

Rejected Landscapes-Recycled Landscapes Waste Disposal and Recycling Sites Perspectives and Contemporary Approaches

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Abstract

This research shows the changes of a landscape in the presence of waste, reality that invades the territory in many different ways in time and space. At first the issue of garbage is faced according to the language of creativity and secondly on how the inevitable accumulation of garbage designs our new and unexpected astonishing landscapes. Then, through a list of projects for more or less controlled recovery altered areas, how the present territorial dimension is inexorably besieged by garbage is explained. With a knowing eye the time before research is here: to the critical, strategic and objective evaluation to report through a cartographic survey the present conditions and the effective distribution of plants for waste disposal on the Italian territory. We then single out a territorial section touched by the phenomena: the area between Milan and Brescia and the territorial morphology so altered and the inevitable environmental transformations. Lastly, through a careful study of the present territorial status, conceptual models take form of possible and potential, present and future, scenarios of altered areas of the presence of waste and collection plants.

Keywords: Waste-Landscapes-Dump-Reuse-Identity-Project

Introduction

The city is a “widespread” and “continuous” one, it’s an unbroken and smooth repetition of alike realities which does not tend towards reducing complexities, revoking conflicts, but rather assimilating them to the point of nourishing. The condition of the city can be discovered and studied by breaking up systems which are always more similar. Therefore, the city, in it’s continuous transformation always proposes the same system, identical and indistinct: the historic center with its walls, the park with its limits, the industry and its fence... a continuous interchange of different areas opening up to crisis, fractures... producing oscillations. Isn’t it of extreme interest to inquire into the fractures that are constantly produced, and investigate the extraordinary bursting energies, and catch sight of certain shadows in the unheard of, embryonic models to let the future pass away or to cultivate it and read in non-existence the full reality of their presence? Plotino wrote «[...] the soul of the world provides sensations. The world is a living-being in which everything sympathises following the rules of correspondence [...]» (Pierre Hadot in *Plotino o la semplicità dello sguardo*). The cities, the cities full of life and different neighbourhoods, are marked by margins that people feel when they walk, maybe giving a pleasant sense of going home or just “taking a walk”. The territory is not empty, it’s not still, but it is not even uniformly full, it is full of presences, strengths, fields and different domains. The aim is to catch the observers’ attention, propose to stop and focus on places that are normally bypassed with a fast glance or with a “eyes shut” look. What captured my interest to choose this topic of analysis, is a sort of emptiness full an atmosphere of change. The more I look, the more I find. Walking alone along the streets, even with plugged ears, we speak, converse constantly with the environment which unfolds through images that compose it: traits of people passing by, gestures, actions, reactions, moreover... road signs, residential areas, industrial areas, spaces left unexplainably empty...objects and meaningful landscapes that “speak”, sometimes even brutally, with their own presence.

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There is a complicated world of significant images that lend themselves as an “instrumental” basis for this research. I remember the French director Godard who has no passion for the object instead, he puts everything at the same level: his pretensual “indirectly free” is a front view arrangement of a thousand details of the world, without solutions of continuity. A “film” is always scrolling, just for the pure pleasure of giving back a reality in little pieces. Under this film, another film is scrolling, the one we would have liked to accomplish or that we still want to accomplish. This kind of motion picture representation can be found in the design of the city, for example, in the image that Colin Rowe gives us in *Collage City*. As an observer of a multitude of realities, a gasp will be the object of my research. I gather the sollicitations of the presences around me, and it's the character from lost places of marginal areas and “extra areas” that I consider as space par excellence, and this is where, in my opinion, the future of the cities harbors, this is where it takes shape and becomes meaningful. Our cities are not conceived in a flexible fashion necessary for these places to exist: the garbage dumps, the incinerators are forgotten spaces, pushed back, marginal. So while roaming, I decided to observe by peering, without concentrating on just one point, but trying to grasp the indistinct totality of the images in front of me. Now in the big picture full of animated and in-animated reality, it is waste that draws my attention for the mere fact that it is always present.

Anyhow not an easy choice to talk about waste. It shows up with the passing of time and its present arrogance is diluted in the ironic light hearted daily needs. With that impulsive air, decadent and nostalgic, waste shows up in our landscape with boldness and with its own obstinate silence of abandon. More than just a heap of waste we mean a sum of frames of mind, an archetype of a national story. For example, dumps, sites far from our common “wanting to see”, know how to be containers and at the same time, witnesses of the present, sincere mirrors of the world surrounding us. Abandoned objects, in some way, become protagonists and evoke something that is no longer there, they give us back unpleasant images, hostile and sometimes even catastrophic... however there are new architectural languages connected to waste management and disposal: incinerators and controlled dumps are an example. They create new architectural scenarios, landscapes always closer to urban centers we have to learn to live with and consider as planning opportunities. Therefore it's the time to put the fundamental question to start off this trip into my research so: how is landscape transformed under the influence of waste, presence, collection and disposal...? If by chance we could imagine a picture-dictionary we would have to imagine a never ending one. I don't have a “catalogue” but an infinite possibility and in the search of a general organization as a fundamental and preliminary means, I can only collect concrete, present terms. Therefore, the study concerns what the needs are, which are the possible alternatives crucial to the two basic moments: the collection and the disposal, which aspects concern the technical part, management, norms regarding waste, the situation present today in our territory are the key aspects of this research. We can observe that we want to be even too angelic: our city wants to get rid of odors, bad or good ones in every way possible... dirty is politics: politics is shame, but the degree of shame varies from culture to culture, from one historical moment to another. An objective condition however, is the existence of the need to dispose waste and this is why I believe it is a reality we need to accept and take advantage of, not to battle against and see as a shame and, therefore, need to “hide”.

I ask myself if it is possible to look at these places by pushing away the representation given to them up to now. According to Godard, history today is contained in the history of cinema and the rest exists in the images we have. Our eyes are compelled to see through lenses of those that have already taken the picture, filmed, documented? In effect, I have no choice: form and direction are already embedded in the territory, and my task is only to reveal them, by building little by little the inner structure: the rhythm, the melody and harmony, the out of key places, subjected to my study. Consider in this case the different incinerators, the fenced in places for waste disposal waiting to be treated to later reach other contexts, other dumps and consider all those spaces that interest the theme, object of this study. The environment is just not a figure. In it there are objective physical conditions and proportions of hygiene, climate, and of pollution. What do we feel in observing the magma of waste invading the earth sometimes in a respectful way, controlled, and sometimes completely free imposing without respect? The landscape continuously modifies to accommodate disposal and collection of waste but how aware are we that it's a reality that will always accompany our life and how much are we willing to accept it and see it as an opportunity to plan and not as a problem to battle (a lost battle at the very beginning, in my opinion)? Then, I ask myself if the attitude to hold with respect to waste disposal plants can change and be of example from the course that took place since the second half of the nineteenth century; industrial areas once perceived as inhospitable hostile places, transformed into surprising sites, in actual planning opportunities as the different “open space” areas or art galleries set up in abandoned factories demonstrate.

In effect, we observe that moving away any rational human use allows more freedom of action and mental reconstruction. Many abandoned territories possess the appeal of their own ruins: weakened by controls, they are places of free action play and imagination. Similar aspects, I can say, to the pleasure felt in front of ruins in archaeological sites, abandoned spaces arouse particular emotions maybe because they remind us that their essence of beauty resides in the fact that they do perish. Let us not forget, that we always have to confront ourselves with decline, decadence and scraps which are an integral part of living and growing. Proof can be seen in the inexorable growth of urban waste, that seem to emerge from everywhere, sometimes in an incontrollable way. Today, in fact, nothing can be disposed of easily, the poison of the past, inexorably come back. The presence of waste is quite significant on our territory and it is impossible to continue to pretend not to see. In the near future every community will have to deal with the issue of waste more and more and at the same time communities will be less and less willing to become the garbage disposal of other people's products leading to the Nim by syndrome (not in my backyard). We can no longer ignore our scraps, send them to Third world countries or bury them in deep or remote places, sooner or later they will come back to torment us. In my opinion, despite the many technological and economic problems relative to waste disposal, the main difficulties to be able to treat squandering and decline are in our mind.

We are, in effect, obsessed by cleanliness and by permanence, but isn't it about time we accept wasting away, and learn to see continuity in the cycle of production, consumption and disposal? Let us observe that the more material production and population increase, the more our waste increases and it becomes difficult to eliminate and space for dumps become more and more difficult to find. Cleaning the world, protecting it and transmitting it should become just as important as using and making it even if we are stuck in a society that is careful to consumerism as a form of well-being and is horrified in front of obvious consequences, a society that exalts creation and despises desolate places and seems not to want to accept the continual flow and nuances. Do observe the magma of waste and how it is received by the landscape and notice how it sometimes appears as a protagonist, sometimes as a silent and distant scenario, so, this is fundamental aspect of this study. Therefore the problem of collection and disposal of waste is ancient, but has become a crucial issue in a relatively recent time, as far as quantity to recuperate, recovery of resources to deal with, novelty and variety of materials to destroy and disposal techniques at hand. It is known that a "consumer society" produces an extraordinary quantity of scrap and it is now clear there is urgency of change in disposal management. In effect, this is a reality that invades the territory in many different surprising ways in time and space. However, even if today we can rightly complain of so many offences caused to the environment, by pollution, by the increase of dumps or incinerators, or disordered heaps of scrap at the outskirts of the city, the past isn't certainly "that clean Eden" that many nostalgic imagine (no one seems to want incinerators, as if rubbish, always belongs to others, or could dissolve by itself). Laws, decrees, "cry outs", governments (good or bad) of the past, suggest that waste still is too much for many cities of the past and for their rudimentary means of disposal. Even if we can rightly complain that today our roads smell of car gas emissions, the "*odors*" our ancestors had to smell were not the best.

In the past, there was very close contact between city and countryside the habit of cultivating small plots in the cities probably contributed to containing the size of the problem of disposal of household waste. The modalities of this treatment is summarized in the use of saving and recycling waste food, clothing, as scrap of all kinds were reused and recycled. The non-edible parts of vegetables, the surpluses of food, animal and human manure was used as fertiliser. The destination of waste was not unique, although always taken outside municipal limits, but in different places, depending on the districts of origin. Thus, a large settlement came about, known to the citizens of the place as a "village of garbage collectors", in which several hundred people, were all committed to collecting, sorting and waste recovery. The amounts collected constantly were growing, asking, then, more storage and better techniques for disposal. Therefore a growing proportion of waste, not recycling, was directly brought out of the city and buried in landfills. There were, in effect, disused quarries, where waste was stored without too much safeguard, in fact the concept of "controlled discharge", had begun to make way only in the early '80s. The present territories are the negation of the built city, areas which are pits or in the process of transformation. A new area in the world is thus formed, a "third space". This space is an etherotopia in the sense of what Michel Foucault meant, that is, an "off" space, abstract, imaginary, a place of nostalgia and a place of presences, but also a "suspended" place which continuously deals with marginal conditions and a future condition with multiple identities.

Waste dumps, incinerators...are "hidden" places, located as far as possible from our daily life, places to defend us from, and to be ashamed of; why not observe them from another point of view, why not investigate and accept their existence and have the courage to declare their presence, their need and allow their future to multiply? We want to be even too angels: our city wants to get rid of odors, bad or good ones in every way possible...dirty is politics: politics is shame, but the degree of shame varies from culture to culture, from one historical moment to another. An objective condition however, is the existence of the need to dispose waste and this is why I believe it is a reality we need to accept and take advantage of, not to battle against and see as a shame and, therefore, need to "hide". I ask myself if it is possible to look at these places by pushing away the representation given to them up to now. According to Godard, history today is contained in the history of cinema and the rest exists in the images we have. Our eyes are compelled to see through lenses of those that have already taken the picture, filmed, documented. In effect, I have no choice: form and direction are already embedded in the territory, and my task is only to reveal them, by building little by little the inner structure: the rhythm, the melody and harmony, the out of key places, subjected to my study. I find myself in the conditions of the founders when they had to domesticate an uninhabited place or a place inhabited before. A territory, for those who have just arrived is actually *caos*, a land that has to be acknowledged for its power, and to work with it by looking for it or avoiding it, strengthening it or weakening it. I am completely unaware of the reality in front of me although in spite of the fact that it is always present and in every day of our life. Waste, infect, is a resource or a problem we are faced with in different ways everyday.

An English social historian, Robin Evans (1982) described the conditions that have led to the present structure of our environment: «[...]daily life has become a theatre of private shadows[...]». Cities are scattered by buildings that do not belong to us, shored up by questionable, ambiguous, insignificant, indifferent architectures. Consider in this case the different incinerators, the fenced in places for waste disposal waiting to be treated to later reach other contexts, other dumps and consider all those spaces that interest the theme, object of this study. The environment is just not a figure. In it there are objective physical conditions and proportions of hygiene, climate, and of pollution. What do we feel in observing the magma of waste invading the earth sometimes in a respectful way, controlled, and sometimes completely free imposing without respect? The landscape continuously modifies to accommodate disposal and collection of waste but how aware are we that it's a reality that will always accompany our life and how much are we willing to accept it and see it as an opportunity to plan and not as a problem to battle (a lost battle at the very beginning, in my opinion)? Do observe the magma of waste and how it is received by the landscape and notice how it sometimes appears as a protagonist, sometimes as a silent and distant scenario. In conclusion, I have observed a condition of the landscape, as it presents itself, as in a sismograph in motion, a reality that invades the territory in many different surprising ways in time and space.

1.1 Hermeneutics of Waste

The problem of collection and disposal of waste is ancient as that of wastewater, but has become a crucial issue in a relatively recent time, as far as quantity to recuperate, recovery of resources to deal with, novelty and variety of materials to destroy and disposal techniques at hand. It is known that a "consumer society" produces an extraordinary quantity of scrap and it is now clear there is urgency of change in disposal management that limits the dissipation of raw materials and reduces waste making recycling possible. However, even if today we can rightly complain of so many offences caused to the environment, by pollution, by the increase of dumps or incinerators, or disordered heaps of scrap at the outskirts of the city, the past isn't certainly "that clean Eden" that many nostalgic imagine (no one seems to want incinerators, as if rubbish, always belongs to others, or could dissolve by itself). Laws, decrees, "cry outs", governments (good or bad) of the past, suggest that waste still is too much for many cities of the past and for their rudimentary means of disposal. Even if we can rightly complain that today our roads smell of car gas emissions, the "*odors*" our ancestors had to smell were not the best.

1.2 Funeral Rites of Extinguished Goods

A mountain of waste which we have to absolutely get rid of hangs over our head. But how? Are we supposed to occupy all the space available? Concerning domestic waste the solution is quite easy because once we have moved the waste away from our houses, there is a pick up system, whether efficient or not, which has the official task of "taking the garbage away" and "recycling". The solutions adapted to eliminate waste are simply a means of taking them away from our senses: in particular from our sight and from our sense of smell. Therefore, waste is "buried" in landfill sites; it's melted down in meteoric waters and in water courses going into the sea; it's abandoned in external landfills; consigned to the catharsis of fire and by this sent to the sky or just simply left to external landfills to be taken care of by atmospheric agents. We are surrounded.

We find waste everywhere: along the city streets, the highways, the railways; in the industrial areas as well as in residential neighborhoods; at the mountain peaks and in the woods; in space; in the fields and on the beaches; floating on the surface of the seas, of the lakes and settling on the bottom. It is not possible to overcome dense smog stretches of asphalt and cement, streams of cars, slurry, smelly swamps and much more separates us from uncontaminated lands. To go back to nature we have to look at this destruction even through a network of interests and investments involving which weights upon our lives no less than cement and steel. The problem of waste is only relative to its disposal. Managing waste means the necessity of a funding plan and plant location. Actually the issue does not come from the lack of finances, nor the lack of plants, not even by people opposing its location, however, mostly by the fact that waste is produced; too much waste is produced, even when it could be relatively easy to avoid doing it; plant disposals are planned as well as the site but the solution to the reduction of waste or easy recycling is not. The fact is that disposal plants or waste treatments continue to be necessary and locating it somewhere will be necessary. The question now remains, how and where? In principle, through a plan with the purpose of sharing in the fairest way possible, the polluting loads and so to distribute small plants on the territory uniformly by introducing financial and environmental compensations for the most-struck populations. Paul Valery wrote in *Il mio Faust*: «The problem of waste basically comes from its material nature. Waste occupies space, it has volume and so it suffocates people besieging from close up. The first image that comes to mind by the concept of garbage is an incumbent mountain that continues to grow and that maybe the better even on the environment of the people» (Paul Valery in *Il mio Faust*). Let's try to climb this mountain! We need space: an "empty" space, whether land, water or sky, in order to deposit everything we no longer want to see. According to Heidegger describing emptiness: «[...]the essence of the containing emptiness is collected when offered[...]» (Martin Heidegger in *Saggi e discorsi*).

Following this research I noticed that waste makes up a world apart, a complex one and symmetric to that of goods: behind the mirror, this world of consumerism reflects itself and becomes conscious of itself; giving us back the part of the products that is more real, the ones that populate our daily life. Waste is the "dark side" of a single reality, which indissolubly associates resource and waste. We can say that we shouldn't throw anything away, because there is no one "way", since materials can change form but not disappear. Smog, garbage, sewage, slurry, waste, scraps and rubbish are the normal flow of urban waste but also buildings are abandoned, moved, demolished and entire areas are removed and rebuilt. Materials degrade and age, they are shattered and reused, some central areas of the city can be abandoned, first slowly then faster, uses that are escaped and not wanted are deviated towards marginal and areas and entire cities can suffer abandonment and decadence. In addition, in ancient cities, old monuments were used as caves for the rocks, beams or for covering material. I remember for example the Coliseum that was used as a quarry, and Roman aqueducts were closed to make living facilities or the heaps of old debris of the great fire of London was transported by sea and used as filling material to created the new Russian city of Saint Petersburg. So, the wastes cannot be "left" without blocking the physical and social space. Waste is nothing but a sensitive manifestation to sight, touch and smell. Goods go from one hand to another with an entire flow of waste.

Therefore, waste represents the end of the economic process that goes from production to consumption, while resource represents the beginning. Nature does not produce waste, a certain circularity exists; what is waste for one process becomes food for the following processes or parallel. The advent of the industrial society marks a general metamorphosis of waste: first of all, the production of waste increases drastically, secondly the composition of waste changes and finally the habit of use and throw-away appears. Goods and waste are, therefore, aspects of one single reality, but at the same time they exclude themselves reciprocally, as temporarily distinct phases of a complex process or as representatives of two motions diametrically opposite of the human behavior. The first directed toward buying and possessing, the second directed toward pushing away and oblivion. Therefore, this society careful only to consumption and made up of objects and images that pass without leaving any trace, will soon bring us to have no more "space". In effect, we notice that in our daily life we are constantly put in front of our earthly attitudes with the associated risk of having to face the "end" of the natural environment, as highlighted by "the report of our living planet" presented at the World Wide Fund for Nature, which states that our biological imprint, that is, the productive surface necessary for a population to sustain its own resource consumption and its needs for waste observation, in some countries it overcomes abundantly the capacity of the Earth.

In other terms, if the whole world lived as a European, it would take more than two planets and if it consumed like an American, it would need at least five but this is purely from the ecological point of view because this report concerning the biological imprint talks about only the "productive surface", therefore about space, and not space-time and therefore it does not consider the acceleration of technological progress that reduces the area taken up to nothing. In addition, we remember that production is not the same in all countries and we usually export to other countries what cannot find space in the original one. In principle, this use of the environment follows a logical thought but as we have already said and as we will see later the attitude of waste exportation is not an acceptable practice and it is difficult to believe that anything can change in a near future. However properly this storm that transforms the past into a heap of debris, says Walter Benjamin, is "what we call progress" (Walter Benjamin in *L'opera d'arte nell'epoca della sua riproducibilità tecnica. Unicità e Duplicità secondo Benjamin*).

1.3 The Destiny of "Refuse" in a Impure Society

Modern populations had, in effect, destroyed cities, towns, nature, landscapes, people, souls, memories, the sense of inviolable and sacred, tradition, art, reversing all this in the obese paroxysm of consumption and waste, in overflowing garbage disseminated everywhere. Yes! Garbage and degradation became now "places" and over this another reality swept over and proliferated. Pier Paolo Pasolini's poetic production, in my opinion, represents the highest point of celebration, inspiration and description of rejection in every direction and in every sense. After all, Pasolini was guided by the obstinate intention to unmask indifference, apathy, the voluntary and perverse cover-ups of overflowing heaps of waste and rejects, defenseless victims of immoral forms, criminal ostracizing policies, negation and rejection. Therefore, a rejection of people, things and objects, pitiless and deliberately thrown out and poured randomly at the margins of existence, in dark inaccessible corners of infinite suburbs and outskirts of the world, in the new fields, therefore, the collection and concentration of the global planet, the new slums become waste dumps and illegal rubbish of humanity from which we are consciously or unconsciously surrounded and from which we keep ourselves at proper distance. It's really a "dirty deal": waste, together with "the illegality of existence" is scattered, forgotten, profaned, disseminated everywhere, representing this way a reality where you can't even breathe, indecent and disquieting story of physical and moral degradation. On the other hand, there is an inefficient, removal compulsory machine under political and institutional powers that have become spokesmen in bad faith of a discontent and general discomfort with the interest of wanting to create concealment systems and police operations and cleaning only in appearance in line with a philosophy of public decorum. The objective is always wanting to restore order, give back and guarantee at least superficially a coat of hygiene, of transparency and purity, after all a world which is apparently clean and re-cleaned obviously better, but actually it is a distorted, hypocritical strategy of control, rhetorical, fatal and total that doesn't spare anyone. This determining, environmental pollution and not only, and today it is practically a failure. We could however know, perceive, or simply stay in the dark and not know exactly what is happening.

Consequently, I feel that today we can't back up or assist indifferently to everything that is happening around. In my opinion, it is necessary to accomplish a fearless act of rejection for waste, a step ahead assuming an attitude of disobedience, insubordination and mutiny with regards to those that want us to be unaware, but also seeking an unprecedented "dignity" of the waste to face the hateful intention to close their eyes and deny the world hide from the world. Thanks to the description of the Pasolini, and of others that have treated the topic of waste, unusual images have come to my mind, distinct glances, thoughts... which have helped me to investigate in an innovative way, a reality that is just as present as it is hidden. Waste, in effect, are in the foreground as well as the background, "independent" and at the same time connected to the city context. In addition, I would like to remember Michael Braungart in *Cradle to Cradle: A Call for a Revolution of Abundance* highlights how a different way of planning has to pass inevitably through a new way of viewing and perceiving our waste. Therefore the text presents itself like an unusual advertisement toward change of life which will determine an improvement of environmental conditions, supporting my thesis that says that change in the creation of innovative and interesting architectonic, environmental, urban projects... of those areas, feared today, subject to recycling city dumps only if first we assume a different way of seeing and living with our waste.

2. Waste, the Destiny of all Goods

What does waste represent in each of our daily life? How do we perceive waste in our imagination and how do we elaborate it through the languages of our creativity?

Waste and unusual objects have often gotten the attention of novelists, poets, directors... We see that obsolete objects, waste, "take possession" of literary texts parallelly to their progressive settling in the real life partly starting from an "historical time" that coincides, roughly with the industrial revolutions. Literature explores this topic by speaking of landfills, who works there, who lives there, for example, like in *La poubelle agréée* by Italo Calvino, or sometimes literature gives us surreal stories of a rare delicacy as *Junk Girl*, taken from *The melancholy death of oyster boy* by Tim Burton. It is in literature that the rejected object, abandoned, second-hand, obsolete, useless, seems to have taken revenge over the functional, useful, intrinsically valuable object because it allows us to designate and allude to an aspect of the human condition that the world of goods and functional relationships tend to remove or erase the places of waste, live and work with them, the "spirit of dead things", these are aspects that often touch each other, they overlap, they live together and often, as we have seen they are described in literature but, not only because even cinema regarding the theme of garbage seems to renew itself in continuation, as the WALL-E, or, in 1915, Vittorio De Sica in *Miracolo a Milano (Miracle in Milan)*, even Antonioni in the 1948 documentary *Nettezza urbana (Garbage men)*. Finally, I remember one of the six episodes *Che cosa sono le nuvole? (What are clouds?)* of the film *Capriccio all'italiana (Italian whim)*, directed by P. P. Pasolini in 1967, where the last scene takes place in a land-fill site where the "marionettes", half-buried by the garbage, notice the skies for the first time and see light white clouds floating by. I think the director, through the overlapping of "world thrown out" and "world lived", expresses the wish that life is the dream of a dream, that is, the representation of a representation. There are many examples of films, both Italian and international. What is surprising is that the theme has influenced authors and continues to do so with different productions ranging from comic to grotesque, dramatic to fantasy...

2.1 Waste cannot be Erased

In the past we observed that waste was something to have become harmless and invisible or to take far away. In recent times, instead, the idea has been that minimizing waste results being the best solution: reducing consumerism, making things become permanent, keeping them with care... It is time to say, that waste cannot be erased and we have to begin to consider them as complimentary elements to every reality that surrounds us. The entire path, from the production and the reuse, up to the elimination, should, however, be subject to particular attention and considered as one only reality. We live in effect in a world where the idea of reuse should be taken on even from the same industries that produce. Moreover the art could help that needed change we should be moving towards, careful to recycling of goods and far from the philosophy of "use and throw out" which would bring us to a scenario of disquieting heaps of waste very soon!. Many artist, infect, have taken conscious positions with respect to this topic, concentrating their works on the beauty and on the necessity of decline. In effect many artists use scrap material for their own works. Even if garbage often repel us and is often a cause of sickness, they have a power of suggestion of a sort of unknown continuity.

2.2 Waste... Always Further Back from the Origin

We know quite clearly that since time past cities sat on their own waste that gradually grew all around. Daily life garbage was directly poured into the street to be rummaged by animals or accumulated until strong rain would sweep it away. Progressively we can see that waste started being pushed away from its origin and in our daily life scraps are brought as far away from our sight possible not only from our senses but also from our thoughts, in effect, knowing they are close horrifies us. City waste is transported far from the city limits within bordering states and toxic waste is exported, quite often to Third World countries. Waste, infect, is usually deposited in the borders of settlements, in areas where people with no power live, where rights on land are weak and there are no controls. We can observe the attitude inclined towards pushing away at different levels: for example let's consider the houses where there are cellars, attics or garages where we can deposit what no longer has value for us, let's just consider the residential suburbs where heaps of material that is no longer useful are or garbage cans found at the borders of the neighborhood and finally let us observe where the public dumps or the polluting industries are found, in the limits of the confining cities. We try to hide everything that has past, been used, consumed...to the point of polluting even places distant from our daily life. After all, accumulating human waste is not immediately dangerous, materials discarded in the past can be used today for other objectives. The reevaluation of old waste is a well known history that is repeated every time demand changes and technology advances.

2.3 Borderline Cases

Maybe we are not aware of the enormous proportions of the problem but if we lend attention to our daily life, where even our supermarket trolleys are transformed in electronic equipment, then we cannot avoid noticing the kind of risk we are running. So we see electronic waste flow abundantly toward Third World countries as the illegal dumps in the city of Ghana show. The accusations come from Greenpeace that, with an "industrial spy TV" charge, managed to build a path of the poisoned ships that leaving from Anverse, in Belgium, where electronic waste coming from Holland, Germany, Italy, Denmark and Switzerland, gather and reach Africa from where they export 20-50 million tons of technological waste every year as highlighted by UN estimates. Therefore, far from "naive" commercial images Greenpeace points out that traces are lost of about 75% of technological waste products in the European Union and over 80% of those products in the Unites States. Ships officially loaded by "second-hand electronic goods" come in the greatest port of the country, Tema, and from there they go to a disposable centre of Agbogbloshie, in Accra, the capital, or they get lost in the waste dumps spread out a bit everywhere in the country. Besides Greenpeace there is Dan Watch and Consumers International who report the serious African situation concerning illegal electronic waste that reach Europe and America and end up in open air dumps. The scenario is certainly less simple than what I have tried to simplify here, however, there are mysterious losses of dangerous waste and lots of illegal dumps, there are illegal markets and people without scruples. This and much more exists, therefore I would like to ask a question on a simple fact; there is evidence of mysterious collection points with just as mysterious destination toward poor places where the quality of life is already precarious, people get oppressed, exploited, worsened... all this waste. Africa is the end of a tragic trik, a new destructive action and also without remorse, without repentance or limit that continuously grows and we persiste in wishing not to see.

Prospective: Extreme Architecture

In opposition to these devastated conditions by imperious presence of waste I would like remember that in some cases garbage has become, instead, a source of social emancipation as, for example: in Cairo, in Egypt, garbage men, known as "Zabbaleen", gather one third of domestic waste, almost a million tons a year, and they manage to recycle and destine to compost more than 80% of the collection and one of the districts called Mokattam, has become the headquarters of 700 small business for waste collection. Masdar city, comes to mind as an eco-compatible city, zero-carbon, zero-waste. Here, the urban plan by the London architect Norman Forster's & Partners at first sight it seems to be pure utopia, but if in these frenetic years of development of Dubai and of the United Arab Emirates, is that an utopia can be achievable par excellence! Masdar will be a city exempt from polluting emissions, there won't be any waste storage because waste will be 99% recycled while the remaining 1% will end up in the appropriate compost plants and incinerator. Is this the future? I don't think!!!

3. Prospective and Contemporary Approaches. Bringing Back a Sense of Place

Waste is invading our world, it's invading it and it cannot be unlimited it. It's a "part" that you can't help confusing with "the rest". According to Zygmunt Bauman, waste always tends to go towards a "*liquid state*" (Bauman Zygmunt in *Modus vivendi. Inferno e utopia del mondo liquido*), that is to say, waste does not conserve its form for a long time and tends to transform itself in something else, it overflows, it spreads and drips non-stop. Waste appears to be like a river flooding our planet. Under the push of globalization, our planet is becoming a gigantic waste global dump with an enormous quantity and variety of slag. I actually believe that when the way of life of the modern world stopped being a reserved privilege of elected lands, the "empty" lands, or the ones belonging to "no one" (especially the territories that in virtue of power struggles can be considered empty and poor) the have become the primary outlet of disposal and waste storage. After all, despite our reluctance regarding this, in my opinion we are essentially what we are throwing away and what we don't want, and we can actually say "*we refuse, therefore we are*", as a modern variant of the famous Cartesian phrase "*cogito, ergo sum*". In effect, we can observe that it is an unequal struggle, a continuous research of "tabula rasa" or removal, bringing to zero, re-cleaning or recuperating neat spaces, to start and restart again. Waste bring to mind daily negative images, hostile and sometimes catastrophic... however, there are new legal architectonic languages for management and waste disposal: an example are the thermo-plants and controlled wasted dumps. They create new architectonic scenarios, landscapes which are always closer and closer to urban centers and sooner or later we have to learn to live with them. Today, research is concentrated on energy extraction by means of incinerators, solid waste and planning the waste collection and disposal body establishing development phases and indicating future management.

The controlled disposal dumps, remain active for many years and as in all containers, once their capacity is exhausted they can be closed and become transformable areas, therefore an opportunity for planning. Regarding this, our history seems to leave us with an encouraging image; there are in effect, good examples of this: "Monte Stella", known as *La Montagnetta*, found in the nor-west area of Milano, initially formed with an accumulation of debris provoked by the bombing of Second World War and then 1945 with other material coming from the demolition of the last stretches of the bastions and also, in time, general rubbish. Other examples of accumulation, in time, of waste and *post-war* debris are the 13 artificial hills in Berlin. In addition, I would like to remember the waste deposits (although with a different formation) in State of New York: Randall and Ward islands or, how can not we mention, the famous *Fresh Kills* in Staten Island, the largest waste dump in the world. Around 1947 Robert Moses assigned it to be a place of holding indifferently, solid urban waste material produced by NY and its vicinities and, only in March 2001, with mayor Bloomberg, *Fresh Kills* stopped receiving waste and a competition for a recovery project was called. September of that same year, however, it was opened partly to receive the rubble from World Trade Center disaster and only later did the classification list for the competition come out.

Field Operations came in first. So James Corner plans the general project strategy, subdividing into four periods: initially drainage procedure, to guarantee environmental safety to later specify a differed opening and general management this is how the complex and suggestive trip into the recovery and "re-establishment" of the dump begins to take form. In this case, like other, the rubbish are, also, considered as sources of energy as some urban waste dumps from which methane gas can be extracted or the incinerators, with energy recovery, demonstrate. But waste dumps, incinerators... have always been considered dirty places, hostile, smelly to relegate at great distance from inhabited centers and only in a few cases have they been located near the urban centers and become an occasion for the city. We note that most of the cases of landscape transformation altered by waste storage, more or less controlled today green equipped areas have been made. I would like to call to mind the Beexby Park, a recovery of a polluted land, difficult and hostile, in front of the San Francisco bay, or the Park Tejo and Trancao in Lisbon, designed by Hargreaves as also the Louisville Park or Candlestick Park in San Francisco, and many other. We can observe, however, that on the issue of recycling storage and recycling plants of urban waste, both in Italy and abroad there has been very little literature and studies dedicated, except in technical-scientific reviews, not very interesting from the architectonic point of view, consequently... research is essential.

Only recently has the issue of waste become an argument of discussion analyzed in conventions where an approximate attitude arises toward a meaningful change. Recycling projects do not try to hide or restore past conditions that evidently cannot come back, but they present solutions not strictly connected to the preceding state but consequentially to this new condition, becoming thusly quiet and eloquent testimonies of something that cannot be erased but has to find its own urban dimension, and so I ask myself, which? Evidently a project in urban and environmental scale cannot be removed from the structural dynamics in which this is subject to and cannot be measured therefore with the different context of intervention without forgetting the constant rapport between conservation/ recovery/ transformation. I believe that conserving, managing and recycling the so-called "*terrains vacue*", whether it is about industrial waste spaces of the city and the land, it does not simply mean reordering them in order to incorporate them once more in the city production mechanism where passing automatically or according to consolidated procedures from state A to state B. I would like to remember what Michael Heizer did in 1985, in Illinois in the open air, strongly polluted by industrial waste, building a gigantic sculpture "*zoomorfa*". Another important project called Earthworks: Land Reclamation as Sculpture proposed, in 1979, by King Country Arts Commission near Seattle, as also famous example is Peter Latz's project for an area in Emscher Park at Duisburg. I ask myself, consequently, up to what point this kind of recycling can be legal, or, whether these "changing ecologies" so highly artificially can be made to become positive factors in the contaminated or devastated recycling earth. In addition, when scrap, or abandonment becomes an "icon" through a project of possible green landscapes how can they be identified as problems if they are hidden by ecological trick. In any case, we notice that in the projects presented, what is not seen, not wanted, rejected find new life through formal qualities thought over again, and this way of making waste become something natural to accept and dramatize consumption and waste, helps to make the exploitation of resources almost forgivable.

In addition, remember that in the work of Kevin Lynch, for example, the theme of recycling is understood in environmental terms as we can find in his writings: *What time is this place?* and *Wasting away: an exploration of waste: what it is, how it happens, why we fear it, how to do it well* facing this aspect from two different and complementary angles. The mutual image of both texts is that of time and change: *What time is this place?* Explores the traces of time present, in the physical world, while *Wasting away* investigates the dark side of change, therefore the aspects of decline, decadence, waste, and they are here confronted as if they were a necessary part of life and of growth and to which we have to learn to attribute value and to manage wisely: «[...]Since human beings are the worst creator of waste[...]». We note that different architects, city planners, and many more of the trade, today, try to find new uses of urban centers in decadence or to other abandoned industrial areas or sites subject to waste disposal and storage therefore mines, caves or waste dumps can be considered primary resources or renewable earth. The waste disposal and collection activity creates worn out lands: it can destroy the earth above, the vegetation, leave wells or holes, cause subsidence, contaminated the earth with salts, heaps of rubble, waste, acid and slime, therefore the recycling of these areas are tied to the environmental issues even before the aesthetic ones.

3.1 Demonstrative Survey

In our culture, since things do not take on meaning until they can be measured and they do not obtain dignity of being a problem unless they are directly perceived, in this writing, you will find a parallel description. On one hand general statistics and on the other daily experience that each and every one can have. However, a warning concerning the statistical data here reported; they are the result of rather strange estimations and measurements that are not always easily available or certifiable while the diversity of every political, social and cultural dimension, as we have seen before, makes the anthropological and perceptive considerations dubious and open to criticism. Moreover, I would like to highlight that the constantly growing numerical value, as a result of a progressive increase in the production of scrap material, determines vague estimation and, consequently, uncertain. In any case, this research has no operative aim but only a generally speaking a descriptive goal (in order to clear the significance and the need of an investigation) therefore, please accept any rough and approximate evaluation that may be statistical, percentages, quantitative and composite.

3.2 Administration of Waste in Europe

Every time we throw an object, by choice or obligation, we produce waste. From that time on the object disappears from our sight, but its life is not over. The process of discharge is divided: it is linked to the type of refusal (urban and special, dangerous and not dangerous), to materials by which it is composed and to treatment plants and disposal on the ground (recycling plants, incinerators, plant composting, landfills etc.). In particular: incinerators dispose of waste, municipal solid and special non-hazardous, through combustion, produce electricity and recover heat that comes into the home through a network. Landfills are final deposits of waste. The dumps are ancient forms of disposal, technologically elementary but environmentally dangerous. In general, depending on the geomorphological and hydro-geological characteristics in the chosen site, three types of landfills are made: landfills in depression (or in trenches) are made for filling old quarries no longer used or dug in the ground; hill landfills; landfills in slope (are carried out behind slopes, filling dugs opened along the sides due to quarries or *impluvium*). The ever-present need of waste disposal in landfills calls for particular attention from the competent bodies that must ensure follow-up during the time which we consider a "training" period of the landfill and in the years after its closure, a timeframe of thirty years has to pass. Landfill sites, only if carried out properly and managed in an irreproachable way, can they become totally safe and possible project opportunities could come about. I believe that this research can be a useful reference tool to better understand and so also to undertake the most appropriate actions for its protection and future life. This can be a valuable support to prod future operations to remediate and to recover degraded sites, the responsibility of local administrations. If we look at, for example, the hills of closed landfills of organic waste we can see that they change over the years by the gradual stabilization the reliefs and then gradual reduction takes place, significant in the first years and less perceptible in time. We could say: hills in motion and then places that always renew themselves, places, therefore, that become occasions for project and ready to accept unusual aspects, of course not for building purposes but for possible green organized spaces. We have to see the landfill from a different point of view: no longer as places to flee from but places to live in where we can design a new landscape.

3.3 Disposal Plants Survey in Italy

The analysis continues by showing an aerial cartographic study and then a precise one of how the Italian territory appears besieged by the presence, more or less controller, by plants for waste disposals, in particular by dumps and consequently how such presences create the character, not only the landscape, but architectonic, urban...but also "functional and economic". In a second time the study is more detail and notes an area particular up for deposit waste: section in Lombardia region and in detail, at proximity highway, from Milan to Brescia. At the end, the analyze of the city of Brescia with relationship to planning, management, control, drainage and transformation of the areas subject to the presence of waste continuous. It is easy to understand that the topic of waste is quite varied, heterogeneous, complex...the factors at play need to explain in detail its general and collective make up. In addition, these places, only if you observe them from a certain distance can they be recognized and identified. Moreover a certain distributive rationality is manifested. In light of this, therefore, it becomes possible wishing adequate recovery projects for public use and also, under stand that the survey of these areas have to go beyond their own simple plan metric representation and it becomes possible to give quality, efficiency and general organization to the area because it is considered an active part of the urban or rural environment. It is through a cartographic study that one is able to demonstrate the possibility to explain what appears; at first it is dominated by random, fragments, heterogeneity toward a more unitary, open and flexible view. I will examine, through a deductive procedure, the problems arising from the presence of waste storage and disposal, the plants where some of the main characteristics of contemporary economy in the society will be recognized. In addition, the elements establishing the location are highlighted, then the factors that make up the connection system and the definition of roles and specific identities. It appears evident that with a correct design of paths and connection an efficient plant system operation will be guaranteed, as well as of the surrounding environment and a correct management and relations. System, network, connections, identity, and morphological structure...these are the key words that make us reflect upon the general conditions presented today.

4. Strategic Map, Strategic Project

The great image of multi-functionality, biodiversity that dominates the city of Brescia, and the general contemporary city, make us consider the city by "systems" and consequently, to evaluate carefully the relationships and organizations of the different plants for waste disuse within a "strategic map" that can explain relationships, programs, implementation times and priorities. One of the basic characteristics of the modern city that is tied partly to the fast technological change and to social the behavior is instability. That's one of the distinctive characters of the areas of collection and dumping, it's constant modification in time. It is important to clarify what we mean by "system"; this term does not refer to pushing away or separation but it refers to integration and identity. We not only seek out the best location and the one which best fits in the space reserved to our garbage but also to the definition of a specific state, role, time and relative environmental pressure. Studying "systems" of the areas subject to the presence of waste, is like observing the time, the ways and their rhythms, the paths followed and their modification in time, their accessibility, the activities etc...evidently defining their importance as "value determined by position". These features do not run out but are strongly tied to the urban or rural dimension. Actually, the territorial distribution reveals a certain discontinuity and diffusion, inducing, research to better evaluate the rhythm, connections, impact on the environmental system. As the areas subject to waste increase, in number and in surface area covered, there is less willingness to accept more waste without radically changing the balance of the areas. For this reason, the responsibilities toward the environment and toward us have enormously increased; consequently interest and research have also become more important in the matter. The widespread sensitivity to environmental problems has actually demonstrated recently how, in the construction of collection and waste disposal plant, it is necessary to turn to a vaster spectrum of techniques in order to decrease and contrast the environmental pressure. In addition, it is easy to understand how the disuse of these places fit into long-term plans and, in particular, into an extended recovery plan and environmental improvement that leads to technological innovation and to a radical modification of positional values that, in turn, can give new opportunities to the city. Actually, we are not talking about a simple modernization of traditional techniques, waste recycling and purification, but rather exploring the experimental fields such as, the study of alternative Energy or of new material and constructive systems. At first, the demonstration in this paper will be obtained through a detailed analysis of the conditions in which today each incinerator is described.

Each area subject to the presence of waste is specified in its own ground, underground, or air and water pollution, botanical species and animals and from this point the "suitability card" is defined, and in detail the degree that qualify an area that welcomes garbage specifying the type of plant that can be put there. Nevertheless, these are always places considered "other" spaces in the city, the isolated systems even if within the urban context, part of the city. Finally we notice a certain resistance toward an understanding of the evolution sense, a slow adaptation to the needs of the society, their being constantly present, even if in different form and dimensions.

4.1 Geographical Capital

In the end, dumps and waste, legal or illegal, become places where everything is drifting and it spreads insuppressibly in a strong wish of new, healthy and safe places. It is really a "dirty case": garbage is spread, forgotten, violated and disseminated a bit everywhere. Consider the garbage areas, the dumps in our cities as an exploitable capital in continuous change and with a modern, singular, renewed "sense" of the place; it is certainly an important challenge, substantial and at the moment, absolutely indispensable. Therefore in front of a real abdication, there is a "garbage area" whether legal or illegal, in favor of an expected "landscape compensation" made of filled earth, terracing, trenches, or simply of green hills or "elegant", propaganda for "Energy bases". At any case, let us not forget that the waste disposal and collection activity can create depleted lands, destroy vegetation leaving wells or holes, creating subsidence, contaminating the earth with salt, heaps of debris, acid and residues and slime and consequently the requalification of these lands has to be always and necessarily tied to the environmental reasons, even before than to aesthetic ones. Moreover, these "infrastructures" beyond suggesting a widespread ambiguity and a real evident territorial transformation is sought mostly as a balance between needs of economic development, norms and management and the improvement of the environmental quality such as this present study tries to do, in exceptional diverse forms and different acceptations, outlining unusual and singular, plausible composite criteria. This is the sense of this thesis, starting from a detailed actual study, going in depth into past studies, quoting "other lands" more or less similar, then wanting to delineate a possible strategic indicative map, as real actions of an "ecological subject" able to prospect the future in a very "sustainable" recovery proposal. A compositive way, therefore, not intended only as a mending action but rather as a real act of doing and thinking of a project that interest the areas that are subject to waste storage and disposal in all the phases of formation and development, redeeming the active role within the physical and social aspect of the city, through a project. Evident examples are the landfill Castenedolo or Ghedi or also Montichiari which can be subject to a compositional thought; so a compositional thought that argues an interconnected system, a comprehensive structure of spatial relations that, marking in strategic way the location, makes plant of disposal and treatment waste an active part in the urban environment. For this reason, it's put forward, provocatively, some possible, innovative unexpected restoration project. Moreover, through renderings, about potential scenarios animated by gains, alternative activities it is possible to present a new, real future.

4.2 A hidden and Implicit Way of Doing

As it often happens when economy and politics enter in play, in this case there are sad examples of criminal and dishonest business: therefore, it is necessary to face the issue with objective, correct and opportune awareness trying to reintroduce, into the urban dimension, the altered areas by the presence of waste disposal and collection plants and where possible, it is necessary to put into place actions to insure an acceptable, safe future. Nevertheless, the disposal and treatment plants, today, improved and strengthened, persist with resistance, fear and protest concerning the possible perspective of future locations. However, in name of necessity, urgency and inevitability with strength and effort, areas of waste storage and disposal which are partially innovative and looking for defensive forms of hiding but mostly a certain agreement with the modern city. The issue is clear, tangible and of great interest if we observe it on a large scale evaluating the effects on the territorial system overall. We notice a distribution, even if many contradictions exist, as we have often said; responding to logical, correct criteria, in line with the character of the place. An articulated structure of actions and reaction substantially takes form, designing a territorial plan, as the census demonstrate. It is recognizable, clear and therefore a base for potential future planning. Moreover, because the waste disposal plants are simultaneously defined with respect to its necessary state of activity and with respect to the contest in which it is settled, they constitute a privileged path for the observation and evaluation of the modern urban structure, in which, presently it is essential and obligatory a correct, valid and definite location. Moreover, today, a passage of absolute disinterest and remarkable attention, influential and popular, rather detailed, that besides outlining the present situation (it never forgets exceptional cases or local stories) it gives rise to changes of different sorts. However, it is obvious that a critical eye, alone cannot resolve the present situation, but certainly it can contribute to giving the right measure of what is at play.

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References to Books

- Baudrillard, J. (1976) *La società dei consumi*, Mulino (Chapter 1.2)
- Baudrillard, J. (1979) *Lo scambio simbolico e la morte*, Cappelli (Chapter 1.2)
- Benjamin, W., (2000) *L'opera d'arte nell'epoca della sua riproducibilità tecnica. Unicità e Duplicità secondo Benjamin*, (trasletor) Filippini, E., Torino: Einaudi (Chapter 1.2)
- Bazzani, F., (2008) *Verità e potere. Oltre il nichilismo del senso del reale*, Firenze: Clinamen (Chapter 2.3)
- Braungart, M. & McDonough W. (2002) *Cradle to Cradle. Remaking the way, we make things, Water proof, Durabook* (Chapter 1.3)
- Burton, T., *Junk Girl in Burton, T., (1997) The melancholy death of oyster boy Morrow W. & Company* (Chapter 2)
- Calvino, I., *La poubelle agrée* in Calvino, I., (1993) *Le fiabe italiane. Raccolte dalla tradizione popolare durante gli ultimi cento anni (3vol)* Milano: Mondadori (Chapter 2)
- Ferri, F., (1996) *Linguaggio, passione e ideologia. Pier Paolo Pasolini tra Gramsci, Gadda e Contini*, Roma: Progetti Museali (Chapter 1.3)
- Foucault, M., (2006) *Utopie. Eterotopie*, (by) Moscati A. Cronotipo, (introduction)
- Hadot, P., (1999). *Plotino o la semplicità dello sguardo*, (trasletor) Guerra, M., Torino: Einaudi, (introduction)
- Heidegger, M. (2014) *Saggi e discorsi* (trasletor) Vattimo G., Ugo Mursia (Chapter 1.2)
- Hegel, G. W. F. (1974) *La scienza della logica*, Laterza (Chapter 1.2)
- Hugo, V., (1972) *Notre-Dame de Paris* (trasletor) Lusignoli, C., Einaudi (Chapter 1.2)
- Jackson J. B., (1970) *Landscapes, selected writings of J. B. Jackson*, Ervin H. Zube (Chapter 3)
- Jackson J. B., (1980) *The necessity for ruins and other topics U.S. First Edition* (Chapter3)
- Jackson J. B., (1984) *Discovering the vernacular landscape*, Yale University Press (Chapter 3)
- Jackson J. B., (1994) *A sense of place, a sense of time*, Yale University Press New Aven and London (Chapter 3)
- Jackson J. B., (1999) *Landscape in sight, looking at America*, Helen Lefkowitz Horowitz (Chapter 3)
- Linch, K., (1977) *What time is this place*, (trasletor) De Carlo, G., *Il tempo dello spazio*, Milano: Il Saggiatore (Chapter 3)
- Linch, K., (1990) *Wasting Away: an exploration of waste: what it is, how it happens, why we fear it, how to do it well*, (editor) Southworth, M., Sierra Club (Chapter 3)
- Lynch K., (1990) *Progettare la città. La qualità della forma urbana*, Etasslibri (Chapter3.2)
- Pasoli, P. P., (1961) *La religione del mio tempo*, Milano: Garzanti (Chapter 1.3)
- Rowe, C., & Koetter, F., (1984) *Collage City*, The MIT Press, (introduction)
- Royte E., (2006) *Garbage land: on the secret trail of trash*, Paperback (Chapter 3)
- Umberto, E., (2001) *Sugli specchi e altri saggi. Il segno, la rappresentazione, l'illusione, l'immagine*, Bompiani (Chapter 3)
- Valery, P., (1992) *Il mio Faust*, (trasletor) Magrelli, V., & Pontiggia, G., Milano: Mondadori, (Chapter 1.2)
- Virilio, P. (1998) *Lo spazio critico*, (trasletor) Porcelli M.G., Dedalo (Chapter 2)
- Virilio, P. (2004) *Città panico. L'altrove comincia qui*, (trasletor) Odello L., Cortina Raffaello (introduction)
- Vitale, G. (1994) *Un mondo usa e getta, la civiltà dei rifiuti e i rifiuti della civiltà*, Milano: Feltrinelli (Chapter 1.2)
- Vitale, G., (2008) *Azzerare i rifiuti. Vecchie e nuove soluzioni per una produzione e consumo sostenibili*, Bollati Boringhieri (Chapter 1.1)
- Zingari, G., (2006) *Ontologia del rifiuto. Pasolini e i rifiuti dell'umanità in una società impura*, Le Nubi (Chapter 1.3)
- Zygmunt, B., (2007) *Modus vivendi. Inferno e utopia del mondo liquido*, Laterza (Chapter 3)

Reference to a Journal Publication

- Brunner, D. R., & Keller, D. J., (1972), *Sanitary Landfill: design and operation*, Washington D.C., U.S. Environmental Protection Agency
- Lewis M., (2008) *Packaging utopian sustainability*, volume magazine n. 16 (Chapter2.2)
- Rathje, W. L., (May 1989) *Once and future landfills*, National geographic (Chapter 4.1)