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## A speculative designer's adventure with invasive species



**Human Invasive Interactions** involves the experimentation, planning, and design of the interaction between people and invasive plants and animals. Invasive animals are successful at growing in our changing urban habitat. Instead of spending limited resources on eradicating invasive species, what are the potentials once we appreciate them as a technology of renewal resources?

In the opening speech by the respected Belgian cultural anthropologist Rik Pinxten at Possible Futures Festival, where Human Invasives Interactions was first exhibited, the audience is incited by suggestions of 'autonomous adjustments' to deal with a world of economical and environmental destruction, only to be led later into an image of "new plantation skyscrapers". Although some of his sentiments are understandable, as a speculative designer I must warn against the heroic, intangible and utopian imagery of the future. Outsourcing our food production to specialised labourers and geography, with vast economical structures, encourages cumbersome systems that could easily become another product of green-washing for large governmental and economic organisations.

Rather than focusing on vast political theologies, speculative design uses case studies and narratives to provoke our ideas about the future in a way that is more immediate. As society grows more skeptical of sweeping political announcements, imaginary utopias and one-liners, the practice has evolved to become increasingly concerned with developing believable memes. The aim is to avoid clichéd symbols so that we can push grandiose aspirations of science and technology into a world where we can rationally explore our frivolous desires, a world far beyond simply jumping to sell ready-packaged solutions for our current dilemmas. This case study of how a city uses invasive species will address the wider issues of the popular cynicism that people have towards food processes, GMO, monoculture, ecological impact, and its impact on public health and started to questions how citizen innovation might be initiated to participate in the issue.

Scientific research in using invasive species is nothing new: the Natural History Museum in London has been studying the feasibility in commercially consuming the Chinese mitten crabs in river Thames (Clark et al., 2009) and the University of Florida (Sanford, 1988) has long researched the increase in honey production from the invasive punktree (*Melaleuca quinquenervia*).

Online websites such as http://eattheinvaders.org preserves the ongoing list of recipes for different invasive species in the Americas, many with community mapping devices such as http://invasivore.org/invasivore-map/ to track sites of invasive and invite potential eaters. Even the Smart Seafood Guide has been cited by New York Times to suggest invasive species as a "safer, more sustainable" (Rosenthal, 2011).

Artist Natalie Jeremijenko's Cross Species Adventures Club makes recipes that applies both the specific wild species as well as humans to promote a new cohabiting, co-dining experience. A new wave of sustainable designers such as Bannavis Andrew Sribyatta of Pie Studio are making furniture out of invasive plants.

In Ghent, Belgium, an experiment I coordinated with Timelab is taking place to investigate how we can rethink our relationships with the animals and plants that share our urban space beyond our control, the invasive species. Timelab started it's roots within the local community as a Fablab, from a collaboration between the Grassroots Invention Group and the Center for Bits and Atoms (CBA) at the Media Lab in the Massachusetts Institute of Technology and is now a "hotbed for makers, thinkers and doers", as advertised by Bruce Sterling on his BEYOND THE BEYOND section for Wired.com. One year on, our collaboration has created a movement for local communities to use, consumer and eat invasive species on a city scale and is the subject of a documentary by the national Canvas TV, where at the launch I had the opportunity to feed the Mayor Daniël Termont, a not-so slowly cooked invasive goose-leg while quizzing him about the future of innovation as activism to oppose the high sentiment and low labour world of 'clicktivism' 'slacktivism' and even, as site on Washington Post: "arm-chair activism" (Figs. 1–2).

To start off the public project, city ecologist and local plant expert Geert Heyneman and myself, presented an invasive snail-cooking show for the public to reinstate the common agricultural pest into a delicious aperitif and making a highly nutritious and low fat answer to the recent Spanish apple snail invasion (ESTA, 2011). With the help of scientists at Ghent



Fig. 1. Graph showing the level of sentiment and labour in different forms of citizen-led approaches that can be seen as a form of activism.



Fig. 2. Mayor of Ghent, Daniël Termont, offered himself to taste my invasive goose-leg to show support for citizen innovation and smart citizenship and grassroots in the city become more aware of ecological complexities and generate uses for invasive species as a control mechanism.

university, we made proposals such as ladybird keratin nail varnish, snail face spas (which quickly leaked into the real world by The Telegraph and a Japanese beauty industry). In our collaborations, the highly invasive Japanese knotweed became a focus for attention with many outcomes such as hand-crafted paper from an archeologist with proposals of being made into biodegradable paper cups and rhubarb flavoured Knotweed Cakes was served by the popular cake artisan Julie Stampaert of Julie's house. For the launch of the new Food Council, celebrity chef/nutritionist Lut De Clercq of Back Stage Kitchen also joined our project to make cocktails made from fermenting invasive Rosa Rugosa and other invasive berries. While providing much delight and discussion for the general public, these initial real-life experiments highlighted a sobering fact that although both chefs and consumers wished to continue using invasive species, there were no extended systems in order to sustain a constant availability of the harvest. Invasive species is not a business for mass agriculture and begs for a more flexible approach to our current consumption systems.

The focus of **Human Invasive Interactions** is on generating proposals in real, specific cases that challenge our perceptions towards the geographical, economical environment and its effects our social and biological health. The collaborations use this elastic momentum as an opportunity for new social events, a productive citizen activism even. For my research this is an opportunity to take research findings into businesses and political organisations. Rather than immediately problem solving for our current state, the project look to build a diverse community that can team up and constantly iterate to slowly break down the large, complex and ambiguous issues related to our futures in a changing ecology and economy.

Our on-going experiment in Ghent is providing new insights to the global social perspective, prototyping a new paradigm between society and science, individuals and politics and humans and the environment. Soon after the launch of the Canvas collaboration called Atelier de Stad, a Belgian restaurateur started to import invasive grey squirrel meat from Britain to Belgium as a specialty. This caused a media sensation that ended with personal death threats. Soon, large, public debates about the treatment of meat and 'wildlife' animals became escalated to the point where Myriam Dumortier from the European Commission wrote a piece on our experiments to warn the tinkerers of the dangers in promoting invasive species. Consuming invasive species would no doubt be effective in reducing their numbers, but could humans be trusted to accept the decrease in a newly useful ingredient rather than to breed and essentially farm the invasive species? "The restaurateur has put the squirrels back on the menu" the proud locals tell me, but the unanswered questions of how policies and morals



**Fig. 3.** Every year, nature enthusiasts in Ghent would practice the act of depopulating invasive Canada goose by throwing goose eggs into rivers to disturb their breeding habitat. Under the project Human Invasive Interactions, these eggs were collected for consumption. Photographer: Michiel Devijer take with Alice Vandeleur-Boorer.



**Fig. 4.** Workshop named as "Grote Woorden, Kleine Revoluties" hosted with FoAM at Vooruit cultural center in Ghent for the Possible Futures festival, September 2013. The event gathered collective insights of local businesses, government bodies, chefs and scientists for alternative futures between people and the invasive species that share their space and collectively exploring potential problems. Photographer: Michiel Devijer.

would catch up to a delicacy of imported invasive species reminds us that often what's considered to be pests are often breed-worthy treasures in another location, economy and society.

These conundrums prove the role of Pinxten's "idea laboratories of the future" in first stimulating a wider participation in order to sustain organic, bottom-up feedback loop when new questions arise, rather than top-down utopian visions that becomes outsourced policies. In this way, the scientific arguments for treating invasive species that would normally be seen as too overwhelming and polemic to criticize become more approachable for the general public to study once they are teased out into scenarios, objects and services.

The discourse surrounding eating and killing of animals is sensitive and therefore has more social interest values in terms of being a design for debate. The Canada Goose is territorially aggressive to smaller species and contributes to soil erosion. Ghent's annual summer mass culling of the invasive Canada Goose is a municipal hidden procedure. In this famously vegetarian town in summer 2013, more than 2 thousand animals were caught, individually injected with a poison and incinerated at public costs. Vegetarians paying significant amounts of their tax money on killing geese became a glitch in the system for a potential rethink of the future of food, ecology and tax systems. There was an appreciation from both the vegetarian world as well as the maker community that eating to increase biodiversity and countering battery and monoculture farming was a sound argument, but the realities of dealing with the rather savage and unexpected challenges of harvesting had its own dilemmas. There were small communities that would eat the invasive geese, even to embrace them as apart of a productive system, but the reality of these disconnected lone-practitioners is that there's a large leap of moral and physical obstacles between hunting a large wild bird and purchasing a pre-packed filet. Hunting and foraging is still a small pocket of the fringe community but as many would argue, "I believe in the principles, but who's got the time

for it?" (Fig. 3). The real design challenge is how these dilemmas, skills and actions could be socialize for our modern way of living, so they are accessible and useful to the everyday public.

With the collaboration of thinktank FoAM in Brussels and the Human Invasive Interactions workshops mapped out the local business-scape for making "invasive plants and animals a unique local resource rather than an expensive nuisance". The workshop invited a list of plant experts, environmental politicians, ecological scientists eco-entrepreneurs and urban sociologists as well as experimental ecological businesses, governmental Department of Environment, Nature and Energy and political organisations such as EVA (Ethical Vegetarian Alternative). With the collaboration of Nottingham's Near Now and a further input from FoAM, the project is now growing to use these insights from Ghent's grassroots invasives for a new public understanding of biotechnology. This public output counters the glamorized distant media world of synthetic engineering and transhumanism and reexamines 'biotechnology' as our everyday processes in: monoculture, ecological impact, public health and how citizen innovation might be initiated to participate in the issue (Fig. 4).

This on-going collaboration through **Human Invasive Interactions** has formed unusual partnerships with scientific, media, ecological, food and business communities for a focus on the dynamic relationship between people and the invasive species. This series of public engagements is creating useful proposals as well as constantly pushing a status quo in our social, economic and political models. Using real-life local communities, these edible, critical and narrative experiments have become a platform to broaden our current conversations between our diets and our views towards the larger system to generate alternative methods with a focus on our ecosystem, food, agriculture, economy politics and healthcare.

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