



**SAVE OUR SEEDS**

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**A CHAIN IS ONLY  
AS STRONG AS ITS  
WEAKEST LINK**

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# INTRODUCTION

Considering the very roots of life is not an easy thing to do, as most of us are used to believe that life is granted. That it comes under no condition. From this misconception we tend not to care about what, indeed, determines our existence.

Plants are part of this condition.

Mankind does not exist apart from other species indeed; the vegetal reign has an invaluable utilitarian function, not only regarding human civilization but all living species on the planet. «Plants provide food, timber, and medicines; they contribute to balancing the ecosystems, stabilizing soil, and regulate climate.»<sup>1</sup> Without any doubt, the availability of vegetal resources has influenced human settlements.

Yet plants also have «aesthetic and moral functions»<sup>1</sup>, that have been determining in most civilizations. All mythologies bring special care to plants, their precepts often being conceived as rules in the use of the latter. This spiritual link between plants and people is of the highest importance even in today's world.

It is equally important to regard beyond the western, anthropocentric vision on nature. The moral notion of Man's godly dominion over all other natural entities, preeminent in Judeo-Christian philosophy, does not represent the variety of human ideologies; in most beliefs, Man is but one of the many living creatures, whose role relates more to this of a citizen than a ruler.

It seems therefore natural to care about plants not only as instruments to be used by a human hand, or beauty to be seen by a human eye; as the World Charter for Nature puts it, «every form of life is unique, warranting respect regardless of its worth to man.»<sup>2</sup>

Preserving the vegetal diversity that nature developed is not only a human need but a moral duty. Would we decide to accept the role of nature's caretaker, that Taoism defines through the concept of «social harmony», our first task would be to ensure that the existing balance among vegetal species, but also between reigns, remains. Would we simply look for a way to bring social equity in the world, that task would not change.

# PEOPLE AND PLANTS

## BANKS FOR SEEDS

I first came to consider the need to preserve vegetal diversity while hearing about the Svalbard Global Seed Vault; this new seed bank in Spitzberg uses extreme cold temperatures to preserve the world's seeds.

Preserving genetic information is indeed necessary in order to give ourselves the possibility to face the current, global loss of diversity. Concerns are mainly oriented towards three issues.

Crop diseases could, due to the increasing homogeneity of agricultural patterns, devastate most of the world's food supply if focused on one of the four main cereals - namely wheat, rice, maize and barley - that currently represent 90% of the world's production of grain. As Ikechi Mgbеoji writes, «[...] the monocultural approach to human dietary preferences, agricultural practices, epistemology, and philosophy that is now in vogue constitutes a formidable threat to the sustenance of the diversity of crops.»<sup>1</sup>

Yet plants are not used only for food supply; it is considered that of the estimated 250000 species of plants, only 10% have been tested for medical purpose.<sup>2</sup> Preserving genetic information is, therefore, an important condition for the evolution of medicine.

Finally, the need to engineer new species that will adapt to specific contexts justifies the creation of a global seed bank. This happens either through the ancient technique of crossbreeding, or most recent bioengineering that involves the modification of a plant's genetic patrimony.



## UTILIZING DIVERSITY

However seed banks are not such a pertinent answer to the loss of diversity. The nickname that has spontaneously been given to the Norwegian institution clearly illustrates my opinion; this «Doomsday Vault» keeps seeds to prepare for the sixth extinction of species, when a strong emphasis should be put in impeding it from occurring.

Ecosystems are fragile entities indeed, which integrity depends on a sane balance in the representation of the species they are constituted of. That osmosis is maintained by the diversity of uses one can find in nature, which human activities must contribute to rather than seek to homogenize.

Diversity ought to be utilized, not capitalized. It is by increasing the variety of crops used in agriculture that we can prevent fleas from becoming pandemic. It is by keeping species alive, not in safes but in the ground, that we can preserve the ecosystem as a whole. It is, finally, by preserving the plants that we can preserve the populations that rely on their use.

## INDIGENOUS DIVERSITY

Using diversity doesn't only regards plants, but the wisdom about them. Acknowledging the populations who developed both plants and the techniques to exploit them as the main actors of diversity conservation is primordial in order to understand the variety of situations in which agriculture finds itself nowadays.

As a matter of fact, agricultural techniques have been elaborated with a strong concern for the needs of the community to improve its living. This empirical

development is valid for any civilization, regardless of its presumed technological development, but has clearly been influenced by local specificities.

The endemic character of plants, as well as all living beings, is defined by certain environmental characteristics - geography, climate... Human populations did develop large arrays of techniques accordingly to distinct contexts, as a way to adapt to their habitat but also to the specific form nature took as an answer to the same conditions.

## **TRADITIONAL KNOWLEDGE OF THE USE OF PLANTS**

***Empirically developed techniques, known as Traditional Knowledge of the Use of Plants, are too often considered non-scientific, and therefore given little credit. The recognition of traditional knowledge is a priority to be achieved in order to reestablish a fair balance in commercial issues as well as regarding rights to intellectual property.***

***As mentioned in the recently adopted United Nations Declaration on the Rights of Indigenous Peoples, "Indigenous peoples have the right to maintain, control, protect and develop their cultural heritage, traditional knowledge and traditional cultural expressions, as well as the manifestations of their sciences, technologies and cultures, including human and genetic resources, seeds, medicines, knowledge of the properties of fauna and flora, oral traditions [...] They also have the right to maintain, control, protect and develop their intellectual property over such cultural heritage, traditional knowledge, and traditional cultural expressions."***<sup>4</sup>

## SOCIAL DIVERSITY

Agricultural choices also have strong social implications in the actual context; durable schemes require a network of farmers, but also a network of techniques, plants and consumers. The interdependence between the different parts involved in food production and consumption must be understood and considered.

Before being food producers, farmers are the inhabitants of an defined area, who rely on the wise exploitation of its ecosystem. As the motto of French Confédération Paysanne expresses, “pas de pays sans paysans”<sup>5</sup> (no country without peasants), they play an important role in land maintenance and in the development of biodiversity, not considering any commercial opportunities but the need to improve their own means of subsistence.

As a consequence of this interdependence, consumers must also be considered part of the food production process. Their choices, indeed, define the global orientations food production moves towards. As a result of choices made in the past, high levels of unemployment in rural areas threaten small exploitation, as many farmers have no other alternative than migrating to the cities. Food production becomes the task of major corporations and landowners, that don't have knowledge and interest in land maintenance as local populations do.

With the actual, ever increasing distance between producer and consumer, it becomes primordial to give agricultural products a clear definition so that the physical gap may be filled by relevant knowledge.

## ***AN UNIVERSAL TECHNIQUE:***

### ***SEED SAVING AND CROSSBREEDING***

***Few techniques have been developed as answers to global conditions; one of them consists in assigning part of a crop to the need of producing seeds to be sown the next season.***

***Saved seeds can be used for planting, but also crossbred in order to improve some desired characters; this is most often a social activity, as farmers exchange their seeds amongst themselves according to their specific needs, in order to improve their chances of success.***

***This process has been existing since the beginning of agricultural settlements, and is the main source for all the species we consume nowadays.***

# PEOPLE VERSUS PLANTS

## THE INDUSTRIAL GAP ?

To many of us it seems obvious that last century industrialization is the only cause of the actual imbalance, and environmental threats; the gap between nature and humanity is in fact a very ancient phenomenon. The population once living on Easter Island did not wait for electricity to be invented to unwisely exploit the totality of the island resources, thus depriving themselves of any subsistence.

It is however commonly accepted that newest production processes, combined with an ever-increasing human population, contribute to accelerate this process of losing any link with our environment. Once a factual condition to cope with, nature is now considered from a safe distance as a production tool to be controlled.

This gap has now taken several forms, from consumer-based – the undeniable loss of empirical knowledge about environment – to policy-based – the lack of consideration for environment in decision-making.

In the following pages, I am presenting the main struggles for diversity, and opportunities for designers to address them.



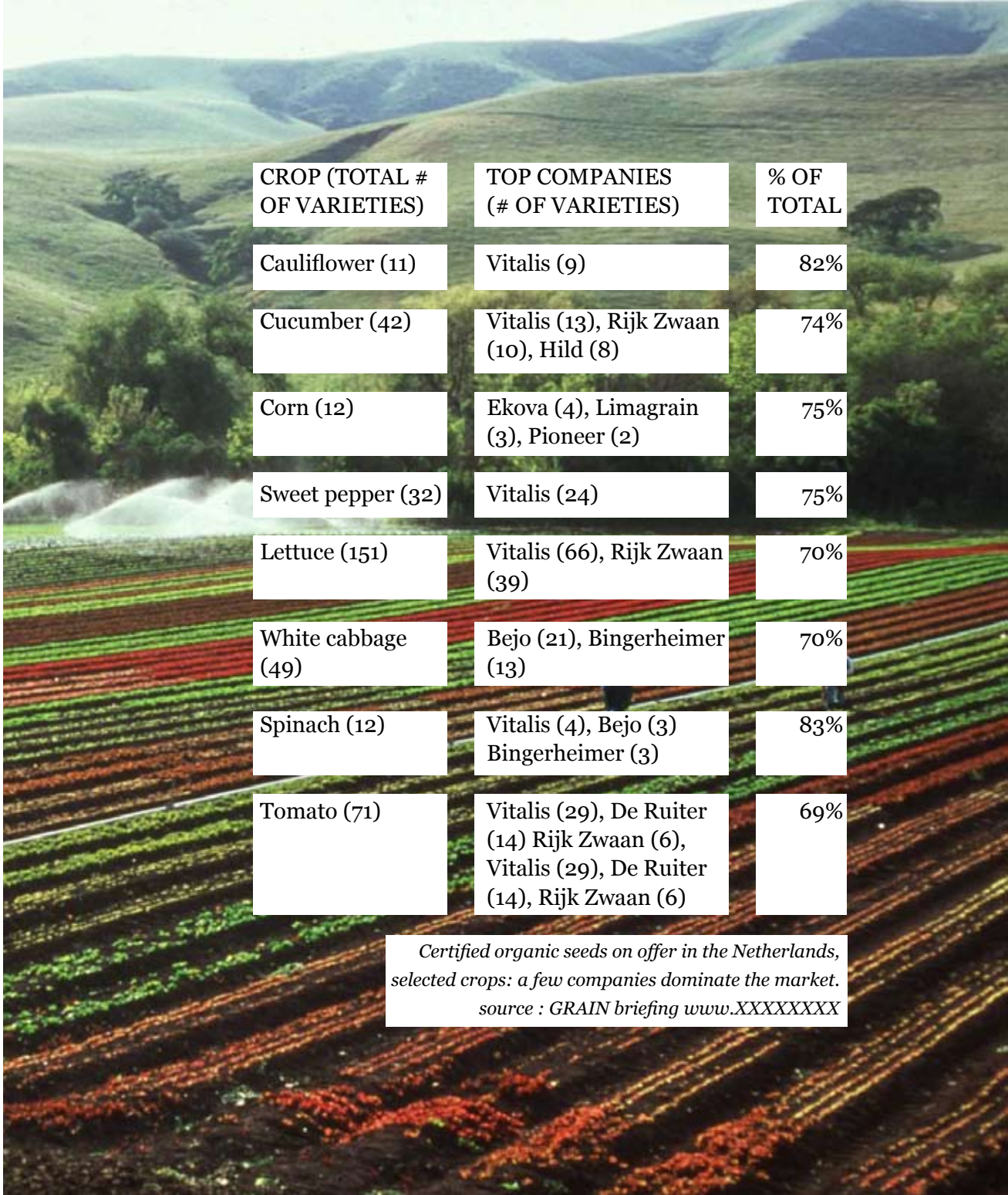


# ORGANIC SEEDS CERTIFICATION

Slowly but surely drifting from its original mission - safekeeping social and natural environments - new regulations for organic agriculture require seeds to be certified, therefore bought in official catalogues. What may seem like a good idea actually makes illegal seed saving and exchanging, reduces the variety and appropriateness of plants that can be grown as organic. When applied to most vulnerable populations, such legislations create a relationship of dependency to certified suppliers.

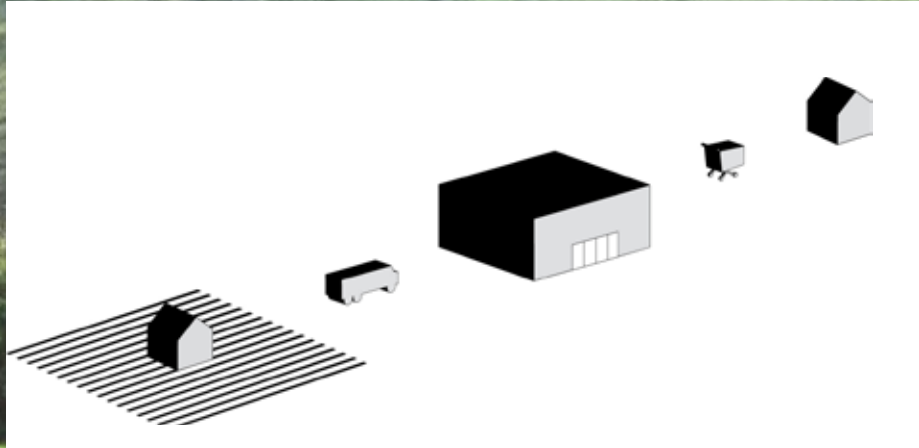
As an answer to these new conditions, local communities start developing trust-based networks, which rely on social control rather than official certification schemes, as Paul Nicholson points out. In France, the AMAP movement organizes weekly food distribution for subscribers, allowing producers to precisely know what amount of food they should produce. This system has been inspired by Japanese Teikei, which appeared when mothers, concerned by agro-industrial products quality, decided to organize their own distribution system in close collaboration with local farmers.

As designers we can use our creative thinking to support such initiatives in a very pragmatic manner. In this

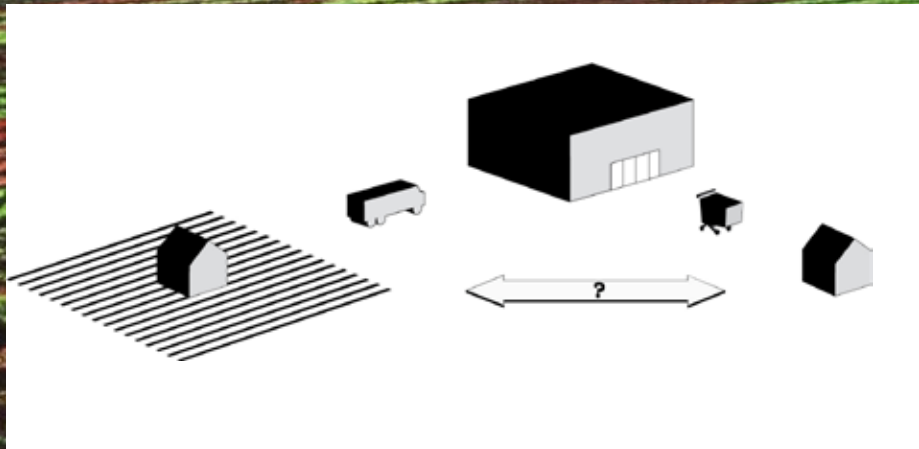


CROP (TOTAL # OF VARIETIES)	TOP COMPANIES (# OF VARIETIES)	% OF TOTAL
Cauliflower (11)	Vitalis (9)	82%
Cucumber (42)	Vitalis (13), Rijk Zwaan (10), Hild (8)	74%
Corn (12)	Ekova (4), Limagrain (3), Pioneer (2)	75%
Sweet pepper (32)	Vitalis (24)	75%
Lettuce (151)	Vitalis (66), Rijk Zwaan (39)	70%
White cabbage (49)	Bejo (21), Bingerheimer (13)	70%
Spinach (12)	Vitalis (4), Bejo (3), Bingerheimer (3)	83%
Tomato (71)	Vitalis (29), De Ruiter (14), Rijk Zwaan (6), Vitalis (29), De Ruiter (14), Rijk Zwaan (6)	69%

*Certified organic seeds on offer in the Netherlands, selected crops: a few companies dominate the market.  
source : GRAIN briefing [www.XXXXXXXX](http://www.XXXXXXXX)*



Traditional network : a linear distribution system, controlled by an external body.



Collaborative network : a global identity based on shared values and a social control.

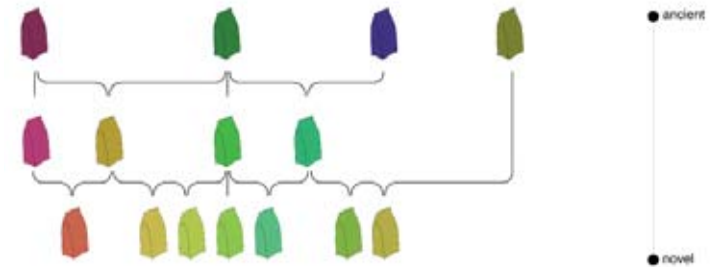
process we must keep in mind existing initiatives, as people involved in these actually know how to cope with all kinds of constraints for the best.

**BIO -, ALTERNATIVE LABEL**

*As organic seed certification leads to the development of alternative labels, design can help promote these solutions which won't be able to call themselves "organic", even though they will be of higher environmental and social quality.* <sup>7</sup>

*Yet those labels, relying on a principle of participative network, must be thought as an unique entity - as opposed to a conglomerate of producer, certifier and retailer corporate identities.*

*Using all the tools at our disposition - from communication to store design, through packaging - we can settle relevant initiatives on the market, and provide them with a strong voice to speak up.*



Representing, through packaging, species evolution : hybridization and open-pollination.

# INTELLECTUAL PROPERTY RIGHTS AND BIOPIRACY

During the expansion of western empires, “primitive” techniques were discovered that didn’t exist in colonizing countries. They were imported and patented. Under the impulses of today’s globalization, Intellectual Property Rights become valid worldwide, including imported inventions in their original country. Indigenous populations are therefore denied the right to freely use their techniques.

Biopiracy is the word that stands for this phenomenon - pillaging by corporations and occidental “inventors” of indigenous knowledge, reversed by law into this by indigenous populations of corporate research investment.

The solution is to be found through the recognition of invention as a collective and empirical act, says Vandana Shiva<sup>6</sup>, when it is now only conceived as a private scientific effort. Disclosing traditional knowledge is considered an efficient tool to prevent techniques and plants from being patented.<sup>8</sup>

This disclosure doesn’t necessarily have to happen through official channels though; some consider more appropriate to have the information disseminated, in order to reach a wider audience.

“If this is your country, where are your stories?”, a Gitksan elder once said the British colons.

Nowadays the whole world is our country. And we still don’t know the stories.



## PRIOR STORY

51 56 002381

My name is Tapia Núñez, I am a female farmer from Perú. I grow diverse plants such as coffee, grape, citrus and kapok cotton, using traditional Inca techniques. My ancestors discovered,

and developed as an agricultural technique, the relationship between different trees forming the canopy ; following their teaching I grew my Citrus trees under the coverage of the taller Cercopia tree, which retains water during drier times.

# PRIOR STORY

*As corporate patenting increasingly deprives indigenous populations from their traditional knowledge, Prior Story aims to highlight their techniques; doing so it provides european consumers a better understanding, while generating a prior act - making this knowledge official thus unpatentable.*

[www.priorstory.com](http://www.priorstory.com)

## PRIOR STORY

86 573 012562

My name is Huangpu Fang, I am a chinese mango cultivator in the Shanxi province. In order to protect my trees from insects, I use an ancient technique which involves a plant called «wo cai».

It has been developed during the Jin dynasty from the hybridization of celery and lettuce. It is very offensive to insects, even to snakes ; they are blinded if they circle and touch it by mistake. This allows me to get constant harvests, in which every fruit is intact.

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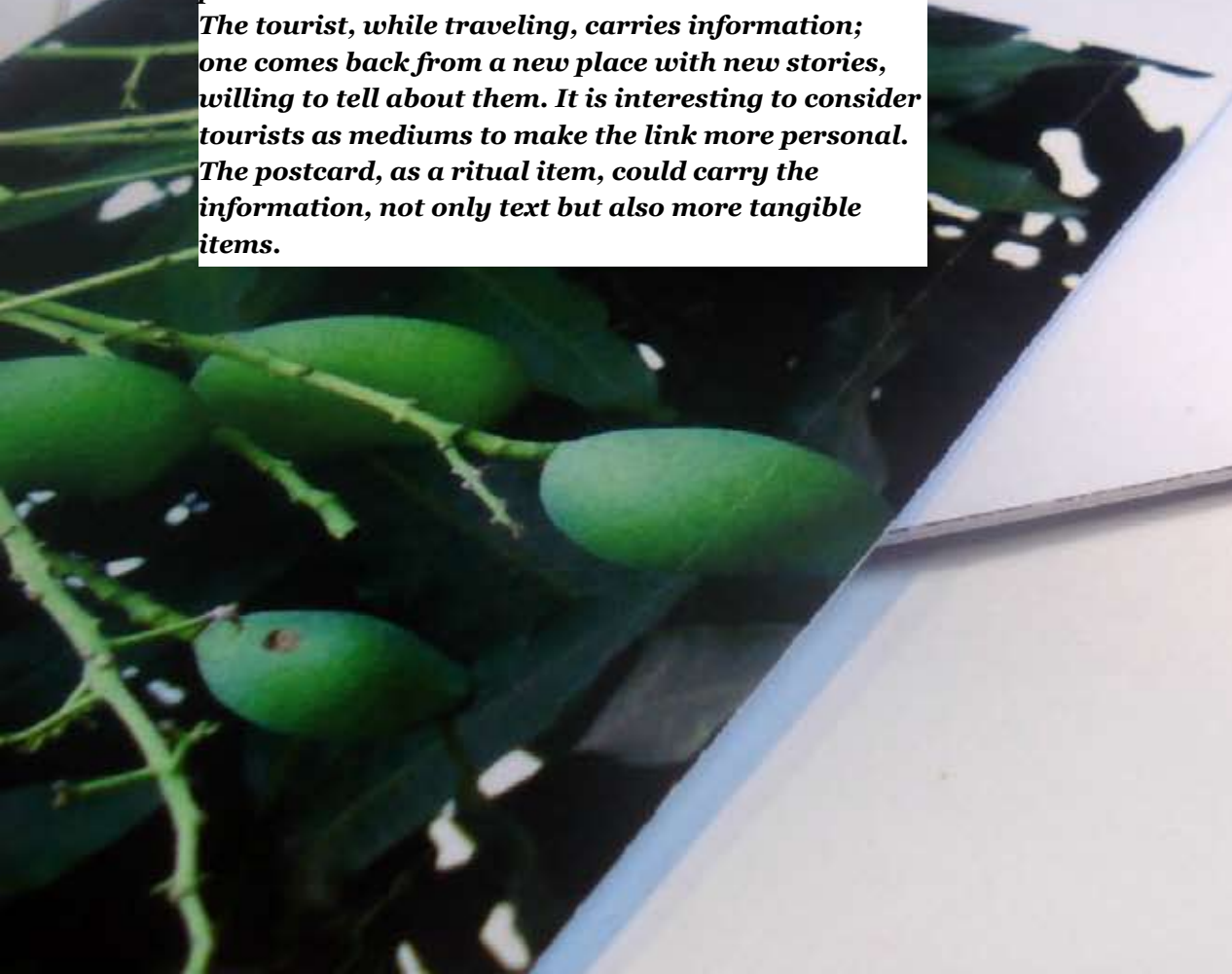
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## ***PRIOR STORY***

***Prior Story addresses the struggle of oral cultures in establishing their rights by generating a prior act - written disclosure of a knowledge - and transmitting it to the final consumer, therefore initiating a more intimate relationship.***

***Designing such medias of communication demands a reflection about how the target will be reached, in order to make proper understanding available to the proper person. In a first step, the information came along with the product in the store; however, it makes sense to aim for a more direct link between producer and consumer.***

***The tourist, while traveling, carries information; one comes back from a new place with new stories, willing to tell about them. It is interesting to consider tourists as mediums to make the link more personal. The postcard, as a ritual item, could carry the information, not only text but also more tangible items.***




# TERMINATED SEEDS

Genetically Modified Organisms, although in theory a good opportunity to make vegetal diversity richer and to help fight against malnutrition, appear to threaten most of the biological and social resources because used as a support to Intellectual Property. In order to warranty the respect of their licenses, patentees engineer seeds to make them sterile, thus impossible to save. This has already had dramatic consequences in regular situations, such as Indian region Vidarbha about which Nancy Scola reports: “In traditional agricultural, farmers can recycle seeds from one harvest to plant the next, or swap seeds with their neighbors at little or no cost. But when it comes to engineered seeds like Bt cotton, Monsanto owns the tiny speck of intellectual property inside each hull, and thus controls the patent. And a farmer wishing to reuse seeds from a Monsanto plant must pay to relicense them from the company each and every growing season [...] A PBS special that aired last month, called “The Dying Fields” claimed that one farmer commits suicide in Vidarbha every eight hours.”<sup>9</sup>

The dependency generated by disabling the most natural process and social relationship related to agriculture becomes absolutely unbearable when it applies to illegitimate patents. There is a strong need to raise public debate about what is a merely moral issue.

## ***TERMINATED FEEDS***

***Design for debate grabs the opportunity to translate***



***problematic situations into domestic objects, in order to generate a social debate. If a strong metaphor can be created, people will eventually feel concerned and react. This practice relies on the ideal that important issues, if expressed in the public opinion, should in fine be considered in governmental decision-making. Terminated Feeds address engineered sterility; it aims to produce purely controversial items, that won't work unless you accept the relationship of command they impose you. The first object is a lamp which bulb gets burnt when the power is turned off, forcing the user to go back to the supplier anytime he needs light.***



## NARROWING ECOSYSTEMS AND MONOCROPPING

Due to the constantly increasing need for cultivated areas for humanity to fulfill its own aspirations - feeding a growing population, producing meat and biodiesels for emergent medium classes - agriculture gets ever-more homogenous; a few “cash crops”<sup>10</sup> actually represent most of the world food supply, and are being grown on huge areas. As told before, the consequences of such global uniformity could be disastrous in case of a flea focusing on a widely cultivated variety. They are not less dramatic when considering the generated imbalance in the ecosystem, as well as the inability for the soil to regenerate.

As an answer to this struggle, initiatives such as botanical sanctuaries and permaculture initiated, which aim to regenerate the ecosystem, regardless to the productivity of such activities<sup>11</sup>. Yet it may be good to recall that traditional agriculture did rely on nature-based schemes; those may arguably be adequate given the new context, yet it remains important to preserve relevant knowledge alive.

### ***AROUND THE SEEDS***

***As raising awareness should not exempt from getting involved, pedagogic tools aim to turn knowledge into action in a pragmatic way.***

***Around The Seeds provides gardeners an appealing alternative to chemical fertilizers by displaying***

*information about the ancient art of crop rotation. It is considered that amateur gardeners use ten times more chemical products in their garden than what a conventional farmer would - not by will but simple misjudgment. And by not reading the label on the bottle.*

*My option is to bring relevant indications, in a very visual and understandable way, directly in the garden, so that no effort is needed to get to know the technique. Supported by the display, the gardener can learn by doing; once the habit is assimilated, it may open up on different ways of gardening.*

{PICTURE TILE IN GARDEN}







## HOMOGENOUS DEMAND

Never before had we known so much about food, and yet so little about heirloom species. This seriously impacts our cultural environment, as most people of our generation know more about pineapple than parsnip, but also has social implications, mainly in rural areas.

Under the demand from consumers for homogenous supply, producers must comply and produce more of less. Hence the high specialization of agriculture - which comes along with the troubles linked to monocropping.<sup>12</sup>

Few initiatives actually exist to invite consumers to take a step back and think about their plate. Most of them are actual counter-examples of the consumer's almightiness - commercial initiatives set up not considering an expressed demand, but an intrinsic necessity. As an example, Dutch supermarket AlbertHein proposed an assortment of cherry tomatoes combining well-known varieties with more surprising ones - yellow, purple...

### ***TASTE, ADOPT***

***Design must go further than awareness-raising options, which most often don't imply any reaction from the consumer, but a passive absorption of information. While designing pedagogic tools seems to be more appropriate, something will still be missing.***

***Design must not only consider the message, but the experience of how one will receive it. Pleasure is very certainly the basis on which the user relies or not on***



*Recreating magic in cooking : a black soup that turns into a bright pink when vinegar is added.*

*the content he is being given. When “inciting” turns into “inviting”, there is little doubt that habits can be implemented in a more durable ways.*

*Cooking, as the strongest ritual related to food, represents a great occasion to bring upon concerns about the ingredients we use. I started exploring that option using recipe book as a medium.*

*Colors And Shapes recipe book considers the aesthetic value of original ingredients to generate a new way of cooking that triggers curiosity.*

*Slice uses the archetype of a children book - sliced pages that can be combined in various ways to create different stories - in order to determine a greater range of recipes.*



## golden quinoa and

Rince 500g of quinoa.

Put into a dish the quinoa and 1/2 liter cold water, and a teaspoon of olive oil.

Put in the oven at 180 °C during 20 minutes.

Remove from the oven, stir and add the juice of 1/2 lemon.



## two corns in

Wash a yellow and a blue corn.

Brush both corns with olive oil.

Put these in a dish, and cook them in the oven at 180 °C during 10 minutes.

Dissociate the grains.



## maya sauce

In a pan, melt 25g of butter.

Pour 100g cocoa powder and the juice of 1/2 lemon.

Stir slowly, while pouring 5g of cinnamon.

Let it cool down.

Put the yellow of an egg, stir.



## rice noodles and

Have a liter water boiling without any salt.  
Pour 1kg rice noodles in the water.  
Let cook during 5 minutes.  
Take the pan out the fire, and let cool down 5 more minutes.  
Add 20 cl milk in the water.



## asian pumpkin in

Cut an asian pumpkin (yasai kabocha )in small cubes, without peeling it.  
Keep the seeds separated.  
Boil the bits for 40 minutes, until the skin gets soft.  
drain the water.  
Fry the seeds in sunflower oil for 10 minutes.  
Add 1 tea spoon soya sauce.



## ginger sauce

Peel a ginger, then grind its flesh.  
Fry it in a pan with sunflower oil, until it gets bright.  
add 50 cl coconut milk.  
Let cool down.



## whole kamut and

Fry 500g kamut grains in a big pan, with olive oil and safran. When the grains get translucent, pour 20 cl water in the pan. Cook for 10 minutes while regularly stirring. Cut olives in halves, remove the core. Add the olives to the kamut, and cook for 2 more minutes.



## mediterranean garniture in

Cut 2 zucchini and 2 eggplants in stripes, and steam them. After 5 minutes add 2 minced onions, and some garlic. Cook for 10 more minutes. Add 5 sliced tomatoes and 1 green paprika. Immediately remove from the fire. Add the juice of a lemon and some herbs.



## spicy sauce

Slice 1 red and 1 green paprika, and a birdtongue pepper. Fry everything with olive oil. Once the paprikas size halved, remove from the fire. Mash, add black pepper. Serve with olive oil.



## purple potatoes and

Wash and brush 1kg small purple potatoes.

Do not peel nor cut them.

Put the potatoes in 2 liters cold water, and cook them softly.

When you can't hole a potato on your knife anymore, remove from the fire.

Save the water for a soup.



## russian cabbage in

Cut a russian pink cabbage in stripes, then rinse it.

Fry it on a vivid fire for no more than 5 minutes in 25 cl vinegar.

Add 3 sliced onions and continue cooking on a soft fire.

When the vinegar is gone, add 10cl water and 20g flour.

Cook for 5 more minutes.



## mont ural dressing

In a sauce pan, melt 100g butter.

Add 20 cl milk and 20 g flour.

Stir.

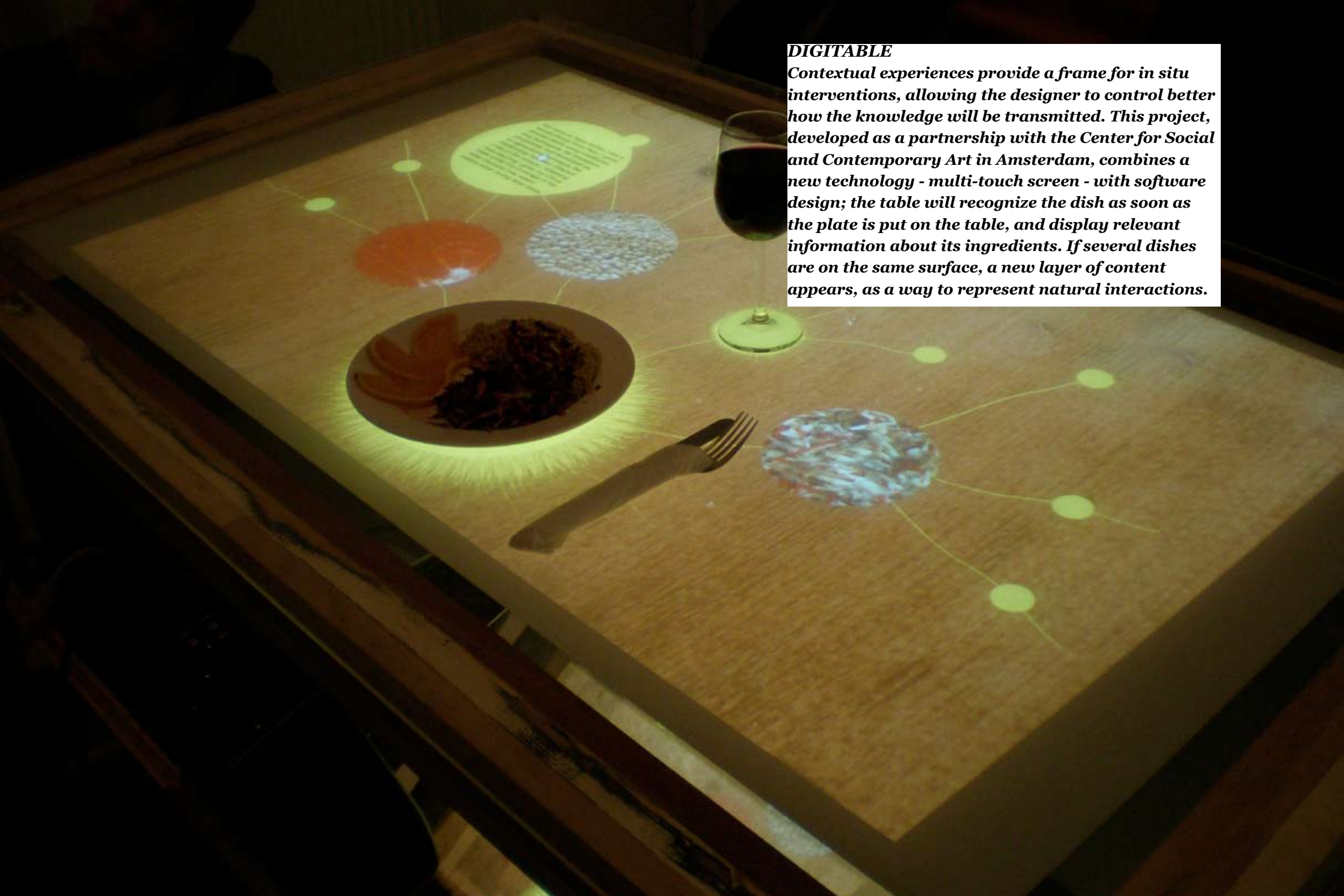
When the sauce is homogenous, add 10 cl vodka,

Add pepper, aneth and 20 cl elderberry flower juice.

remove from the fire and let cool down.

## ***DIGITABLE***

*Contextual experiences provide a frame for in situ interventions, allowing the designer to control better how the knowledge will be transmitted. This project, developed as a partnership with the Center for Social and Contemporary Art in Amsterdam, combines a new technology - multi-touch screen - with software design; the table will recognize the dish as soon as the plate is put on the table, and display relevant information about its ingredients. If several dishes are on the same surface, a new layer of content appears, as a way to represent natural interactions.*



# DESIGNING SPARKLES

## DESIGN AND INITIATIVES

While considering all the political and organizational issues related to the topic I had chosen for myself, I came to understand that most of these are being addressed by highly competent persons and communities. There is no point for designers to pretend compete with such specialists, who have been developing ways to achieve their goals long before any external interest appears.

This statement is even more important if regarding initiatives led by poor or remote communities, about whom one could easily assume to provide great creative or technical improvement. It is essential that we, as creative people, don't try to take over specialists but learn to cooperate with them.

Supporting existing initiatives is a serious task, which can be addressed in different manners. Collaborating with an organization to help it promote its own values and communicate about its activities is an option that, regardless of the designer's mastery, addresses but a very specific part of the issue.

## THE NEED FOR PUBLIC AWARENESS

On the other hand, it must be possible for design to address the problem from its very root. As evoked many times before, there is a strong responsibility for the consumer to decide and express through his buying patterns and for the citizen through his voting what future orientations must be. Grabbing that opportunity

makes sense, while working on a topic as universal and consequential as is the preservation of vegetal diversity.

Public sensitization is to be considered a way to support both local and global initiatives - a campaign for the cause rather than the initiatives. My position is therefore more oriented towards bringing recognition than design solutions, whilst keeping the educative and playful aspects I did mention before. Designing objects that raise a certain awareness, provide excitement and invite to get involved on both personal and social levels. Designing the sparkles that will initiate motion.

## THE VALUE OF SEEDS

While researching about the different matters related to my topic, I was astonished to understand how precious seeds can be in some contexts. What we consider in the best of cases as a kind metaphor to express life, most of the time as disposable trash, is actually, and in a very direct way, a primordial mean of subsistence and the core of a cultural heritage. It takes illegal actions for guerilla gardeners to grow seeds in urban, public areas, hence showing the world the importance of plants as part of our worlds.

I am therefore trying to design devices that invite people to modify their way of regarding seeds, by providing a natural understanding of the value of seeds.

## DESIGN PROJECTS

Learning the value of seeds is of course no linear scheme; one must understand all the values that are attached to vegetal diversity, utilitarian as well as intrinsic ones.



Design must therefore tackle different opportunities to get the message through. From raising awareness, providing knowledge to triggering curiosity and offering the tools to get involved, all aforementioned approaches can be applied to the aim of valuing seeds.

### ***OBSERVING SEEDS***

***Regard is a big part of the deal ; By showing the beauty of seeds in a meaningful manner, objects trigger and invite people to react. Seed Jewels put an emphasis on seeds endemicity, each piece referring to a specific location. Seed Frames use of an adequate disposition to let seeds speak for themselves.***



● Wild

● Domestic





# CARROT

text about carrots how and when they became orange as a tribute to the Netherlands royal family, it explains a lot about how people domesticated nature and how we consider pretty recent inventions (17th century) as the rule and tend to forget all the other species. Of course in the openings, you should insert the seeds of those forgotten varieties, that you will have collected, hence discovering purple and beige carrot !



### ***COLLECTING SEEDS***

***Inviting people to take a part in seed conservation can only be done if the process itself is made valuable. Using Panini stickers as a reference, one can get childish excitement back in looking for specific seeds, and saving them in a specific album***

### ***SAVING SEEDS***

***Acknowledging seeds as part of a natural process is a first step in rebuilding the link with our surroundings.***

***As flower pots represent the habit of plant petting, turning these into saving devices allow people to reinsert seeds into the natural loop. Seed Drier permits to replant or exchange pits from food, while using Seed Family people can grow seeds fallen from grown-up plants.***





# CONCLUSION

Conclusions still to be drawn and written, but it should obviously talk about my researches, the opportunities for further development, my critical view on the project... everything in 300 words.

# NOTES

<sup>1</sup> Mgbeoji, Ikechi. *Global Biopiracy: Patents, Plants and Indigenous Knowledge*. Cornell UP, 2007

<sup>2</sup> Bates, Sarah & Knight, Richard. *A New Century for Natural Resource Management*, Island Press, Washington, 1995.

<sup>3</sup> Rackleff, Kathryn. *Preservation of Biological Diversity: Toward a Global Convention*. 1992. 3 *CJILP*405

<sup>4</sup> United Nations Declaration on the Rights of Indigenous Populations, Adopted by General Assembly Resolution 61/295 on 13 September 2007

<sup>5</sup> Herman, Patrick, in behalf of Confédération Paysanne. *Changeons de politique agricole*. éditions mille et une nuits, 2002

<sup>6</sup> Shiva, Vandana. *La vie n'est pas une marchandise*. alliance des éditeurs indépendants pour un autre mondialisation, 2004

<sup>7</sup> "I think what will happen is that local farmers, and especially small farmers, will to some extent continue resisting the application of these seeds, and perhaps many small farmers will leave organic certification schemes, and develop local labels, local self-certification schemes with consumer groups."  
Nicholson, Paul. Interview of February 18, 2008

<sup>8</sup> In the current system, patent examiners use an array

of databases, according V K Gupta, a panel co-convener. "A system should be set up to ease the work of patent examiners," he said, and suggested a systematic use of metadata, which provide greater detail.  
Saez, Catherine. *WIPO Consults On Protecting Traditional Knowledge, Genetic Resources*, 2007.  
<http://ip-watch.org/weblog/wp-trackback.php?p=875>

<sup>9</sup> Scola, Nancy. *Why Iraqi Farmers Might Prefer Death to Paul Bremer's Order 81*, AlterNet, 2007.  
<http://www.alternet.org/waroniraq/62273/>

<sup>10</sup> "Cash crops" is the expression commonly used while referring to financially efficient species, that are grown for financial reasons, as opposed to subsistence crops. As the United Nations Permanent Forum on Indigenous Issues writes, "*the history and cycle of plantation development begins by the granting of forest areas as concession areas, the next stage is the clearing or destruction of forests and then followed by the establishment of plantations. As these plantations are meant to produce crops for the market, they are logged after a short period and planting begins all over again. In both these processes indigenous peoples are either evicted from these forests areas, or their access to the forests is curtailed, and a few people are absorbed as seasonal workers.*"  
[http://www.un.org/esa/socdev/unpfii/documents/6session\\_crp6.doc](http://www.un.org/esa/socdev/unpfii/documents/6session_crp6.doc)

<sup>11</sup> "Ecosystem gardening is a way of thinking and acting upon our tattered environments, of finding creative, localized and effective ways to restore natural places. It involves working closely with plants and their environments: tending, cultivating, growing, reseeding, intervening, as much as leaving wild spaces alone. The aim is to bring health back to the landscape, by crafting

together the rainforest. There is clear evidence that the forests will return if we give them a chance.”

Sechan, Supraba. Gurukula Botanic Sanctuary website.  
www.gbsanctuary.org

<sup>12</sup> “First of all, it should be underlined that almost 90 per cent of the global calorie intake currently comes from just 30 crops. Moreover, the spread of a few selected modern crop varieties has dramatically increased, especially in developing countries, with the consequence of a dangerous global genetic homogeneity.”  
Massari, Stefania. Current food consumption patterns and global sustainability, discussion paper

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Tudge, Colin. *So Shall We Reap. What's gone wrong with the world's food - and how to fix it. Penguin Books, 2003*

## LEGAL TEXTS

OMC's Accords sur les aspects des Droits de Propriété Intellectuelle qui touchent au Commerce (ADPIC)

WTO Agreement on Trade-Related Aspects of Intellectual Property Rights (TRIPS)

GATT's Uruguay Round

Union pour la Protection des Obtentions Végétales (UPOV) convention

Universal Declaration of the rights of indigenous people (UNO)

World Intellectual Property Organization (WIPO) chart  
Plant Variety Protection Act (PVPA)

# NETWORK OF EXPERTS

Genneper Hoeve, organic farm, Eindhoven

Groen Gennepe Volkstuin, community garden, Eindhoven.

Hervé Le Meur, coordinator of the organization OGM danger, France.

Ikechi Mgbeoji, writer of the Global Biopiracy, Canada.

Jennie Love, founder of straightfromthefarm website, US.

Jonathan Zilberg, cultural anthropologist, Indonesia

Nancy scola, reporter-writer, US.

Olga Van Der Valk, researcher in Wageningen University, Wageningen.

Paul Nicholson, board of CPE, GRAIN and EHNE, Spain.

Philip Sterck, Responsible of BioPlanet stores, Belgium.

Peter Distol, founder of SOCO gallery, Amsterdam.

Preston Hardison, World Intellectual Property Organization, Switzerland

Roger Chennels, South African lawyer, specialized in indigenous rights, South Africa.

