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Landscape—A Review with a European Perspective

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Abstract: This article aims to act as a general literature review regarding the landscape, analyzing it through a synthesis of the main concepts and processes that have generated, and subsequently developed, the word "Landscape". It is a versatile theme, because it has always been studied by various disciplines, through different theories, which sometimes even conflict with each other. Through the present text, we understand the importance and the unique value of the landscape, a value that has nowadays been transfigured by the strong industrialization and strong brand of man in the territory. Thus, the first part of the research is, to some extent, a reflection on current issues that are related to the landscape. It is also a tool for integration, including in the definition of "Landscape", even those heavily humanized, exploited, degraded, abandoned, and residual; the so-called "Drosscape", "Friche", and "Terrain Vague". The solution is not to negatively interpret these types of scenarios, but rather to enhance them as they are, filled with potential and creativity. This concept is achieved by means of an operation of recycling or reuse of waste, which is capable of germinating new life cycles within the "dead nature" of our increasingly cemented territories.

Keywords: landscape; drosscape; waste; reuse; recycle; sustainability

1. Introduction

Our era is decisively of a popularized and democratized landscape that belongs to everyone, while, in the past, it had the role of a social code and a distinctive sign of an elite that recognized itself in the common sharing of representative places or topical representations.

The landscape has passed from a peripheral vision to a central one, in which it has become important in several disciplines, especially in philosophy and geography [1,2]. The reasons for the success of landscape, at first sight, could refer to the ecological movement. The ecological and landscape consciousness (or even: the desire of nature and the desire of landscape) are both part of a wider current, which refers to the relationship between post-modern man and nature. The ecological movement of early 1970s represents, from this point of view, a remake [3,4]; due to the fact that the malaise in the city and urban crisis generated the demand for more nature. However, there are also two other significant aspects that have led to this change.

The first one concerns the crisis of post-war planning and the growing dissolution of habitual divisions between the identifiable poles of the territorial system: city-countryside-nature and city-industry-countryside-nature. The known territories were transformed into an increasingly unreadable reality due to the "sprawl" phenomenon [5,6], the urbanization of small towns, the crisis of agriculture [7], and traditional industrial activities followed by an exponential birth of urban fringes. The lack of references and daily comparison of non-places and other interstitial spaces [8] has motivated the desire to identify and protect the landscape. This necessity gave the beginning to firmly speaking

about this theme, trying to expose it and give it an immobile form in the texts, inscribing in the "Great Book" of identified sites as universal heritage of humanity; also, the UNESCO activity has undoubtedly contributed to making the landscape popular.

The second aspect relates to the impacts of our images of civilization on the landscape. On one hand we are in fact surrounded by countless landscape images that reach us from screens, advertising panels, or newspapers. On the other hand, there are many landscape images that are created by us while traveling. Nowadays, the world of touristic industry and the digital image industry have huge impact on our way to discover and memorize the landscapes. Feeling completely free in the enjoyment of very different landscapes, we are, in reality, conditioned by a cultural and economic device; the landscape seems to correspond to the idea of an aesthetic value that is imposed by others without us being aware of it [1].

This work represents an academic contribution, as a literature review article, which provides an exhaustive report regarding the landscape concept in a transparent and methodized form. The paper organizes an extensive bibliography research to understand, for the first time and in a single document, the flow of the perpetual evolution of the landscape. In fact, through the present article, it is possible to read the entire way of this mutation, since the origins of the landscape to its current change, which sis essentially caused by a strong human influence due to economic and industrial reasons. The paper describes distinct views of the natural territory, showing, in particular, its strongly humanized and altered side due to the presence of many industries that are located on the land; especially, the scenario of the abandonment is treated, which it is formed by several industrial wastes. The concept of recycling, through the promotion of the landscape architecture methodologies for the rehabilitation of the devastated territories, is also addressed, and it tries to highlight their potential of re-use for a different requalification of the lands.

When considering that this natural scenario has always been distinguished by beauty, equilibrium, harmony, and functionality, will be possible to also confer these characteristics to the degraded, abandoned, and wasted landscape? This is the key question that motivates the investigation reported by the paper, to make understand that the human action is not always a negative factor. At the same time, new ways of requalification and research exist, to define the recovery and rehabilitation approaches of the concept of the landscape.

Section 2 discusses the landscape concept from its birth, the origin and the etymology of the word "landscape", some theories from different disciplines about the concept, and it discusses the legislation and the concept of identity. Section 3 describes the landscape mutation, analyzing abandonment and residual spaces, such as friches, terrain vagues, and drosscapes, while, in particular, paying attention to the case of the quarries. Section 4 shows the redesign of the dead landscape that deals with the concept of waste reuse, to the rehabilitation concept as a bridge between the past and present, and to the promotion of art landscape architecture in abandonment territory. Finally, Section 5 draws the main conclusions.

2. The Concept of Landscape—Birth and Definition

2.1. Origin and Etymology of the Word "Landscape"

The origin of the term landscape is relatively recent and it separates the European attitude in two periods of time: pre and post-landscape. The concept of landscape, as it is understood nowadays, did not exist; society was more oriented towards the interior, almost exclusively extending the observation of nature to the cloister or vegetable garden, since the external landscape was only a background for other scenes [9]. The gaze on the world has been externalized over the centuries, as long as man exercised a growing dominion over the environment that surrounded him. The first occurrences of this term are found in the second half of the 15th century with the introduction of the landscape element in painting, one of the innovative topics of the Renaissance [10].

At that time, the landscape was always seen as a marginal element: the nature was represented in a schematic and essential way, only in order to propose the settings with sacred stories. The naturalistic element was progressively reborn during the Middle Ages; the main founder of this revolution was Giotto, who, in the impressive series of frescos made in the Basilica of Assisi at the end of 1200, for the first time reproduced a real landscape within painted stories. Giotto's characters moved in one realistic space, against the background of cities, medieval villages, and rocky or wooded landscapes that the observers could recognize (Figure 1) [11].

Between the end of the 14th and the beginning of the 15th century, during the spread of the "late Gothic" style, the landscape representation began to change with the introduction of the detailed and meticulous illustration of every single natural element. The circulation of manuals, which is called "Tacuina Sanitatis", containing studies and drawings of plants and animals, reinforced the interest in the landscape. These texts were used for medical and culinary purposes, which contributed to the spread of reproductions of herbs and plants illustrated with naturalist precision (Figure 2) [12]. It was only during the Renaissance age that painters began to study the landscape and the nature with scientific precision. Particular attention should be dedicated to the pieces of Leonardo da Vinci, who marked a fundamental transition in the evolution of the landscape painting. Leonardo performed a lot of studies "dal vero" (Figure 3) represented natural phenomenon that helped him to recreate landscapes with incredible realism (Figure 4). After this period, little by little, the landscape painting became entirely protagonist and obtained the recognition of an autonomous genre unbound by the presence of human [13].

This brief summary of the painted landscape history illustrates that it took several centuries in order for the nature to be represented as an object of pleasure worthy of attention [1]. The landscape has passed from a passive perspective to a more active one developing itself, even in the architecture field. In Great Britain, it has been the first example of a new landscape architecture school, which perceived and realized proposals to intervene in the landscape, creating parks and gardens that are inspired by idealized rural landscapes [14]. At the end of the 20th century, the landscape became fashionable and there was a substantial curiosity regarding this concept. The landscape appeared to be the key to responding to many questions regarding the management of space and the activities that were developed within it, due to its potential for integration [15].

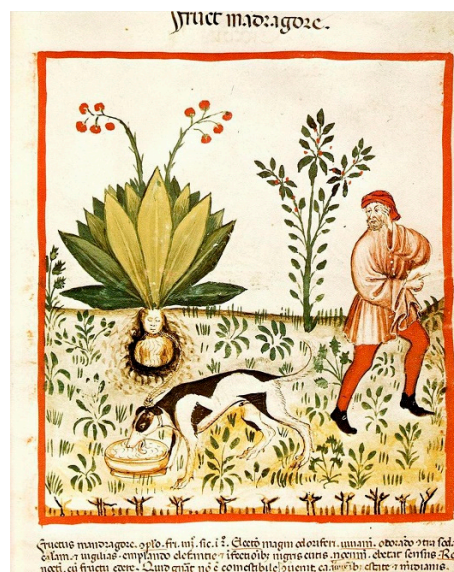**Figure 1.** Giotto—Legend of St Francis—The gift of the mantle (1294).

Figure 2. Tacuinum Sanitatis—Mandrake Dog (1389).

Figure 3. Leonardo da Vinci—Study of a Tuscan Landscape (1473).

Figure 4. Leonardo da Vinci—Madonna of the Yarnwinder (1501).

In this same period, even arts began to take landscape into consideration, as we will further observe in the development of contemporary artistic movement that dealt with the landscape in a new and unconventional way. Following the ideas deriving from the Dadaist vanguard, this new movement directly acts on the landscape, modifying it, permanently or temporarily, with the introduction of enormous installations. These pieces are the result of creative and artistic choices that place the real landscape as the main subject [16,17]. If we want to rest on the meaning of the word landscape, we can state that there are several research studies regarding the origin of it. However, among the various interpretative strands, what seems to offer greater levels of depth and further developments is the one that was presented by the French semiologist Jeanne Martinet, who dealt with the theme in a conference held at the University of Saint-Ètienne in 1983. According to Martinet, the concept of landscape derives from the Dutch word "landschap" that was used by Dutch painters during the second half of the 15th century to shift the interest from the representation to the represented model. In their pieces, the nature becomes the subject of the painting with a new approach, which, based on the words of the painter Joachim Paternier, "reverses the scale of values recognized until that moment and extends the landscape to the detriment of the figures hold as subordinates" [18].

Yves Luginbühl, a French agronomist and geographer, as well as one of the main founders of the European Landscape Convention, has a different vision regarding it, although he confirms the Dutch origin of the word. He believes that the matrix is composed by lant (territory) and scap, equivalent of the German term schaft (community); is, therefore, a word that links the territory to the community, born in the Dutch, Danish, and German coastal territories in which the respective local people were settled. They were marshy lands at the edge of the North Sea, which were inhabited due to terpen, embankments obtained by accumulating the surrounded lands to provide shelter from the tides [19,20].

The connection between territory and community, which constitutes the Dutch matrix of landscape concept, is confirmed by French word "Paysage", which was used in the middle of the 16th century, destined to act as the main vehicle for the dissemination of neo-latin side of the European languages ("Paesaggio" in Italian). Jeanne Martinet also notices the work of etymologists, whose outcome consisted of determining that "pays" derives from Latin "pagensis", which means both an inhabitant of a pagus (village) and the territory of a village. As for the suffix-age, the same author does not exclude, in spite of general rules, the sense that indicates the action or the result of an action, even if it is applied to a noun and not a verb. Therefore, the term landscape would mean "making a country", the expression of a place, a specific representation of the relation between the community and its habitat, at the same time allowing for the global apprehension of a place [21].

2.2. Selected Landscape Theories

On the basis of the observations above, it is possible affirm that the word "Landscape" is a rich and complex word that often correctly represents different and contradictory concepts. There have been many attempts of its interpretation, often pertinent, but it has never been possible to reach a shared formula that contained all of the facets composing it [21]. In this way, the scientific debate regarding the concept of landscape is always open to many inherent disciplines (geography, geology, engineering, architecture, urban planning, agronomy, land art, etc.), when considering the high fluidity and richness of facets about the topic that has never had a precise disciplinary collocation in an academic sense. The consequence is the presence of various theories about this broad and interdisciplinary theme. James Corner, landscape architect and theorist, who sustains that there is one apparent topic that unifies all of the fields of landscape, elaborating a single theory: the landscape imagination. According to his thesis, there is nothing natural about landscape: even though landscape invokes nature and engages natural processes over time, it is first a cultural construct, existing as a product of imagination. Landscapes are initially imagined and represented in images, words, and projects afterwards. Like music, landscapes are forged by the imagination, while also themselves provoking and stimulating the imagination to see and figure new things [22].

Pursuant to this theory, landscape is always seen as the result of an architectural project that stimulates the mind. It is wrong to make the landscape coincide with nature, because, like a garden or a beach, it is not a landscape, but simply, an already existing scenario that is not linked to any architectural project. On the contrary, the philosopher George Simmel states that the landscape exactly derives from nature, being a part of nature itself [23], an attractive nature that sensibly shows itself in the aesthetic experience. In this way, the thought of a French philosopher Paulhan is also aligned. He states:

> *"We like the landscape because we like nature, and the landscape is the portrait of it".* [24], F. Paulhan, 2016, p. 5

Differently, the verses of François Amiel [25], "Le paysage est un état de l' âme" (Landscape is a state of the soul), suggest a romantic vision of the landscape and the attention towards the interior landscape. It is a reflection of the gaze on the world of each individual, a purely subjective vision that is linked to the existence, to memories and emotions that are connected to the landscape. Our past is shaped by the constant presence of that landscape, being formed by people, things, and imagination, always alive in the unfolding of the experience. The emotional bond between people is certainly crucial and indispensable, but the relationship with the significant entities of the landscape is also essential: the horizon of the sea, the smell of a neighborhood, or a particularly significant road. The investigation on the inner landscape aims to analyze those deep bonds that intimately unite places with personality and experience. This concept is translatable with the Anglo-Saxon term Inscape (intern point of view), which was used for the first time by Irish poet Gerard Manley Hopkins. Using this term, he defines that complex of characteristics that gives uniqueness and exclusivity to an individual experience, resulting in being different from any other experience [26–28]. This psychological attitude finds its extreme level in the Fernando Pessoa's [29] "Livro do Desassossego" (The Book of Disquietude)—"The landscape is a state of soul", with the difference that the landscape is not an affective projection on the outside, but conversely, a personal picture in which an individual subject receives, as on a screen, the world projected on him.

Talking about the landscape, we find another important theory that is related to the description of the Cultural landscape and created by the German scientist Alexander von Humboldt. Based on his doctrine, landscape that is observed by man is the result of a complex and dynamic system, where varied natural and cultural factors are integrated influencing each other and changing over time. The cultural landscape is generally understood as one that man has transformed, directly or indirectly. Humboldt sustains that, in addition to the reciprocal relationship that is established between a territory and its inhabitants, it is the fact that a human being observes what surrounds him and based on that builds an image that transforms the environment or territory into landscape [30–32]. As the Belgian geographer Marc Antrop explains, the importance of the perception is intimately related to a holistic approach that considers the landscape as a whole is more than the sum of the parts as being the necessary synthesis for the true understanding of this whole [33].

Additionally, landscape represents a central conception and a summary resulting from a long relation between natural conditions and human action in classic geography. This relation is organized into societies, bearers of history, culture, and technological evolution. Rather than morphology, geographical landscapes contain an anthropological depth, a revealing remembrance of numerous sediments or signs that are left by subsequent transformations. Landscapes are cultural heritage, comprising an essential element of the identity of people or even a model of Nation–State cohesion. Moreover, ideologically, the regions, areas of extension of unity, and models of the landscape, have legitimized the organic theses of the equilibrium of the nation in its diversity and relationship between environments and ways of life, and the stable picture of the mosaic of the typical landscapes of each region. The study of the landscape is almost a seduction exercise: dismounting to perceive, finding the marks of time, the vicissitudes of history, seasons, fields, forms of settlement, buildings, and materials. More than just a concept, the study of landscapes identifies itself with the object of

study of geography, the distinctive element of a clear disciplinary positioning between the natural and the human sciences [34].

The theory of an Italian philosopher, Rosario Assunto, is also included in this area and it describes the landscape, starting from some geographical elements. In his opinion, the definition of landscape can be enunciated, starting from the clarification of the meanings of three essential words: Landscape, Territory, and Environment, which today are used almost interchangeably. However, the terms are quite distinct: "Territory" has an exclusively spatial meaning; in fact, it is roughly understood as an extension of the earth's surface that can be delimited according to geophysical divisions or political-administrative delimitations (substantially territory is matter). On the other hand, the concept of "Environment" has two meanings: a biological one, which refers to the conditions of physical life, and another historically-cultural one that refers to customs and traditions. Substantially, it is the content that includes the "Territory" in itself, because there cannot be environment without territory. The definition of "Landscape" spontaneously emerges as a form that the environment confers on the territory, or rather, the form in which the synthetic unit of matter (territory) and the function of content (environment) are expressed [35]. Substantially, the landscape for the author is "the country considered from the artistic point of view" [36].

However, the landscape is not just a physical element, but in fact it exists because there are those who look at it, giving it a meaning. It is an encyclopedia whose reading capacity depends on the cultural level of the observer, as an anthropological interpretation of socio-ecological facts and processes: environment, history, and geography [37]. Consequently, the landscape is the artificial result of a culture that perpetually redefines its relationship with nature, in which the subject is entirely part of it. In this way, we witness the birth of the social factor of the landscape, which begins with the human whose activity leaves traces on the territory [38]. In this regard, in the famous "Social formation and Symbolic Landscape" [39], the author Denis Cosgrove, an American geography professor, describes the two possible attitudes that man implements towards the landscape and leads them to two ideal typical figures, the "Insider" and the "Outsider". The insider is the rooted inhabitant who has knowledge of places based on the memory that is transmitted by the group and on his personal memory; he produces the landscape by living it and working in it. On the other hand, the outsider, such as a tourist, is an external and disinterested spectator who has knowledge of places based on instant fruition, predominantly aesthetic; it does not produce landscape, if anything, it consumes it. For the two groups, the landscape has two different functions: for the first group, it is the transmission of identity and for the second group it is the recreation. Nevertheless, it is crucial to answer who, in our society, is a rooted inhabitant, and who is only a disinterested tourist. We are all insiders and outsiders for a network of places. Perhaps, according to the words of the European Convention, we could talk about multiple "life frameworks". We are never completely unrelated to a place.

Other authors, such as Daniela Poli, have reported the attention to different ways of relating to the places, when compared to the insider and the outsider. For example, a "returning resident", a person who, although living elsewhere, returns for a period of time to his place of origin having a different gaze from that of the inhabitants, consequently perceiving resources and issues with more clarity and maintaining an emotional relationship. This is the figure that Daniela Poli [40] has described as a "care-taker", a person who takes care of the places by choice, an attitude that may concern, for example, the chosen place for leisure or rest. Also pushed by the ecologism, the question is directed towards a global sense of places, with the invitation to consider Earth as a single house that must be taken care of; or even as a single garden, of which the man is the gardener [41], which highlights the global sense of the landscape.

> *"Only when I saw the Earth from space, in all its ineffable beauty and fragility, I realized that the most urgent task for humanity is to take care of it and preserve it for future generations"*. [42], S. Jahn, December 2007, National Geographic Magazine

Although we can provide innumerable definitions of the landscape, according to the theory and the social component, there is a formula that could summarize all of them:

$$L = S + N$$

In the expression above, there are three essential factors described, of which a landscape is composed of: the subject, the nature, and the relationship between both [1]. This notion is also treated by the ecology discipline that studies the interrelation between human society and its living space. The landscape, in this ecological point of view, is intended as a set of interconnected ecosystems that act, externally, with the needs of the society [43].

However, Malcolm Budd, a philosopher who analyzes the landscape not based on relationships with man (who in the previous case acted as a protagonist in relation to nature), disagrees with this statement that is based on his individual and unique character. He is, in fact, in favor of a positive aesthetic that accepts all nature as beautiful, since it is not altered by man [44], exclusively accepting its natural changes, due to time, day, and night and the seasons of the year [45]. This is a concept that is definitely related to the aesthetic enjoyment of the landscape, which is able to arouse emotions in the subjects who stop to admire it (Table 1) [46].

Table 1. Summary of some existing theories about landscape, used in the text.

Reference	Definition	Reference	Definition
(Corner, 2014)	There is nothing natural about landscape. It is a product of the imagination, anything that is previously imagined and afterwards represented in images. It is the result of an architectural project.	**(Turri, 2003)**	Social aspect of the landscape: it exists because there are those who look at it, giving it a meaning.
(Simmel, 2007)	Landscape derives from nature, being a part of nature itself.	**(Tilley, 1994)**	The landscape is the artificial result of a culture that perpetually redefines its relationship with nature, in which the subject is entirely part of it.
(Paulhan, 2016)	We like landscape because we like nature, and the landscape is the portrait of it.	**(Cosgrove, 1998)**	The social landscape has two ideal typical figures: the "Insider", rooted inhabitant, and the "Outsider", disinterested spectator.
(Amiel, 1931) (Soares, 1982)	Landscape is a state of the soul.	**(Poli, 2002)**	In the social landscape she also describes the figure of "care-taker", he who takes care of the places by choice.
(Lettini & Maffei, 1999); (Andreotti, 1996, 1998)	Inner landscape: relations that unite places with personality and experience.	**(Clement, 2008)**	It is important to consider Planet Earth as a single garden of which man is the gardener, highlighting the global sense of the landscape.
(Twigger-Ross & Uzzel, 1996); (Jones, 1991, 2003)	Description of cultural landscape as a landscape transformed by man, where exist relations between him and the territory.	**(Jakob, 2009)**	There is a landscape formula which could summarize all the landscape definitions: $L = S + N$ (Landscape= Subject + Nature)

Table 1. *Cont.*

Reference	Definition	Reference	Definition
(Antrop, 2000)	The landscape is a whole that is more than the sum of the parts, being the necessary synthesis for the true understanding of the whole.	**(Budd, 2002)**	He is in favor of a positive aesthetic that accepts all nature as beautiful, since it is not altered by man, accepting exclusively its natural changes.
(Domingues, 2001)	Landscape identifies itself with the object of study of geography. It is an element positioning between the natural and human sciences.	**(Griffero, 1996)**	The landscape, being an aesthetic component, arouses emotions in the subject that admires it.
(Assunto, 1976, 2006)	The landscape is a form that the environment confers on the territory. It is the country considered from the artistic point of view.		

2.3. Landscape Legislation and the Question of Identity

As already mentioned, attempting to provide a definition of the landscape, various disciplines have been discussed to provide an explanation of it in different fields. As the landscape is versatile theme, it is too simplistic to define it according with a unique expression. However, the reference points for a sharing definition, at least on the operational level, are the European Landscape Convention [47] and the Legislative Decree 42/2004 [48], known as the Urbani Code, with its amendments in 2006 and 2008 [49].

The European Landscape Convention represents the first international treaty that is exclusively dedicated to the European landscape as a whole. It applies to the entire territory of the Parties: in natural, rural, urban, and peri-urban spaces. Therefore, it recognizes, in equal measure, the landscapes that can be considered to be exceptional, the landscapes of everyday life as well as degraded landscapes. It defines the landscape in a perspective of preserving the diversity of the landscape itself and privileging the social aspect of shaped landscape in the past by man and nature. Considering recognition and protection, it underlines its cultural, environmental, social, and historical importance. Finally, it invites the States to define safeguard, management, and conservation policies for future generations [47,50,51]. On the other hand, the Urbani Code represents the main Italian regulatory reference that attributes to the Ministry of Cultural Heritage and Activities the task of protecting, conserving, and enhancing Italy's cultural heritage. It defines the concept of cultural asset, including landscape assets and, in particular, proposes the recognition of the notion of landscape within the cultural heritage (Italian Legislative Decree, 2004). In both cases, the fundamental question is clear and it represents the landscape concept as a contemporary expression of culture and nature, dynamic entities in constant evolution [49].

Focusing the attention on these regulations, it is possible to understand that there is a great richness and diversity of landscapes. While admitting this variety and observing the landscapes, it becomes obvious that history is embedded in the landscape. It connects the natural conditions with a long and specific human action, which reflects both the natural and cultural history of a territory.

We come to the question of the spirit of the place, a dynamic character that is constantly changing, but is unique to each landscape and integrates into the local identity [33,52–54]. However, corresponding to a product of the past, the current landscape constitutes a record of the collective memory [55] and a powerful element of cultural identification, such as language and religion [56], as well as connection with the territory and with the identity that it represents [9,57–59].

The identity of a place, as the American psychoanalyst and philosopher James Hillmann suggests, is "the soul of a place", a character that belongs to a place and to no one else [60]. It is the product of past events revisited in the light of creative acts, also dictated by social, cultural, and economic

changes. In this sense, the concept of identity is very closely connected to that of Marc Augé, according to which a place produces identity when the community, which resides within it, recognizes itself in it [8]. The relationship between space and community, which is also contained in the European Landscape Convention, is based on the concept of the "soul of the place. The landscape is similar to a palimpsest and a stratification of signs between the deletions and rewrites [61,62]. The binomial landscape-identity, as applied to the contemporary era, often leads to talk of crisis of legibility, representativeness, and planning, because the contemporary landscape is perceived or described as "ugly", disharmonic, the same in every place and devoid of identity. Therefore, this element loses the character of uniqueness that previously distinguished it, creating disorientation. It is important to recognize the identity of a place, because it enables contact with the traces of the past of that place, and, at the same time, it is crucial for the prefiguration of the future, for its ability to arouse emotions and with them new identities [63].

According to Bernanrd Lassus, who has dedicated an important part of his theoretical and planning work to this theme, the landscape consists of the stratigraphy of several historical chronologically overlapping layers [64]. A kind of "millefeuille" [65] to be patiently and precisely dug and reinterpreted, using the tools of poetic archeology. According to Massimo Venturi Ferraiolo", every landscape is archaeological as such". He also adopts the metaphor, which was designed by environmental and anthropological transformations, while Weilacher highlights how the landscape over time and maturing, becomes a cultural landscape through the invisible overlap of historical traces [66,67].

> *"In the flesh of the landscape all the stigmata of the past are impressed and endured. Landscape is a memory and I can interrogate it"*. [63], M. Corajoud in B. Cillo, 2008, p. 87

3. Landscape Mutation—Abandonment and Residual Spaces

3.1. Changed Landscape

The concept of safeguarding the identity of a place or a landscape, as it was previously described, is not compatible with our contemporary era, where, on the contrary, one looks at the landscape identity with a nostalgic feeling of an important factor that has been lost. Against this image, the experience shows nature as not only humanized, but also effectively and visibly altered, because of constant transformations. The image of a world that is dominated by human presence usually prevails, which is accompanied by the transformative capacities of machines [10]. In fact, the growing industrialization has significantly changed the usual territorial structure and at the same time provoked the first serious environmental issues. An example is the construction of the railway network that required massive interventions, such as the construction of countless viaducts, bridges, tunnels, embankments, etc., with the aim of leading tourists to places that are cataloged by the touristic system [1,68].

Industrialization has also generated other types of landscape, having not only a recreational and entertainment purpose, but also primarily a productive one. Thus, we witnessed the birth of the so-called industrial landscapes, being dotted with the presence of innumerable warehouses and buildings, intended for production, which modified the original appearance of the territory. Usually, industrial buildings, by their nature, use, shape, and size, are often considered to be extraneous volumes to the landscape, as they are difficult to integrate into the context. Although they are no longer mere production sites and take on a plurality of functions (office, warehouse, and supermarket), they are negatively perceived by the local communities. For this reason, a particular "Nimby" syndrome is discussed, or "not in my backyard", "not at my house", when planning a new production site, only not to encounter new industrial volumes that do not integrate into the existing landscape [69].

In relation to various economic activities, we distinguish the industries of products that are characterized by the materiality of the asset object of their activity (agricultural, manufacturing, and commercial) and service industries (credit, transport, security, and education). The industries are considered in the strict sense, the extractive (that exploit the mineral riches of the subsoil), the manufacturing or transformation industries (that transform raw materials or semi-finished

products into finished products, such as the chemical or mechanical industry, electronics, food, textiles), and finally the energetic (that transforms the energy produced by the different sources). The extractive industries, in particular, are those that have modified, and still modify, the landscape in a more invasive way. They are industries in which the effects of industrialization are much more visible, because, while the others only cause the addition of new industrial buildings on the territory, these alter its morphology instead, deforming it according to the various production needs and "disfiguring it". Therefore, they cause a strong impact on the territory, modifying its physiognomy, but also its social structure, economy, and environmental quality. The mining or quarrying industry that is mainly engaged in the extraction of valuable minerals or other geological materials from the earth, usually (but not always) from a reservoir, from a vein or from a layer of charcoal. Iron, coal, copper, diamonds, bauxite, gold, lead, manganese, magnesium, nickel, phosphate, platinum, rock salt, silver, tin, titanium, uranium, and zinc are included as the materials that are commonly covered by this type of industry. Other materials are particularly useful, being subjected to extraction, are clay, sand, ash, gravel, granite, and limestone [70].

The Case of the Quarry

Belonging to the scope of this research, and being, in fact, the industrial activity that involves more transformations and transfigurations of the landscape, in particular, we will focus on analyzing and describing the quarry, that is, any area of open-air excavation of rocks and minerals [71–75]. Apart from the more artisan aspects, a quarry can look like an organized industrial complex in order to economically exploit a deposit, on the surface or at a small depth, by means of works that take place at the surface of the ground [76].

"Cultivating" comes from the Latin "colère" (p.p. cultum), which has various meanings, such as cultivating the land, cultivating friendships, cultivating the arts and studies, respecting a person, and honoring the customs of people. The excavation of mineral resources is an activity, like many other crops (agricultural, forestry, fishing, water, etc.), through which raw materials are extracted from natural resources; these subjects have been necessary for man since the dawn of civilization [77]. Similar to mining activity, the cultivation of a quarry can be carried out:

- Open air: type of quarry used to extract deposits of mineral resources near the surface.
- Underground: requires equipment or workers to operate under the surface of the earth.
- Pit: type of open pit typical for flat areas, where mining is carried out along graded surfaces that extend downwards to below the level of the countryside [75].

Although the first type is the most widespread, there are examples of underground quarrying, especially for relatively high-quality materials. The Candoglia marble quarry for the Milan cathedral and numerous Carrara marble quarries are notable examples of this type of quarry.

According to the Italian mining law of 29 July 1927 n. 1443, the distinction between quarry and mine is very subtle. The difference essentially consists of the type of materials that are extracted and are under the management of the property. In fact, the quarries are left available to the owner of the land, while the mines are part of the state property. The areas where a quarry is implanted are directly identified, when useful economically feasible materials emerge, or they are identified through prospecting operations that interpret the nature of the subsoil. The organization of the quarry involves the construction of access roads and storm water collecting channels to avoid dangerous influxes into the quarry. The development of the cultivation depends on the local morphology if it is located in the mountains: generally, steps are created on the slope of the mountain and connecting roads between the mountain and the valley, consisting of inclined planes, ligature roads, and cableways. On the other hand, if the quarry is located on flat ground and the useful material does not surface, then a pit quarry is opened, proceeding first of all with the uncovering, or rather, with the removal of the sterile material until reaching the useful obtainable material. The plants that are common to all types of quarries are those related to the lines of transport of electricity, compressed air production, industrial water

pipelines, explosives, fuels, lubricants, and various materials. As far as the machinery is concerned, in the case of a quarry on flat ground, there is a need for excavators and fixed and self-propelled conveyors; in the case of quarries in the mountains, mechanical shovels, wagons drill, drills, dumpers, conveyor belts, locomotives, and wagons are required. In particular, for the marble and ornamental stone quarries (the subject of this research), the cutting plant must be inserted with the helical wire [75].

The cultivation methods can all be traced back to the stepped type, which consists of carving, a succession of sloping platforms (steps) in the field: the variants depend on the type of the deposit, the mineral, the encasing rocks, the covering, but also on topographic conditions. On flat land, the one-sided method is usually used: a long step is achieved that can be parallel, fan-shaped, or block-fed. The reduction is regulated, so that the sterile can be transported on pre-established areas or unloaded opposite the front, on the area that was previously occupied by the ore that has been removed. The access roads to the steps consist of inclined ramps up to 20 degrees of slope, on which the machines are moved in order to reach the workstations, while the excavators on belts, dumper trucks, or railway carriages discharge the sterile. In the mountains are used the methods with open steps, which follow the slope according to the level of the curves, and a funnel, in which the steps follow closed bends that are ever narrower towards the bottom. In the second case, a jet cooker opens at the bottom, where the mined mineral is conveyed, and that arrives on tapes or other means of transport to go to an extraction well. For piercing siliceous rocks, jet piercing is often used; the flame dart of an oil-oxygen mixture burner replaces the mines. In the quarries of marble and other cutting stones, as already mentioned above, we continue with the use of the helical wire with which large blocks from the living rock are cut [75]. Currently, on the European and global stage, the mining industry, in particular, related to marble, is faltering.

A large number of quarries are subjected to the closure or abandonment for various reasons after being abundantly exploited (Figure 5). The most frequent ones are due to the difficulty of selling the extracted material and the economic incapacity that are caused by international competitiveness. Among other causes, we also find the failure, the depletion of the extracted material, questions of inheritance (in most cases the owner has no descendants), or, to conclude, the presence of magmatic rock inside the exploration area that causes the metamorphose of marble, contaminating it, reducing its quality, and altering, for example, its resistance and color. The crisis in the building sector has also contributed to reducing the quantities of the extracted stone materials.
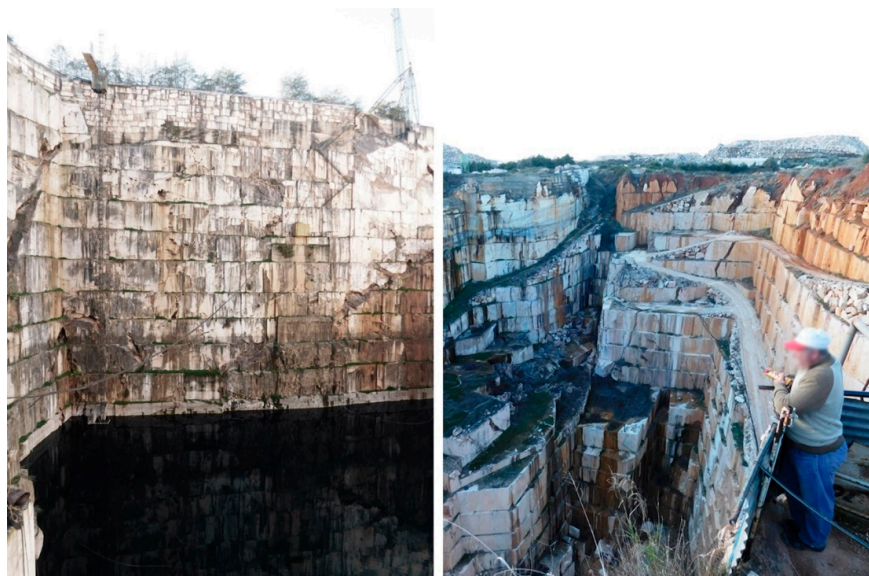

Figure 5. Abandoned marble quarries in the Anticlinal of "Estremoz", Portugal. Note the waste mounds in the background.

The abandoned quarries are a type of landscape that can definitely stand as an emblem of the gap. They were first exploited and then discarded, without following any design indication, but rather the imperativeness of productivity [78]. To cause their structure to be even more casual and problematic, there is also a lack of a reflection on the landscape or landscape studies consistent with the era of the birth of places, with the consequent random overlapping of the traces of past uses. The quarries are destined not to be able to return to their previous state, subject to the violent removal of materials and the desire to gain profit. The restoration of the initial conditions is always impossible, leaving the remaining fragments in the territory to be the fundamental element of the design approach. In light of this reflection, the quarry lends itself to a plurality of interpretations, being, at the same time, a collection of natural and artificial fragments, presence and absence, firm but constantly evolving. A place that escapes univocal reading and this is why it leaves room for many futures [79].

3.2. Landscapes of Abandonment

3.2.1. The Friche Concept

Over the years, many of the countless industrial areas that are described above have lost their business, turning into brownfields, due to the lack of economic funds or depletion of exploration material. Most often, they are a burden for municipalities that fail to make them profitable, but at the same time they are a virtue for those who can see their potential for re-use. These unstructured spaces are identifiable with the industrial term "friches". Most countries are still in the process of defining what is meant by "friche" (brownfield), but, in general, it is an area, previously used for industrial purposes, which is now abandoned and unused. In the past, the term was used to indicate the uncultivated fields that awaited the new plowing and then evolved over time [80]. The term also denotes, up to now, at the juridical level, all of the areas where human activity ended, for example, the abandoned industrial activities.

Claude Chaline, a French urban planner, identifies different types of friche during different historical periods. In the French and Italian circles, the church increased its real estate for a long time as a result of the benevolence of rich and illustrious individuals and donations of the faithful. This led the church to control a large portion of the territory of the city. At the end of the 18th century, the assets of the church were limited according to different methods, even though expropriation and a large case of urban friches was generated. In fact, the buildings often remained unsold or unused for a long time, which created a widespread condition of abandonment. Little by little, the state took charge of these assets by transforming them into public and administrative buildings. A similar phenomenon occurred in the 19th century, when a vast patrimony of disused military installations was found at the end of a long period of wars and armed conflicts.

In the same way, in the different evolutionary phases of the history of the city, other types of friche have been generated, such as those that are related to the world of transport, and thus referring to the stations, depots, and railway tracks. In addition to the disused railway goods, we must also consider the places of degradation that the railway lines generate along their margins, often posing as an obstacle. Additionally, the port friches derive from the same process, and all those with functions that are incompatible with the city, which were trapped during their growth as airports too small for passenger traffic and too close to the dense city. Large buildings for the agri-food (slaughterhouses, barns...), department stores, and small shops failed to change the system of sale and deposits used for trade. All of these phenomena have given rise, since the middle of the 20th century and especially in the last 15 years, to a new meaning of the word that no longer only refers to the decommissioned industrial heritage, but also the areas that have become waste of the city, located inside it [80,81].

It is important to remember that the aforementioned "friches" are not only perceived as positive natural elements, but they can be seen, above all, as a depreciation of the landscape, an aesthetic, economic, and ecological loss. This perception often appears when urban planning is wavering and leaving gaps, or even large scars, in the urban fabric [82–84].

3.2.2. Wasteland and the Notion of Terrain Vague

If we want to solely focus on the residual material, we can say that our cities are invaded by waste and garbage in all forms, and from different points of view [85]. The waste of industrial society and, in a special way, those of the consumer civilization, is an essential and highly complex component of the life cycle of all material goods. They are in some way the "removed", the "expulsion" of that systematic activity of robbery, and waste of the earth's resources on which this type of society is founded [86]. In the early 1970s, Kevin Lynch was among the first to address the issue of waste and garbage that are produced by the company in the United States, arguing that the gap and decadence are inevitable consequences (voluntary or otherwise) of the contemporary urban phenomenon and its development. He believes that waste is something useless or useless from the human point of view; it is loss, abandonment, decline, separation, and death [87]. When we talk about scraps, we are led to think and associate them with garbage, waste produced at our homes, or at most to waste from industries, and therefore related to pollution. Even today, the association of waste with the spatial context is not immediate, but we must not forget that there are also places considered as waste, and that waste can also take on a spatial, territorial, and landscape dimension [88].

Among the waste that is produced by the city, there are entire areas that are expelled, because they lack use, definition, and form. They are abandoned or disordered industrial spaces, border areas, "empty" lands unrelated to the urban system, excluded from it, but physically internal to the city, which present themselves as "absences" in the contemporary urban fabric. They function in various ways as shelters and mirrors that allow us for to examine our daily environment, outside the frenetic circuits of work, commerce, transit, and ourselves. They are also containers of a fragmented shared history, which illuminates the imperfect process of memory, and constantly tries to remember and reconstruct the past [89]. Based on the work of lgnasi de Solà Morales [90], Catalan historian and architect, we can also classify these elements as "Terrains vagues", a word that has consistently gained popularity, especially in English language. The term "Terrain" in French indicates a delimited portion of land as a lot or a field, while the term "Vague" contains three great connotations: Vacuus, meaning empty, Vagus, meaning uncertainty, and Woge, meaning mobility, fluctuation, and also indicated its state of being in between time and space [91]. The complete word, "Terrain vague" contains a multitude of meanings and it is used for indicating various types of wasteland located within the confines of the city. At the same time, it is external to the daily uses of citizens; "Terrains vague" seem to be almost forgotten spaces in which few values survive and in which the reminiscences of their past have taken precedence over the present, which makes them almost similar to ruins, which makes these spaces fascinating. Therefore, this name reflects the duality of these landscapes, being essentially something that is not designed but at the same time having a high power of transformation that is precisely given by not being constructed; waiting spaces, spaces of the possibility that enclose in itself a transformation in power [81]. The recognizable "Terrains vague" forms are those that are identified with the former industrial sites, such as abandoned factories and quarries, gas meters, water towers, shipyards and marshalling yards, military areas, mining plants, general markets, warehouses, canals and locks, hospitals, schools, sewage treatment plants, bridges, tunnels, and dry docks [92–95].

Secchi [96], for example, provides well-known cases of "Terrains vague", subsequently redeveloped, ranging from the port areas of San Francisco, Rotterdam, Liverpool, and London, to the sprawling Fiat Lingotto factory in Turin (renovated in the late 1980s in a multi-use complex according to a Renzo Piano plan) and the first Modena racing track (now Parco Enzo Ferrari). Duisburg-Nord Park in Germany by the Latz & Parter studio, the New York High Line by architect James Corner, and the Nordbahnhof Park in Germany by the Fugmann & Janotta studio are other examples. These are some references of an emerging group of architectural projects that are related to waste landscapes (wastelands) or abandoned industrial sites (derelict lands), which share the same aesthetic characteristics and the particular quality of creating a balance between the past and the present [97]. In his essay, Solà-Morales advocates for a much subtle way of integrating the past of abandoned or destroyed places with architecture proposals. In a way, Solà-Morales' architectural

approach towards "Terrain vague" resonates with the aesthetics of ruins, due to their insistence on maintaining the form of a construction of the past without completely renovating them. This is even more evident in the landscape designs that are mentioned above involving derelict spaces that integrate the industrial ruin [91]. Concluding, the "Terrains vagues" are daily areas that expose the stratification and the palimpsests of the nature of all places. They are what the architect-artist Stalker [98] defines, in his manifesto, as "spaces for comparison and contamination between organic and inorganic, between nature and artifice", which constitute the negative of the built city, the interstitial and the marginal, spaces abandoned or in the process of transformation. Or they are what Secchi [99] defines as "immense collections of objects positioned tactically next to each other, dumb" [95].

Many other terms have been used to describe abandoned and residual spaces: "Derelict land" [92,100,101]; "Zero panorama"; "Empty or abstract settings", and "Dead spots" [102]; "Vacant land" [103,104]; "Wasteland" [105,106]; "il Vuoto" ("the Void") [96], "Urban wilds" e "Urban sinks" [87], "New, nameless places" [107]; "Dross" [108] e "Drosscape" [6]; "No-man's land" [109]; "Dead zones" and "transgressive zones" [110]; "Superfluous landscapes" [111]; "Spaces of uncertainty" [112]; and, "Le Tiers-Paysage", "Les delaisses", "the Third Landscape" and roughly, "Leftover lands" [113]. Other common terms, among others, include "Brownfields", "In-between spaces", "White areas", "Blank areas", "SLOAPs" (Spaces Left Over After Planning), "Voids" [97], and "Terra incognita" [103]. Despite the multiplicity of definitions and terms described above, these landscapes are not united by physically belonging to the city, but from having been expelled from it for the conclusion of their life cycle, for the incompatibility of their use with the urban reality or for the loss of their economic value. These territories, "rejection of the city", do not have an intrinsic negative value but a specific characteristic, natural consequence of the process of growth and development of the city, and its metabolism [81].

3.2.3. Drosscape as a Refuse Space

Therefore, the waste can be considered as a natural component of an evolving and dynamic city and, as such, it is an indicator of its healthy growth [6], of its metabolism [114], and part of its life cycle. Thus, the control of urban metabolism and the production and management of waste is a fundamental aspect that is to be taken into consideration in the growth and development of a city. The waste landscapes are the places that are rejected by the society due to the presence of functions that are not compatible with it; abandoned areas, planning residues, places where productive processes have been exhausted by dissipating, consuming, and losing identity. The common derogatory and critical interpretation of these places emphasize the loss of their environmental qualities and place them in strong contrast to the naturalistically higher quality landscapes. For this reason, these places require greater attention from the communities and institutions for the realization of the regeneration project [115]. Working with these territories of waste and when considering them as part of the landscape means working on the most fragile and problematic part of the city, triggering a design discourse on the landscape and the recovery of urban metabolism products through their treatment. The energy needed for urban regeneration must come from the territories rejected by the city, because the future of growth and transformation of cities is closely linked to the reuse and re-imagination of waste landscapes. In this context, the designer's role is to integrate this inevitable waste into a more flexible and aesthetic strategy, creating a complex, integrated, and dynamic plan at the same time [81].

Although many urban planners have been interested in urban waste sites and their definition, a detailed classification of the different phenomena is still missing in the European landscape. Alan Berger, who is an American urban planner, was the first to attempt a rigorous cataloging of the different places of waste, in the variegated American territory, defining them as "drosscapes" (Table 2), identifying different categories that generated them:

- Wastelandscape of dwelling (LOD): refers to voids of land that are integrally designed into housing developments, especially into walled or gate enclaves. These voids often have singular programmatic intentions (golf course, buffer zone, preservation area, trail system, etc.). There are

two types of LOD voids: those that are outside and inside the enclave. "Outside" voids encircle the enclave as buffers and separators from adjacent development or other possible nuisance land uses that may affect the quality of life held by the dwellers of the enclave. "Inside" voids are designed, for example, to allow for public utility easements that cross throughout enclave territory. They serve the social, circulation, and recreation needs of their inhabitants.

- Wastelandscape of transition (LOT): reveals the transitory nature of capital investment and real estate speculation. Some LOTs are intentionally designed and built as transitional land uses, such as staging areas, storage yards, parking surfaces, transfer stations, etc.
- Wastelandscape of infrastructure (LIN): includes the landscape surfaces that are associated with the infrastructure, including easements, setbacks, and rights-of-way associated with transportation (such as highway corridors and interchanges), electric transmission, oil and gas pipelines, waterways, and railways.
- Wastelandscape of obsolescence (LOO): refers to the sites that are designed for accommodating consumer wastes. These include municipal-solid waste landfills, wastewater-treatment facilities, and "cars dismantlers".
- Wastelandscape of exchange (LEX): refers to shopping centers and all those urban complexes where the commercial, but also catering, fitness, and entertainment functions are concentrated. They are boxes that are surrounded by parking lots and can only be reached via expressways. They generate many interstices, waste spaces, and often they become places of waste when they become unsuccessful and lose their economic value.
- Wastelandscape of contamination (LOCO): includes public and federal installations, such as airports, military bases, ammunition depots and training grounds, and sites used for mining, petroleum, and chemical operations [6,116].

Table 2. Summary of the terms used to describe abandoned and residual spaces.

Reference	Definition	Reference	Definition
(Chaline, 1999)	Friche	**(Lerup, 1994)**	Dross
(Solà Morales, 1995)	Terrain Vague	**(Leong, 1998)**	No-man's land
(Berger, 2007)	Drosscape	**(Doron, 2000)**	Dead zones and transgressive zones
(Barr, 1969); (Kivell & Hatfield, 1998); (Oxenham, 1966)	Derelict land	**(Nielson, 2002)**	Superfluous landscapes
(Smithson, 1996)	Zero panorama, empty or abstract settings and dead spots	**(Cupers & Miessen, 2002)**	Spaces of uncertainty
(Bowman & Pagano, 2004); (Northam, 1971)	Vacant land	**(Clement, 2003)**	Le Tiers-Paysage, les delaisses, the third landscape and Leftover lands
(Gemmell, 1977); (Nabarro & Richards, 1980)	Wasteland	**(Johnas & Rahmann, 2014)**	Brownfields, in-between spaces, white areas, Blank areas, SLOAPs
(Secchi, 1989)	Il vuoto (the void)		Voids
(Lynch, 1990);	Urban wilds and urban sinks	**(Bowman & Pagano, 2004)**	Terra incognita (unknown land)
(Boeri, Lanzani & Marini, 1993)	New nameless places	**(Cupers & Miessen, 2002)**	Spaces of uncertainty

These accurate classifications suggest that it is necessary to reprogram these drosscapes with social plans that transform waste into more productive urbanized landscapes to some degree. They demand a phased implementation of design that offer "clean" or "green" types of urbanization, because they are

not immediately entirely occupied [117–119]. In this regard, it is possible to consider and affirm that the concept of the territory that is manipulated and modified by man replaces nature, being explored and conquered over the centuries. On one hand, destruction, the territorial wound inflicted on nature by industrialization, generates a radical dualism with the good landscape, grown over centuries, but on the other hand, it generates the new non-places that are produced by mechanical civilization, which are places aesthetically ignored and removed. Summarizing, the new interest in the landscape once again passes through loss or crisis, because it is precisely through the latter that one understands the importance of the natural element and one feels the need to act in order to restore the lost places [1].

4. Re-Designing the Dead Landscape

4.1. Recycle and Reutilization of the Waste Material

After giving a definition of the abandonment landscape, while using distinct terminologies for the description of this type of scenario, we can state that the territories need to be reactivated and re-introduced in a cycle in which the waste that they produce is no longer a problem to be solved, but an opportunity to restart, regenerate, and transform a territory. This would also allow for creating new economies that would predict benefits, not only quantitative, but also qualitative, for spaces and society.

The transformation derives from the urgent demand, coming in turn from contemporary society, to find ways and methods to stop the phenomenon of land consumption and waste of resources. This action is activated through an "eco-logic" that was inspired by the concepts of the Reduce-Reuse-Recycle triad, now widely established in the field of the so-called Green Economy. In the strategies of urban regeneration and landscape, to the three "R" of the so-called "eco-efficient recycling", the three "E" can be combined: Economy, Equity, and Environment. In other words, economic growth, combined with social equity and respect and protection of the environment [120].

This is how the recycling project was born, which extends the notion of regeneration and defines a new context of reference, being linked to the values and materials of ecology, the environment, and the landscape. Recycling means putting back into circulation, reusing waste materials and items that have lost value or meaning, and promoting the concept of sustainability. It is a practice that allows for reducing waste, to limit the presence of waste, to reduce the costs of disposal, and to contain the prices of the production of new interventions. In other words, to recycle means, to create new value and new sense, another cycle and another life with sustainable solutions. This is where the propulsive content of recycling resides: an ecological action that pushes the existing into the future, transforming waste into prominent figures [120].

In the cultural debate, the theme of the reuse or recycling of abandoned spaces in the city is increasingly proposed and is addressed as an opportunity in terms of environmental sustainability. At the Venice Biennale in 2008, a well-known American economist Jeremy Rifkin already presented his Charter for the Architecture of the New Millennium, in which the recycling of old spaces is assumed as a pillar of the Third Industrial Revolution. The reference is a model of a city that is capable of recovering material from existing values and the built environment, especially in the presence of brownfield sites, which eliminates waste processes as much as possible. The challenge is to be able to trace the ability to make new life cycles germinate in the "dead nature" of our increasingly cemented territories in architecture, urbanism, and landscape. It is curious to note that, what we call "natura morta" in Italian, (dead nature) in English represents as (and even earlier in Dutch with the word "Stillleben") "still life", or is "quietly alive". This could be the symbol of the present research: for examples, transforming inert matter into a resource for new life cycles, to the way in which Morandi transfigured his "dead nature". This is the profound meaning of the concept of recycling [120]. As Pippo Ciorra wrote in the introduction to his exhibition at MAXXI Museum:

> "*Rebuilding instead of building: building on, around, inside, on, with waste materials; to live in ruins instead of building; re-naturalize rather than re-urbanize*". [120], P. Ciorra in S. Marini, V. Santangelo, 2013, p. 13

The theme is obviously not new, but the concept of recycling as applied to the themes of city and landscape architecture can go from a pure technical term to a key word to seek for renewed strategies and tools (design) for the regeneration to which we aspire. It considers not only the waste materials of the recent transformation processes, but also the same "inert" fragments of pre-existing territorial geographies, which are involved in processes of abandonment, marginalization, and rejection. The historian Antonella Tarpino has rightly called these territories "disoriented", that is, fragile territories or traces left as an inheritance [121]. In this vast field of reflection, it is important to emphasize that the "recognition of the landscape in every place as an important element for the quality of life of the populations: in degraded areas as in those of great quality, in places considered as exceptional, as in those of life daily", as stated in the preamble to the European Landscape Convention.

The goal is to use these "artifacts", material or immaterial, for the purpose of re-reading landscapes that provide meaning and identity to these territories, even in their new touristic dimension. This considers "system projects", rather than individual interventions for the reuse or recovery of specific abandoned areas or factories [119,120,122–124]. Discussing the city as something that can be recycled leads us to consider its rhythms cycles of life and metamorphosis. The famous words of Jane Jacobs should be interpreted in this sense, as, according to her, the city does not follow an unmodifiable biological path, but it has the ability to regenerate within itself to overcome a cycle of life and decline, reinterpreting and constantly renewing itself [125,126].

4.2. Rehabilitation Concept—A Bridge Between Past and Present

The words described above belong to an optimistic attitude that prefers rewriting the meaning of the waste concept through the use of material recycle operations. In this way, the violated landscape acquires a greater importance, contrary to what happened in the previous years, where the attention has always been paid to the natural, original, gorgeous, and untouched landscape. The "Decoupage ferroviaire" of Cezanne (1870–1871) canvas, showing the wound inflicted on the landscape by the construction of the tracks, remains, from this point of view, an extraordinary document, in the strongest meaning of the term (Figure 6). A real awareness of the destroyed and polluted earth that will be later analyzed in some films and in the land art of the 1960s.

Figure 6. Paul Cezanne—Decoupage ferroviaire (1870–1871).

The works of Michelangelo Antonioni are the first in the history of cinema to systematically give the landscape the role of protagonist. His films cover the totality of the sublime and violent nature, until considering the heavily industrialized territories of the post-war period. The Ferrarese filmmaker, fascinated by the unusual aesthetics of industrial sites and landfills of all kinds, pays attention to what was almost always excluded and visually censored, that is to the other nature, modified, cut out, and recomposed to make it unrecognizable. Antonioni will allude to the tradition of the postcard landscape, to the perennial and petrified image of nature for tourism use, and to the irruption of the landscape that is experienced as a surprise [1]. Also having these images as a reference, it is possible to say that natural beauty is now mutilated and its landscapes are degraded [127]. We have moved from a "figurative city", which is well organized by design rules and architectural models, to a "disfigured" city that is characterized by invisible and abandoned segments, excluded from the infrastructure network [128]. Summarizing, according to the words of French landscape architect, René-Louis de Girardin, we can say that the beautiful nature is threatened and we must protect it from ourselves [129].

In this sense, the intervention of landscape architect is strictly necessary towards intense humanization, which becomes quite inhuman [130]. According to Corajoud, a French landscape designer, this human intervention, should not consider the landscape as a "tabua rasa" and, consequently, seeing it as a simple "blank page" where we can unilaterally print our ideas. On the contrary, it is necessary to consider it as a place that already has a history and characteristics that the landscape architecture project should regulate. The project is guided by the landscape itself and "the work" emerges as a process of co-initiation between the creativity of the existing "subject" and "object" [10]. In relation to the issue of pre-existence, there are some authors that are interested in the topic. In particular, Laurie Olin states:

> *"The only thing introduction that we can ever know for certain about the world is that which exists now or has existed in the past. To make something new we must start with what is or has been and change it in some way to make it fresh. How to make old things new, how to see something common and banal in a new and fresh way is the central problem".* [131], L. Olin, 1998, p. 159

As Corner says, "the past is like a repository of meaning that may be mined to prompt new possibilities that transcend the given present for the construction of new horizons". To the author, landscape is something that is consistently made and remade in the perpetual process of transformation [124].

Rehabilitating, or rather, re-finding a place means projecting the landscape in the past and in the future, because it cannot subsist without transmission of knowledge, culture, and without tradition [132,133]. The tradition does not refer to some vague recollection of the past, frozen and inaccessible, but instead, it refers to the creative and processual power of which we are an integral part. Consequently, tradition is a dynamic artifact, being a result of human work and the accumulation of ideas. Tradition forms the basis for any future work. The objective is to devise new meanings (futures) from a critical and yet imaginative reinterpretation of our tradition (past). Much of the difficulty in contemporary landscape architecture lies in such recoding and transformation. How do seemingly disparate and banal meanings in the landscape discover new life and usage, renewing an art form while also maintaining its tradition? In other words, how can we turn the ordinariness of everyday situations into something imaginative or fresh, pertinent to our time but not estranged from tradition? The landscape is itself a text that is open to interpretation and transformation. It is distinguished from wilderness, which is land that humans have modified. Moreover, landscape is not only a physical phenomenon, but it is also a cultural schema, being a conceptual filter through which our relationships to wilderness and nature can be understood. It is a phenomenon beyond immediate comprehension [10]. While recognizing its remarkable value, landscape architecture has always had a fundamental mission of restoring the balance of "living works" on the dead ones. It will have to adapt rather than replace and make the most of what nature has given us; just as the old industries will have to be integrated into the general landscape, not forgetting the presence of the past

that offers a sense of completion, of stability, and of permanence, in resistance to the rapid pace of contemporary life [130,134].

In this sense, it is better not to build new landscapes, but to recover the forms of territory prior to modernist and industrialist barbarism [135], and providing a new face to the factor of abandonment, as also stated by Joachim Mitchell. His work explores the possibility that new buildings arise from the reuse of rubble and waste, which translates the problem into a resource [136]. The landscape is full of resources; it is inexhaustible in the sense that it offers a multitude of clues that tell us what it is, what it was, and what it can become. Indeed, in the flesh of the landscape, all of the stigmas of the past are imprinted and endured. The landscape is a memory and we can question it [137]. While taking into consideration the words described above, it is possible to understand that the relevant element of a landscape is its context. In fact, when a word or phrase is taken out of context, it can become meaningless or its meaning can become distorted, even to the extent of implying the opposite of what was originally intended. As Tim Waterman, landscape architect and theorist, said:

> *"When we live in a place, make a home in it, a permanent investment, we are said to inhabit it. A good place is one in which we feel comfortable, that fits us like a pair of worn jeans"*. [138], T. Waterman, 2009, p. 6

Based on his statement, it is evident that context is not less important in the landscape. The landscape provides context for everything that is built and for the activities of our daily lives. Anything that is built in the landscape needs to take into account its surroundings and its situation to be successful and sustainable and, this work, it is at the core of the practice of landscape architecture. Everything in the landscape is part of an interconnected system that forms the fabric of our existence. If any element in the landscape is altered, everything else is also affected. Accordingly, the landscape can no longer be solely considered as decoration around the base of buildings [138].

4.3. The Promotion of Art and Landscape Architecture in the Abandonment Territory

The question of the context, a fundamental element of a landscape, gave much more visibility to the landscape architecture that has experienced enormous growth and gained visibility in recent years [123]. It occurred due to the design of new parks, waterfronts, squares, public places, gardens, and the revitalization of many urban spaces around the world. It has also transformed into a therapeutic tool that has repaired the innumerable damage in the territory, in abandoned places with undefined use (old warehouses, factories, landfills, etc.), and inventing new spaces that are more suited to life in the name of industrial decline [139]. There are a number of other factors that have recently promoted landscape and that are associated with subjects of site, environment, and new technologies. Landscape is increasingly sought for its unique and intrinsic characteristics—its scenery, history, and ecology. Whether as a theme park, wilderness area, or scenic drive, landscape has become a huge, exotic attraction by itself, a place of entertainment, fantasy, escape, and refuge.

In the 1970s, these abandoned areas never healed, as described above, they are mainly brought to the center of the debate with the contribution of artists who find in these places an island within the city where they can freely express themselves. In particular, many photographers, like John Davies e Manolo Laguillo, use these places as subjects of their works. The artistic movement is in favor of the conservation of these territories, to give space to something different, of unexpected, of not accepted by the canons of the city [81]. In this context and with the following line of thought, we also witness the emergence of land art. In the hands of artists, such as Smithson (Figure 7), Heizer, Walter De Maria, Christo, Robert Morris, Herbert Bayer, and James Turrell, landscape is less a scene for contemplation [10]. They have given a completely new meaning to the concept of nature, realizing their installations in industrialized or heavily polluted places to discover the surprising attraction of uninhabited and dangerous places. Their paradoxical works do not hesitate to transform nature with the use of heavy vehicles that are used by industry. The artists agree to be on the side of the artifice, indulging in the presence of the "machine in the garden" of civilization, which amplifies it

further. Land art refers to the landscape through a constant strategy of displacement and disorientation. Its most important effect consists of making every representation impossible, disassembling the image. In this way, the works are exposed to natural elements and they are no longer rendered eternal within museums, denouncing any attempt at documentation. Therefore, the piece only exists as a perpetual transformation [140].

Figure 7. Robert Smithson—Spiral jetty (1970).

This concept has allowed for a radical redefinition of the landscape, also including the word "gap", which has stopped assuming a negative meaning. As Bernard Lassus argues:

"Today one can very easily imagine that a polluted place produces a beautiful landscape and that in the opposite a non-polluted place is not necessarily beautiful". [141], B. Lassus, 1991, p. 64

The idea of the unchangeable and insensitive landscape to change is lost. This clearly opens the possibility of the landscape to absorb the time dynamics, by elaborating strategies that are capable of dialoguing with the wastes, rather than excluding them a priori as an undesired subject. In addition, Gilles Clement, a French landscape architect, sees the residues as part of a dynamic process without interruption and in which the "appeal to architecture still seems the only appropriate way to affect the natural disorder " [113].

This establishes new operational scenarios and new lands that actually existed already, but our gaze was not used to perceive them. The future of these white areas, always waiting for a precise role, can therefore be to form areas of change, which are ready to be activated in the case of necessary revisions of the existing structure [142–144]. The landscape is transformed into a palimpsest for future scripts that overlays, and so the project becomes the tool that interacts and creates relationships. The reading of the waste and discarded landscapes is essential to act on them [145].

With the experiences of photographers, it has been possible to ascertain what enables these places to go beyond the traditional aesthetic categories, upsetting our way of looking, recognizing, and qualifying. An example is Bernd and Hilla Becker with the typological cataloging of industrial artifacts, or with photographs by Naoya Hatekeyama, which highlight the signs left in the terraced quarries that seem to be negative cities. Therefore, photography is an instrument of knowledge and it becomes fundamental in giving an unusual reading of the discarded spaces, which will in turn be of fundamental importance in the intervention process on the waste [79].

Architecture and urban planning, in particular, are directly involved in the production of intervention tools for the transformation of this waste. It is where their contribution to the conception of new life cycles in architecture, cities, and landscapes becomes essential. Based on this logic of thought, much references of an emerging group of architectural projects, which are related to wastelands or derelict lands, exist (as mentioned elsewhere). In fact, as comprehensively discussed in the preceding parts of this article, the current trend in the architecture and landscape fields is related to the revitalization of the industrial abandoned sites through the reuse of the residual matter. The purpose is to create "new" territories promoting the tourism and the economy of the countries. Specially, the extractive industry (case study of the present research) is the protagonist of this transformation, which includes different requalification projects with different applications. The abandoned pits, in fact, can be reused through many ways, such as agricultural applications, resource storage, underground warehouses, and tourism development.

For example, the abandoned pits in Heerlen, Limburg Province, Netherlands were turned into power stations for utilizing the geothermal resources. The abandoned tunnels of Wieliczka Salt Mine, which was located in the suburb of Krakow City in Poland, were rebuilt into an ancient salt mine museum for exhibiting the relics of salt industry and salt carving works, and as well as in the treatment of respiratory diseases. An abandoned gold mine in Blake, South Dakota, America was turned into a deep underground laboratory to create a deep underground environment for the experiments in the frontier of particle-physics. The Butchart Gardens, near Victoria City of Canada, which used to be a limestone quarry, is now the most famous garden in North America. The Stearns Quarry Park located in South Side of Chicago is an urban leisure park that is reclaimed from an abandoned quarry and a construction waste landfill site. The Garden of Eden in England, which was built on a large abandoned clay pit, is the world's biggest greenhouse exhibition center of plants. The Intercontinental Shanghai Wonderland Hotel in China is the first five-star hotel that was built in an abandoned pit, and the Ice World and Water Park, IWWP in China, is the largest indoor snow park in the world, which was built in the Dawangshan pit [146]. In the Salento peninsula, the Fossil Park near Cutrofiano village was created inside an abandoned clay quarry [147]. In Kosovo, in the municipality of Hani Elezit, 12 new dwellings and green zones were built in the Dimce Quarry after the backfilling and levelling of the depleted closed pit area [148]. The sand and gravel quarry in the City of Crystal Lake, Illinois, was reclaimed to host the city-owned Three Oaks Recreational Area, a 66 ha public recreation area, which is popular for swimming and fishing, and in South Africa, the case study that is probably the best known is the residential and recreational marina development in the reclaimed stone quarry at the Cape Town Waterfront [149].

According to the concept of waste reuse from quarries, there are many publications concerned with this problem, which propose ideas for the recycle of the residual material. Its applications are so many, spanning from the glass, chemical, pharmaceutical, environmental, agricultural, plastic, steel, metal, textile, and construction industry to public works. The few applications that can lead to a large consumption of this waste material are those that are oriented to civil construction industries, for the production of lime, cement, and concrete [150], for calcining acid soils in the agriculture sector, for the composition of bituminous mixtures useful to road constructions and aerodromes in the civil engineering sector [151,152]. Another idea is to take advantage of these wastes during the work period when the quarry is active in order to avoid having artificial marble mountains, unused, which cause a strong impact in the landscape. This concept recommends to use, reuse, or discard the marble leftovers for the creation of a new construction material, denominated "Marcrete" (a fusion of marble and concrete), for applications in the architecture's domains [153]. In summary, all of the applications mentioned above treat the marble-wastes in the way that they are partially removed from the original place and used elsewhere.

This first analysis of the history of the evolution of the landscape, which has focused greater attention on the derelict territories and is a part of a large research that tries to give different interpretations of the meaning of the waste reuse. In particular, the future directions of the current

work suggest to exclusively act in situ, not exporting any type of material. The case study concerning the Anticlinal of Estremoz in Portugal, an area of 280 km^2 that is composed by about of 200 marble quarries, each of which is flanked by a huge pile of wastes (about of 15 m high), which are named "Escombreira". These giant mounds of remains represent a diverse view to requalify the devastated landscape e to reuse the rests in situ, in fact, they are the main elements to promote the tourism in the place through the insertion of new buildings inside them [154]. The developed research, which is based on the concept of giving a new meaning to what is ordinary, working with the waste rather than exclude it, *a-priori*, to preserve the historical and industrial memory of the place, not removing marble-residues from the context where it belongs. These interventions will be integrated within the surrounding landscape, ecology, geology, and art, while using interdisciplinarity as a key driver for innovation.

In accordance to these theories and new methodologies, is it possible to define, with a single explanation, the landscape? As discussed in the previous sections of the article, it is too simplistic to define it according to a unique expression, but, after these considerations, the landscape can be considered as an alive and ever-changing entity and an infinite sum of individual actions that interpret and modify a place. It is born, evolves, and dies through periods of happy growth, long periods of stasis, and sudden crises and the community that lives in it, recognized herself as in a text of perennial evolution [155].

5. Conclusions

This article highlights the importance of the physical element "Landscape" in promoting greater attention towards it. It took several centuries for nature to be represented as an object of pleasure worth of attention. In fact, the meaning of the word "Landscape" has changed over the years; from peripheral, exclusively considered as a mere background in pictorial representations, through central, also gradually acquiring importance in the field of architecture and art, particularly with the birth of land art. This new movement directly acts on the landscape, permanently or temporarily modifying it, with the introduction of enormous installations. These pieces are the result of creative and artistic choices that place the real landscape as the main subject.

The present work, while introducing the various disciplines that are related to the Landscape, has provided brief but concise theories in this regard in order to demonstrate the versatility of the natural element, belonging, in fact, to various fields of intervention. It has started by addressing the issue from a pictorial and historical point of view and then proceeding to analyze the main regulations that concern this sector. Subsequently, it has discussed the imaginary component of the landscape, its relations with nature, its geographical, cultural, interior, social, global, identity, as well as aesthetic aspects. This summary has served to frame the concept of landscape and to address, with solid foundations, the central question concerning the relations between the pure landscape and the disruptive industrial modernity.

Our era includes a different view of the natural territory, in particular, showing nature strongly humanized, due to the birth of industries and the presence of industrial artifacts that are located on the land, but also strongly altered in all its appearance. We witness the birth of the concept of "*Drosscape*", "*Friche*", and "*Terrain Vague*", their scenarios made of machines, wastes, and abandoned landscapes after being widely exploited. They represent a burden for the municipalities that fail to make them profitable, but at the same time symbolize a virtue for all those who can see their potential for re-use. The present research has focused greater attention on the second aspect, having, as its central theme, the redevelopment of these devastated territories through the reuse or recycle of residual matter. The issue has been addressed by analyzing the meaning of the word "reuse", which is important in recovering the existing values of an environment and eliminating waste processes in this way. Several cases of study have been described concerning the requalification of the extraction industrial sites, to make understand the current trend in this field. Some methodologies to reuse the residual matter, from the industrial activity, have also been illustrated. All of these applications treat the marble-wastes

in the way that they are partially removed from the original place and used elsewhere. The possibility to act in a different way has been shown through the description of the principal idea of the future directions of the ongoing research. This innovation consists in working with the waste in situ rather than excluding it *a-priori*, to preserve the historical and industrial memory of the place, not removing the marble-residues from the context where it belongs. A case study in Portugal has been presented where, according to the surrounding landscape, a new architectural use and a new configuration have been conferred to the huge mounds of waste that are placed in this location. Finally, through this article, the ability to germinate new life cycles within the "still life" of our increasingly cemented territories has been highlighted.

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