers. We hope for this to happen as soon as possible.

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