

A virtuous abandonment

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Foreword

Who can say that he has never been curious and fascinated about finding something abandoned, a ruin, or an old car, completely invaded by plants and micro-organisms?

Who has never taken time to observe the infinite complexity of materials changing outside with time? It's a step in the life of objects that has always fascinated me. Once out of the protecting cocoon that offer our homes, these materials change, offer a new aspect, they start transforming themselves and deteriorating. It's this changing material that I wanted to question in this abstract in order to understand the relation mankind has established with it.

Introduction

The amount of waste has doubled in forty years. This is what the French environment agency called « ADEME » affirms in a study conducted in July 2015. In France, each citizen produces 354 kilograms of waste per year. It includes a lot of types of products from household activity. We can find a huge amount of packaging but also a lot of objects that people don't want to possess anymore like furniture or electric household appliances. This waste is supported by the garbage collection. For years, we have learned to sort, to separate the materials that can be recycled like paper, glass or different kinds of metals. In 2012, 17.9 million tons of materials were recycled but it only represents 20% of the total amount of waste generated each year. Non-recyclable waste is still too important. Such waste can be landfilled or incinerated. In France, 30% of waste is incinerated and 36% is buried in order to degrade in a landfill. Let's take the example of furniture. Each year, a French citizen abandons 26 kg of furniture on the sidewalk². In 2012 only 23% of that total mass was recycled. Although there are upgrading facilities, in 2015, more than one million tonnes of furniture largely composed of synthetic materials, were buried in a landfill². The problem is that, today, these landfills are saturated while the quantity of household waste increases by 1% every year in France. The major cause of this huge amount of waste is the fact that most waste takes a lot of time to completely biodegrade. The complete disappearance of waste buried in landfills requires hundreds of years. This long destruction is due to the massive use of non-organic materials in our manufactured products.

Whether collected and landfilled or illegally dumped in nature, waste is a big problem. If we keep using harmful synthetic materials in our objects, discarding them will remain a problem.

1. ADEME (2015). *Déchets édition 2015*.

2. Eco-mobilier (2016). *www.eco-mobilier.fr*

Why do we keep using synthetic materials whose durability is problematic if we keep discarding our products? Why such a paradox? Why throw away after all?

Without mentioning the overflow of packaging waste, we discard huge quantities of objects. Any excuse is good to discard any object whatsoever. We can discard for the simple feeling out of sheer weariness, for a functionality compromised by broken parts, or due to maladjustment. Can the fight against this overflow of waste involve designers' responsibility? Designers could anticipate every reason, every situation that could possibly bring to an end the relationship between the object and the user. Can designers avoid the potentially harmful end of objects? Designing the end of life of objects could be as important as designing their relation with users. The disposal of this kind of object could be a positive step for the environment and not the opposite.



Unauthorized dumping
in Saint-Pierre de Gagny,
France © Association Les
Abbesses de Gagny-Chelles.

Furniture, electric household appliances and all the objects that we discard, are literally abandoned. Abandoning something means leaving it to the power, the action of something else. Abandonment is also characterized by the action of stopping something that was going on, by not using something, giving it up for good.

Can't we say that we literally abandon our objects? We abandon objects at the discretion of the environment, of nature, hoping they won't resurface, and that the environment will remain discreet about what our waste inflicts on it. Upstream, man, the possessor and user of objects, no longer wishes to pursue his use of these objects. As said in the dictionary definition, he decided at a specific time, to discontinue his relationship with the object, an emotional relationship or a simple user relationship. He renounces. It ends. The user will always find a reason to give up these relations and to throw the object.

We could almost wonder if this is a characteristic of mankind to constantly want to get rid of their goods?

What if we reversed the trend? Can design offer a new definition of the verb « to abandon »?

Could we leave our objects in nature, outside in the environment, but to generate something positive rather than negative? We have to be realistic: they will end in this environment anyway... Can the act of abandoning our objects become virtuous rather than pernicious?

What if the act of abandoning objects could be made beneficial by design?

Before working on abandoned objects, it is necessary to understand the issues behind the possession and use of these objects. The stability generated by these two concepts is implemented with a pernicious apprehension of materials. Mankind fantasizes about unalterable materials. This relationship with the materials used in goods that surround us poses serious environmental problems.

But the «design effect» has a role to play in changing the way mankind apprehends materials. It can engage in the act of abandoning objects, a process to deal with materials differently. It's a new prospect, a new awareness of nature and of the impact that objects have on our world. Design can afford to engage in human beings a posture to question the way they apprehend matter. It's only after the creation of a new alternative for discarding that designers encourage us to give up our pernicious conception of materiality. He can initiate a new responsible behaviour by designing a process allowing people to be autonomous in a special step in the life of objects: the life end, which was delegated up to now and is delicate to manage.

Abandoned shoes in Gilles Clément's garden (2015). © Julien Borie.



Owning and using objects: a pernicious apprehension of materials

A world of objects used and possessed

It's since World War II that possession has grown in Western societies. Thanks to the Marshall Plan, a period of almost thirty years of exceptional growth began in 1948. During the post-war boom, the household budget that had so far mainly been used for food was now devoted to durable goods like furniture or electric appliances. Today, in 2015, except the exceptional growth, the economic model remains almost unchanged with the only difference that it has been «perverted» over the years. Marketing strategy has encouraged a renewal of durable goods. The consumer society characterized by the production of industrial goods is the dominant economic model that continues to provide multiple objects to meet multiple needs.

These needs have been studied by a French philosopher called Jean Baudrillard³. Use and possession, according to him, are two distinct needs. The first one is the use value of objects: using a fridge accommodates users; it allows them to refrigerate food. It is the service that matters.

However, the second need, possession, is very different. A human being can then form himself as a subject. Possession would be a way to externalize oneself. The object acquires a subjective status. Ownership allows the user to build its own

3. Jean Baudrillard (1968). *Le système des objets*.

subjective totality and therefore to proceed with the construction that will give its own personality. It is a narcissistic investment. In the novel « *Les Choses* », the author, Georges Perec⁴ describes the life of a young couple in the 1960s, Jerome and Sylvie and their perception of happiness, closely linked to the idea of the things they dream of acquiring. Man builds his own character, his personality, with objects that correspond to actual or desired features. Man consumes « sign-items »; shapes and materials which refer to a distinct reality of themselves. Objects don't just help man to act on the world and to transform it in a practical totality for him, but also to constitute his subjective totality. Man keeps his objects because they enable him to make his life more convenient as he uses them and plays with «signs». This balance brings some kind of stability to modern society. It guarantees the «self». Man projects himself in objects.



Verner Panton for Herman Miller, *Panton chair*, thermoplastic polystyrene (1968).
© R. R.

4. Georges Perec (1965). *Les choses*.

The fantasy of unalterability

The fact that Man projects himself in products makes him transfer his own life rules into objects.

Jean Baudrillard⁵ says that man finds in objects a way to ward off his fear of temporality and death.

He wants objects to keep a « brand new » finish not only when they are bought but during their whole lifetime. The fantasy of the unalterable form and material is then applied to objects. Man establishes a narcissistic relation with objects and wishes they could remain in the physical world a long time after him. The stability they generate through ownership and use must not be compromised!

The productive technique then participates in setting up objects with shapes and materials, which repel all the possibilities that could compromise their integrity, despite being constantly renewed as required by the model of a consumerist society.

This preference for unalterable materials is mixed with the production codes inherited from the aesthetic mainstream of the second half and end of the 20th century modernism. The quest for everlasting smoothness, cleanness and slickness, is applied by manufacturers. The shape and material must form something unchangeable. It is obvious that objects intended for outdoor use are the climax of the application of this fantasy. All destructive agents such as rust for example are not welcome on the subject and are anticipated upstream to avoid the destruction of what is produced and used.

«Outside» is a physical threat compromising our items. Mass production completely avoids the possibility to change our materiality conception. The majority of the objects around us can't offer us another conception of materiality. Our mass-production system prevents the material from proving that its alteration could be positive rather than negative. This concept of materiality influences our value judgments.

5. Baudrillard op. cit. p. 16

An apprehension of materiality which influences our value judgement

Some users and owners of objects find pleasure and a life balance in keeping objects and materials that change over time and use. Unlike Westerners who seek to radically eliminate anything that looks like a stain, people in the Far East preciously preserve it. They care about fate and accept it. Trying to change and fighting against alteration would be against nature. It's a different culture which extracts beauty from darkness, dirt, and what weakens materials.

This lifestyle is based on a certain conception of beauty called « Wabi- Sabi ». Leonard Koren⁶ explains that this philosophy of life advocated acceptance of imperfect things. This movement of thought finds beauty in the natural processes of transformation of materials, such as metal oxidation, in so far as they relate a story through time. Unfortunately the way man apprehends materials constrains the ability to extract such poetry from them. The current design of objects and materials prevents the deterioration and provides items without any possibility of thinking about materials differently. The consequence is that people are not encouraged to keep their objects, since they don't offer any « poetry » through time!

There is no strong relationship between materials and them. The alteration of materials cannot be but negative. This kind of design therefore affects the future of the object and participates in the final stage of its life, which is to overfill landfills and pollute the ecosystem of the planet. This concept of materiality is pernicious. It is partly responsible for our current environmental problems.

6. Leonard Koren (2008). *Wabi-Sabi, For Artists, Designers, Poets & Philosophers*.

Abandoning virtuously is incompatible with the major conception of materiality

Discarding objects made with the fantasy of unalterable materials is a problem for the environment.

At the end of the 19th century, this fantasy found a great opportunity to be applied. Plastics, which were biodegradable at the beginning, became synthetic and toxic for the environment. A material which resisted very well to outside physical conditions was created. This is the main cause of today's environmental problems. Landfills are full of plastics which need hundreds of years to go back to earth. When plastics degrade, they are divided into thousands of microscopic particles which can be found in water, in animal organisms and, of course, in the human body.

In the movie « Super Trash » we can see an open air landfill which is very badly maintained.

The landfill's toxic « juice » goes directly into the Mediterranean Sea. The problem is that these problems have been unnoticed for a long time because of their inconspicuousness. If man keeps using toxic synthetic materials, discarding will still be a problem.

Can design fight against our pernicious conception of materials? How?

7. Martin Esposito (2013). *Super Trash*.

Martin Esposito, Super Trash, (2013). © R. R.



Martin Esposito, Super Trash, (2013). © R. R.

Abandoning objects could modify our conception of changing materials

The design effect: first apprehension criterion of materiality

According to Stephane Vial⁸, the role of design is to create what he calls « a design effect ».

Design is not « something » but « something that happens ». It must have a performing character.

But unalterable materials are limited in their performing character. But, according to the author, if you want to create design effect you need first to create a « beauty effect ».

According to Freud, it's an important psychic need for mankind. The designer Simon Heijdens created a beauty effect with changing material. He created a ceramic which cracks slowly when you use it. These cracks disclose a floral pattern after a long time. He introduced new layers of experience in our everyday objects. The paradox is that the altered is preferred to the unaltered. The « fragile » aspect of the material can bring a positive rather than negative design experience to the user.

Altered materials can be positive! For our research, the designer could create a design effect at the end of the objects' life. Why not create a design effect at the moment when objects

8. Stéphane Vial (2010). *Court traité du design*.

are discarded? Depending on where the object is abandoned, the physical conditions would act differently on its structure. A forest or a desert would transform the material differently. Design could bring an experience of observation of the effect of the physical conditions on objects. The user could discover them, observe them day after day.



Simon Heijdens, *Broken White*, (1968). © Simon Heijdens.



With their project *The Idea of a Tree*, Thomas Traxler and Katharina Mischer created a process which shows and enlightens the effects of physical conditions and especially of ultraviolet rays. They made a machine, which makes a seat made of plastic layers that are different according to the luminosity of the moment. Here, design brings a new relation between man and nature. A sensitive relation of observation and comprehension which is completely different from the major relation he maintains today. Man is in a domination relation with nature. It's kind of an extension of his relation with materials, he wants to dominate everything.



Man and nature domination

Since the end of nomadism, man has been in a relation of domination with nature. Man thinks culture is independent from nature. The philosopher Augustin Berque⁹ denounces the illusion of this attitude. Mankind can't extract himself from nature, he's part of it. The English chemist James Lovelock with his Gaïa theory explains that man is part of the ecosystem of the planet and destroying it equals destroying himself. His desire to extract himself from nature is a problem for his future. The huge amount of waste produced each year is an example of it. The way we apprehend materials with our fantasy of unalterability is a domination attitude towards nature through objects. We want them to keep a « new » aspect forever. How can we understand the characteristics of the different environments where we live? How can we understand the issues of material degradation when we evolve in a dominated and controlled world resulting from our pernicious conception of materials? How can we get out of this perception? We must have a more sensitive attitude towards nature. We must try to calm down and observe and comprehend. It's by/ through observation that mankind is more able to understand and respect nature, not through domination. We must accept to re-invite changes on our materials.

9. Corine Pelluchon speaks about Augustin Berque (2015), *Les nourritures*.

Acceptation of the natural cycle of materials

Can changing our relation to nature result in our acceptance of the natural cycle of materials?

An organic material doesn't degrade in a couple of hours. It needs time and special physical conditions. In 1998, Martin Ruiz de Azua created special ceramics. He put them for a whole year in a river bed and after that time they were completely covered with small green microorganisms which created an original aesthetic.



This object allows us to comprehend the characteristics of a natural environment and the materials' characteristics. Indeed, without a porous ceramic, the microorganisms wouldn't have been able to cling on it. We can conclude that an organic material really needs specific conditions to degrade totally. Using synthetic toxic materials can then be poorly regarded after this kind of experience. Design can make you accept what's inevitable. It's only after understanding this that we can use and possess objects with a positive life end. A return to a massive use of organic materials can then be wanted. Design can promote biodegradable materials.

Martin Ruiz de Azua,
Natural Finish, (1998).
© Martin Ruiz de Azua.



A virtuous questioning

Can extracting a design effect from organic materials motivate people to abandon positively?

Design could raise people's awareness regarding organic materials. But what could this positive abandonment be?

What if objects enriched soils instead of polluting them? It could be fun to not feel guilty anymore when discarding objects. Objects could be gifts for the environment, they could enrich it.

But before respecting nature, we must comprehend the different typologies of materials.

As said in *Cradle to cradle*, organic materials belong to the biological sphere and synthetic materials belong to the technical sphere. Each material in the end of their life should go back to their own sphere by degradation or recycling in order to curb environmental problems. But ideally, people should boycott the problematic technical sphere as much as possible. Design effects could have the power to make people reconsider their material requirements in order to go back to a humble conception of materials. Can it make us reconsider our needs? Our needs could indeed be reconsidered.

But it doesn't mean that the quality of uses must be reduced too. It's the designer's role to make a transition toward another conception of materiality, something positive rather than negative. Eco-design mustn't be a constraint but should bring the same uses that we are used to but respectful of nature. That is designers' challenge for the next decade. The issue of changing materials would be justified for the end of life of objects.

For example, the end of life of objects could become individually manageable thanks to design.

Compostable objects could be created with organic materials. A design task would then consist in creating a positive experience in the act of composting objects. The « experience » could make

10. Michael Braungart et William McDonough (2002). *Cradle to cradle*.

A new alternative for abandoned objects

The end of life of objects managed by their owners

this act positive rather than a constraint. Today, being obliged to compost organic materials is a constraint. Our gardens could look like landfills where objects languish? Or objects can be conceived by a designer in order to create something positive. Objects could be designed to be abandoned virtuously. Design could provide useful objects offering a positive effect and experience at the end of their lives.

Managing oneself the end of life of objects could be a situation that could really happen in the future.

A design research would be justified and using changing materials in this case would be judicious.

If modern man wants to fight against toxic waste and the overload of landfills, a transition to a new economic system could make us use a lot more organic materials than synthetic ones. If we still throw away the same amount of waste as nowadays, people could be obliged to delete themselves the organic objects that they don't want anymore.

In order to alleviate landfills, organic objects could be totally excluded from them.

People could then be individually responsible for the objects they want to throw away.

It is then interesting to benefit from nature's degradation capacity. A little garden, a forest, could be places where our objects could return to earth. But if we don't want new uncontrolled landfills everywhere, in our forests and gardens, what shall we do? What kind of objects should we design? Being obliged to eradicate our objects by ourselves is a constraint as it implies bulky items. Can design make it a positive rather than negative act and experience?

Can design help nature in the degradation process of organic objects? Put together they could contribute to create an ultra-efficient degradation process outside. To fight against the

Human-scale durability

fact that objects could become bulky items, outside, in our gardens rather than in landfills, a design work could produce predisposed objects which could biodegrade very quickly. But for this kind of design project, users and designers need to reconsider their perception of materiality. Materials that alter outside must be reinvented on our objects. But this changing aspect mustn't be a constraint. It mustn't be something that will reduce the qualities of an inside use. This is what's particularly interesting as regards product design. How can we create an object that is useful inside, has a lot of qualities, but that can also prove fragile once put outside? It's a whole new way of designing objects. We must give as much importance to the inside use of the objects as to their end of life once put outside. The major questioning doesn't start from the form, the final object, but from a material research. The material used on objects gets a new status just like the design work itself.

In human sciences, forms have always been preferred to materials. But now it's going to change. Materials can be stimulating and interesting starting points in design research just like forms and final objects themselves. Materials can reveal a lot of interesting exploitable qualities once they have been studied and understood.

It's time for human beings who are mortal to surround themselves with mortal objects just like them. We must use objects with a limited lifespan in order to be more responsible and respectful towards the earth ecosystem.

What kind of typology could be interesting to work on?

What organic materials are quickly biodegradable?

First of all, an organic material is not necessarily quickly degradable. Let's take wool for example. Wool is frequently used in upholstery, it has a lot of qualities. Even if it seems very fragile this material needs a long time to go back to biodegrade.

The natural environments where the material is abandoned are very important. Something hanging will degrade a lot more slowly than something on the ground. What materials could we choose?

What material offers a lot of qualities for an inside use and is quickly degradable outside?

Test samples of the effect of different middles on natural wool (December 2015 to March 2016). © A.Q.



What about bioplastics? For my research I focused on a bioplastic called galalithe. It's one of the first plastics ever made and it was frequently used before Bakelite in the making of jewels, pens and other little objects. I added sequoia sawdust to make the bioplastic stronger. This material can be used for many applications because of its strength and hard aspect. The advantage is that this material degrades very quickly outside with humidity and rain. It is also funny to observe that it can be quickly eaten by mice and insects. In a few months the material goes completely back to earth.



Sample of pure bioplastic
© A.Q.



Sample of bioplastic +
sequoia powder © A.Q.



Test sample left outside, important degradation visible after 5 weeks (end of February/March 2016) Top/Under. © A.Q.



Test sample left outside, before/after, eaten by mices in one night (end of February 2016)
© A.Q.

But can we accelerate this process? Thanks to experiments, I proved that the shape can increase and accelerate the degradation of materials. The object can be made of a material quickly degradable and it can be predisposed/ designed to accelerate this process.

What typology of objects would it be interesting to create with this process?

We previously observed that a huge amount of furniture was buried in landfills. Wood used for furniture is bulky and contributes to landfills being filled to the brim. Can we make furniture with just bioplastic in order to make them biodegrade quickly? No, we can't. Wood has a lot of qualities that can't be equalled by bioplastics like galalithe, for example.

So can we accelerate the degradation of wood?

Assemblages can be created with galalithe and wood in order to make them disassemble quickly outside. The object can then be less bulky and can take a favourable position for his future degradation.

Galalithe, once injected in a piece of wood, even accelerates its degradation a bit. But wood in general is problematic. Indeed, it still degrades slowly but it is not the main problem. A compostable object can't be made of wood because trees take years and years to grow. Its renewable aspect is delicate. Wood had better be valued as such. It's not eco-responsible to create a typology of quickly degradable objects with this material. It is the same for galalithe. It has allowed me to experiment easily but on a high scale production it wouldn't work. The origin of the material is primordial. A compostable object must be made of quickly renewable materials.



Shape which stimulates the degradation, left in an urban middle (Center of Lyon, results after 5 months). © A.Q.



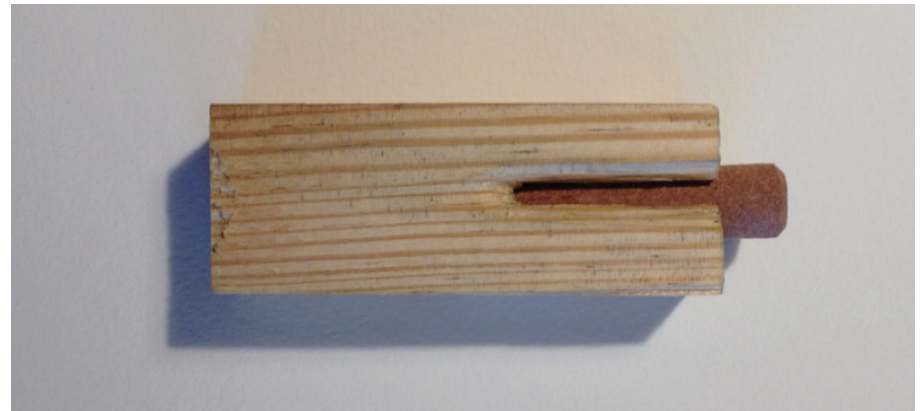
Shape which stimulates the degradation, left in a natural middle (Exposed to plants, results after 5 months). © A.Q.



Test of assemblage with bioplastic dowels, reaction with the exterior conditions and the weight of the pieces of wood. © A.Q.



Bioplastic dowels © A.Q.



Dowels in assemblages shaped to degrade quickly with the rain © A.Q.

Discard? Discard!

It is then interesting to work with materials like algae in the *Terroir* project. Algae is a resource which proliferates and grows quickly. Wicker grows quickly too and has great properties like flexibility. Discarding an object isn't a problem if it's made of quickly degradable and renewable materials. Experiments on wicker made me question the importance of aspect. Indeed, these trials leave a raw aspect of wicker because the function doesn't require to have it changed. A compostable object must show that its materials are quickly renewable and degradable. The materials must be recognizable and mustn't hide their characteristics. A design work with a respectful systemic vision can create compostable objects managed individually. It's an experience, an expiatory process. Both nature and men would get advantages if the main conception of materiality was changed. Let's turn our discarding habit into something positive.



Jonas Edvard & Nikolaj Steenfatt, *Terroir*, (2014).
© Nikolaj Steenfatt.



Assemblages of wicker, miscanthus and plastic that could be considered in bioplastic in order to release the volume © A.Q.

Conclusion

The fight against the overflow of waste could involve the responsibility of the designer by implementing a new typology of objects. These objects could offer an end of life harmless to the environment. Paradoxically, discarding could be positive.

The act of abandoning objects can actually be rendered beneficial by design. The stakes hiding behind the possession and use of objects can be questioned. Possession and use are two requirements built by a pernicious apprehension of materials, based on the fantasy of unalterable objects, even though modern man is encouraged to renew them/his objects. This apprehension has to be changed. People in western countries are completely disconnected from changing materials because of a nature domination conception and because they have a lot of industrial synthetic materials. Changing materials do not have the chance to prove they can be positive.

Design can meet the (different) needs of possession and use, and initiate a more respectful and gentle attitude towards nature. An Orphic attitude of observation and comprehension would help us change our conception of materiality. It is only through this attitude that a design work could take place in order to make discarding and abandoning virtuous.

New objects effective for an inside use and predisposed to quickly return to earth for the end of their life would propose a new paradigm for abandoned objects. Having to degrade our organic objects by ourselves could be in favour of a new conception of material which is not problematic for the environment. It is in the interest of modern man to observe and understand the action of the environment and the natural cycle of materials. The design effect and the quality of experience that can be improved could serve an individual interest which would, by extension, be positive on a larger scale.

If design facilitates and improves the act of abandoning through

the creation of objects whose materials, components and joints stimulate and accelerate their disappearance outside, discarding becomes a positive act. It is neither trivialized nor encouraged, but anticipated for positive consequences. Discarding objects made of quickly degradable and renewable materials is no longer synonymous with pollution but with enrichment of the soil and environment.

Design can here make the act of throwing a pleasant gesture that doesn't make one feel guilty, and a good action for environment.

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Iconography

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Unauthorized dumping in Saint-Pierre de Gagny, France
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Abandoned shoes in Gilles Clément's garden (2015).
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Verner Panton for Herman Miller, *Panton chair*, thermoplastic polystyrene (1968). © R. R.

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Martin Esposito, *Super Trash*, (2013). © R. R.

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Simon Heijdens, *Broken White*, (1968). © Simon Heijdens.

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Thomas Traxler & Katharina Mischer, *The Idea of a Tree*, (2013).
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Martin Ruiz de Azua, *Natural Finish*, (1998).
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Test samples of the effect of different middles on natural wool (Décember 2015 to March 2016). © A.Q.

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Sample of pure bioplastic © A.Q.

Sample of bioplastic + sequoia powder © A.Q.

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Test sample left outside, important degradation visible after 5 weeks (end of February/March 2016) Top/Under. © A.Q.

Test sample left outside, before/after, eaten by mice in one night (end of February 2016)
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Shape which stimulates the degradation, left in an urban middle (Center of Lyon, results after 5 months). © A.Q.

Shape which stimulates the degradation, left in a natural middle (Exposed to plants, results after 5 months). © A.Q.

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Test of assemblage with bioplastic dowels, reaction with the exterior conditions and the weight of the pieces of wood. © A.Q.

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Bioplastic dowels © A.Q.

Dowels in assemblages shaped to degrade quickly with the rain © A.Q.

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Jonas Edvard & Nikolaj Steenfatt, *Terroir*, (2014).
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Assemblages of wicker, miscanthus and plastic that could be considered in bioplastic in order to release the volume © A.Q.

A virtuous abandonment

The amount of waste produced by the rich countries continues to rise. Even if there are revaluation and recycling facilities there is still a huge quantity of objects, like furniture for example, which are landfilled. The problem is that landfills are reaching their capacity constraints. Organic and especially synthetic objects need years to degrade and are posing major environmental problems. The abandonment of these objects are dangerous for nature and for mankind of course. Can we reverse this habit? What if the act of abandoning objects could be made beneficial by design? People need to use and possess objects. But our current major system of production meets these needs with a pernicious apprehension of materials. We fantasize about what is unalterable. But this conception is partly responsible for our current environmental problems.

Design with its «effect» has an important role to play in order to change this apprehension. It can lead a more respectful attitude towards nature. For this purpose designers must create a new alternative for abandoned objects. Managing individually the end of life of objects could be a solution in order to change the act of discarding into something positive, expiatory and responsible.