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## **'Who's the pest? Imagining human-insect futures beyond antagonism**

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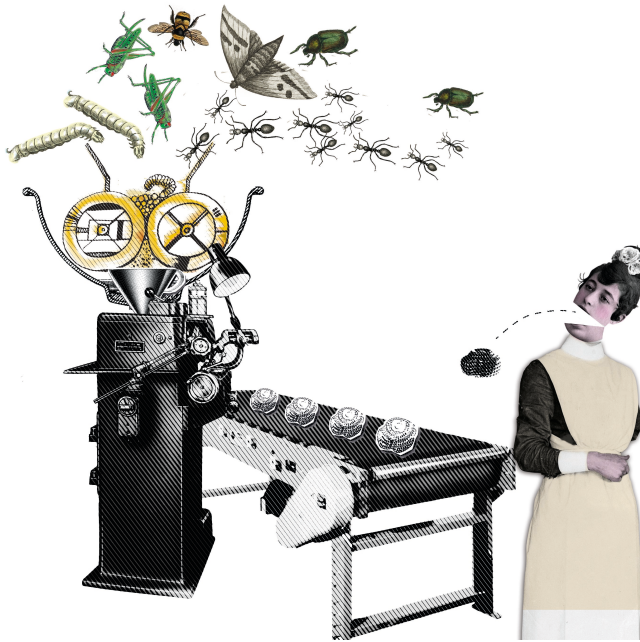
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'My insects are all vegetable feeders, clean, palatable, wholesome, and decidedly more particular in their feeding than ourselves. While I am confident that they will never condescend to eat us, I am equally confident that, on finding out how good they are, we shall some day right gladly cook and eat them.' Vincent M. Holt (1885)

Insects are enjoying an increasing public presence in an unusual register. In an effort to rewrite narratives of pests as harmful and horrific, initiatives such as *Pestival* (2009) and Hugh Raffles 'Insectopedia' (2010) have introduced us to the beautiful architecture of termites, acute vulnerability of pollinators, unusual cricket entertainments, bug based sexual fetishes, and habitual reliance of forensic science on blow flies and beetles. A 2009 *Antenna* issue further lamented the 'typecasting [of] insects in a pre-digested and inappropriate box' (Farmer et al, 2011: 13). How else could we co-exist? This question, and the wish to contest stereotypes, also shaped the Wellcome Collection's 'Who's the Pest?' event series (18 April - 16 May 2013). Co-organised with activists from *Pestival*, the programme framed the issues in a number of different activities, from local 'insect' walks and debates to food tasting and food designing sessions. Even a computer game was commissioned for the website to get people thinking about their potential role as 'co-pest'.

**Figure 1.** Mutually assured survival? Insects as 'future food'



Credit: *Insects au Gratin* promotional image; reproduced with permission of The Wellcome Trust.

Having somewhat thankfully missed the gourmet evenings, I attended the ‘Insects au Gratin’ food design workshop. The idea of insects as food is less gimmicky than it sounds, although newspaper articles on the topic keep surprising unsuspecting newsreaders (indeed, many have inquired about misplaced April’s fool’s jokes). In 2010, the United Nations recommended that people switch over to eating insects, especially in countries where they are already consumed (Holland, 2013), and in 2011, the European Commission reportedly offered a £ 2.65 m prize for projects that encourage Europeans in following suit. Since then, ‘food designers’ (many of them scientists turned chefs) have taken to the challenge of making insect protein palatable to ‘Westerners’. British company *Ento* (think bento box meets entomophagy) emerged from a graduate project within the ‘Innovation Design Engineering’ programme at the Royal College of Art and Imperial College London. The designers ‘started this project with a common desire to work on creative approaches to sustainable systems for food security’ (Ento, 2013). Seeking to market their very appetising looking lunchboxes to a ‘high end’ consumer group, they are hopeful that insects will find a place in the Western diet, much like the previously ‘unmarketable’ sushi. The concept of introducing insects to the Western diet is not new – it has only become more pressing. In 1885, visionary Victorian nutritionist Vincent M. Holt complained that people would rather starve than eat insects. Insects, he maintains, are not only cleaner animals compared to birds and mammals, but they also provide better nutrients than the average working class, or even upper class, diet.

‘But why on earth should these creatures be called loathsome, which, as a matter of fact, are not loathsome in any way, and, indeed, are in every way more fitted for human food than many of the so-called delicacies now highly prized? (...) All this would not be so absurd if it were only the rich that were concerned, for they can afford to be dainty. But while we, in these days of agricultural depression, do all we can to alleviate the sufferings of our starving labourers, ought we not to exert our influence towards pointing out to them a neglected food supply?’ (Holt, 1885)

Complaining that no such reservations were made regarding crustaceans, oysters and ‘dirty’ pigs, he pointed to the lack of logic underlying Western food consumption. Unusual for his time, he held up insect eating populations as more ‘sensible’ and ‘civilised’ than his carnivorous compatriots<sup>1</sup>. Envisioning a pastoral idyll where poor children help farmers pick insects and help their families in turn with the gathered nutrients, Holt is not so far off from contemporary imaginaries, where insects are no longer exclusively portrayed as an uncontrollable crop pest, but are seen as withdrawing ‘natural services’ (pollination) or even as constituting a desirable ‘crop’ themselves. An article in *Wired* sums up the anticipated situation, brought about by overpopulation, mishandling of resources and climate change: people need to get used to less food choices. Entomologist Marcel Dicke, amongst other concerned scientists, suggests that from as early as 2020 onwards, food choices will decrease and insects will become a necessary part of even Western diets. The problem that he sees relates the bad image of insects: ‘we’ll have to find a way to sell insects without actually showing them’ (Dicke in Cassandro and Chicco, 2011). While both advocates and sceptics, such as author Jay Rayner (‘A Greedy Man In A Hungry World’), believe that marketing will be the key to selling insect protein (Rayner (2013) cites Quorn as an example), others feel that authoritative chefs might be the answer. As Marian Peters, secretary and PR person of the Dutch Insect Breeders Association, suggests, ‘we still don’t know how to cook and serve them’ (Peters in Cassandro and Chicco, 2011). In parallel, new kitchen appliances such as the ‘Lepsis Grasshopper Breeder’ are being developed to facilitate a seamless aesthetic transition in Western kitchens (Erikson, 2013).

Despite its title, the Wellcome’s ‘Insect au Gratin’ workshop did not actually offer cooking advice. Rather, it was asking participants to think about, and come up with processing and serving formats which might make insects more acceptable as part of the European diet. Led by designer Susana Soares and Natural History Museum curator Max Barclay, the workshop combined debate with project demonstration - and plasticine modelling. Addressing an audience of food bloggers, design students, entrepreneurs, artists, ‘concerned citizens’ and ‘unintentional’ visitors who had walked in from the exhibition, the presenters began with an overview of insects as food. Topics, frequently prompted by audience questions, included cultural

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<sup>1</sup> Mexican biologist Julieta Ramos-Elorduy describes aversion to entomophagy as a ‘European failure’ that, because of (on-going) colonialism, continues to have negative repercussions around the globe (1998: 9).

differences, the prevalence of edible insects and larvae in Northern Europe, processing methods, nutrient content, the problem of ‘crunchy’ exoskeletons, the ease of raising insects, environmental impact, links between insect eating and beneficial farming practices, and, lastly animal welfare issues. It was suggested that Northern Europe did not offer as much diversity of insects as hotter parts of the world, which was seen as one of the reasons why an insect eating culture never developed. Citing examples from Roman cuisine, however, the organisers showed how insects used to be on the menu in the Mediterranean, apparently marinated in wine and roasted. Insect eating also appears to be permitted by all major religions, with scriptures such as the Bible even specifying particular examples.

### ***Insects au gratin: Food for thought***

In the second part of the workshop, the audience was introduced to ‘protein printing’, the concept of Susana Soares’ installation. Soares has already worked on a variety of insect related design project, including an insect-manned ‘breathalyzer’ for human disease diagnosis, and the ‘Am I attractive’ (to mosquitoes) installation at the 2009 Festival at the London Southbank Centre. Here, mosquitos were placed in a large Perspex globe with a couple of protruding tubes which contained gauze covered windows. Visitors could place their hands on the gauze to see whether mosquitoes found them ‘attractive’. At the Wellcome Collection, Soares presented an industrial 3-D printer, which slowly built up intricate white patterns, which she described as ‘food’. Following the confused looks on most participants’ faces and the sudden exclamation: ‘Why print food?’, Soares explained that her ‘food’ was intended as more than mere nutrition: it was an object to ‘think with’. Recalling bee dances, wings and enlarged microscopic details, the patterns that emerged from the printing process related to questions around our relationship with insects as potential food: what level of ‘insect-likeness’ could we accept in our food? On how many scales are we interrelated and interdependent? How will our interdependency evolve?

**Figure 2.** Insects au Gratin workshop: Designer Susana Soares presenting next to her protein printing installation



Credit: photo taken by Angela Last.

Unable to use the original insect paste in the gallery (polymer resin was used instead), Susana Soares showed a video of the 'original' printing process. On film, mealworms were first mechanically ground into a coarse paste and later by hand, as the industrial equipment failed to produce the desired finer texture. The paste was subsequently mixed with ready-made icing (prompting jokes about future children's parties and Soylent Green) and fed into the printer. The same designs as on the Wellcome Collection demo appeared. The ensuing debate drew connections with unusual food projects such as the Center for Genomic Gastronomy and the Wellcome's own 'haute cuisine' insect eating event ('The Deliciousness of Insects'), put together in conjunction with the Noma-affiliated Nordic Food Lab and above mentioned entomologist Marcel Dicke. One of the participants, a food blogger, had attended the event earlier in the week - at £50 it was mainly attended by dedicated 'foodies' - and reported back on the experience ('The crickets were delicious!'). Animated by the unlikely combination of icing designs, anthropology field stories, Danish-Asian cross-over recipes and the 'fact that we are eating hidden insects all the time anyway' (in chocolate, frozen spinach and cochineal colour), one participant finally asked: 'Can we try them?' After an encouraging answer, all participants finally tucked into the plates of roasted ants on the table, some more heartily than others. Our table agreed that they tasted very much like roasted sunflower seeds. The fact that the vegetarians in the group also ate the insects was

interesting for many and led to discussions about ethics and sustainability: are insects more a sustainable food than vegetables? (The answer seemed to be mostly 'yes', considering the overall impact of agriculture.)

### **Playful co-innovation?**

The final task and discussion surrounded the question of how to change our eating habits: how to present the food, whom and how to target. Equipped with Fimo, paper plates, post-its and coloured pens, the participants were asked to think up insects foods and to present ideas – either in written or three-dimensional form. Our table seemed rather fast food orientated, proposing, for example, ant falafel, cricket tacos and takoyaki-style larvae balls (takoyaki are fried Japanese octopus dumplings) – with potential further plans to expand the range with burgers, pot noodle and lemon ant ice cream (apparently, when you feed ants flavoured water, they end up acquiring the taste). By contrast, our main conversation theme revolved around the decadence of Western cuisine and its meat excess. Said propensity for 'meat love' was envisioned to be combated with 'innovative' children's snacks and cartoons, celebrity endorsement and TV cooking shows. There were no structured presentations at the end. The convenors went around the table to chat to people who explained their creations, or sometimes just talked about their relationships with insects. People also shared stories amongst themselves. At the end, everyone left behind a tiny model and a paper plate with 'instructions' as well as feedback.

Through the final activity, the workshop resonated with the idea of publics as 'co-experimenters' (Last, 2012), although it was not made clear how or if the participants' ideas would be used for anything in particular. It was interesting that the event attracted people who actively wanted to contribute to a 'change of culture', whether it was for their health, 'the planet' or prospective business. Unlike the workshops I had observed and conducted around genetic engineering or nanotechnology, where some participants refused the design task, the 'insect' workshops gained everyone's participation in tasks. This was perhaps partly, because the modelling was perceived as humorous, but also because there appeared to be a sense of care and urgency that was also reflected in people's statements about themselves, their view of the world and their models. A retired couple from the suburbs mentioned, for instance, that they had already cut down on meat consumption to reduce strain on the planet, and another participant wished that people would 'stop being so arrogant and learn from other cultures'. Although concerns about patenting, monopolies and affordability were raised, these remained very much in the background, since the introduction of insect protein was generally deemed a 'good idea'.

A workshop element that, in retrospect, would have been interesting to some participants, could have consisted of pointing them to particular forums or initiatives. In order to exceed their role, participants could equally have used the workshop to design an initiative or forum as part of the workshop. Obviously, this might have been logistically difficult to accomplish within the space of a gallery and,

as sociologist Mike Michael suggests, it might not even be the purpose of such 'designerly' engagements. Writing that design interactions are not aimed at 'giv[ing] voice to the 'scientific citizen', Michael argues that they may instead 'serve in both the problematization and reconfiguration of this figure' (2012: 544). In the case of 'Insects au Gratin', future manifestations of 'scientific citizens' as 'innovators' or 'pioneers' were evoked: figures on the boundary between the neoliberal drive to innovate and the necessity to invent less destructive socialities, in the name of human survival. Future workshops could be imagined on this basis, especially if, by 2020, we really become limited in our food choices. For the moment, participants were given some avenues to explore from the discussions, and further activities: an 'Insects vs Humans' debate, a computer game on the Wellcome Collection's website, some related BBC Radio 4 'Who's the pest?' programmes – or they could walk over to the Southbank Centre a couple of weeks later, where bee concerns had made it into the London Literature Festival programme. Here, the image of insects as pests saw continued complication.

**Figure 3.** *Insects vs Humans*: Constructing 'pests'



Credit: *Insects vs Humans* promotional image; reproduced with permission of The Wellcome Trust.



More upbeat and polemic than the 'Insects au Gratin' workshop, the 'Insects vs Humans' debate opposed two teams of academics and broadcasting personalities who argued over the theme of the event series: 'Who's the pest?' Specifically, the teams tried to draw out what constitutes a pest by making a case for insects and humans as a 'pest' respectively. The discussion thus covered a much larger range of human-insect relationships, although insect eating and the self-harming effects of 'modern' human lifestyles repeatedly resurfaced. Underneath the bawdy interventions around bankers as human pests and the overall 'horribleness' of insects, serious questions about our interdependence with something we tend to consider radically other, and even hostile, were raised by the panel as well as by the audience. Examples ranging from human population explosion and planetary destruction to insect socialities and malaria control facilitated an inquiry into nature-culture boundaries in the construction of the term 'pest'. While both pests and humans can be considered invasive, prolific and destructive, does 'culture' exempt humans from being included in the definition? On the other hand, are insects not only a pest, because of human overpopulation and mismanagement of 'nature'?

The questioning of boundaries, and particularly 'cultural exceptionalism', was also reflected in the audience contributions. To begin with, one audience member contested the sliding of the panel into a 'for/against insects' stance, proposing that the debate should reflect a more complex nature of relationships (later this contestation was somewhat put into practice when entomologist James Logan absconded from the 'against' side to join the 'pro' team). Another audience member remarked that the 'insects are a pest' side of the panel misrepresented insect life as too narrow and behaved 'much more insect-like for not seeing the bigger picture'. Finally, insects were proposed as a more viable model for sustainability, seemingly lacking large-scale violent conflicts and selfish behaviour, but instead offering appealing models of co-operation and adaptation. The end 'vote' on pest status showed approximately even scores and, if I remember correctly, reflecting the vote at the beginning. Speaking to the organiser after the event, she seemed pleased with the debate and the series overall, but felt disappointed that the media had only focused on the insect eating: 'it's not what it's all about!' The 'freakshow' framing was felt to be an inappropriate stimulus for a public debate, as it re-affirmed, rather than unsettled our disturbed/disturbing relationship with 'pests'.

### **Who (need)s the pest?**

Overall, the event series offered varied prompts to think differently about, and, as it was proposed in this journal, *with* insects (Beisel et al, 2013). In a sense, 'Who's the pest?' felt like a harbinger of perhaps less light-hearted engagements – reminders of our culture's embeddedness in natural limits. Looking across the river, the title for the Southbank Centre's debate, 'A Future Without Bees', signalled a warning that our ways of living with insects might need to change rather more speedily. Discussing harmful agricultural practices, the garden centre industry and the influence of

chemical giants on pest management on both a domestic and a national level, the picture that was painted felt rather bleak. Do the efforts of the 'First World' to learn from insects (and other 'worlds') come too late? The Wellcome and Southbank events tried to give hope: thinking with insects was translated into possible, practical pathways. The beekeepers, scientists and conservationists that constituted the 'A future without bees' panel promoted actions such as guerrilla gardening, lobbying and building habitats for solitary pollinators. In a similar manner, the organisers and convenors offered visions of learning, not only from insects, but from other humans' relations with insects.

At this point in time, the message seemed to imply that we still have a choice in how we want to be with insects. As writer Timandra Harkness kept emphasising throughout the 'Insects vs Humans' debate, humans, in contrast with instinct-driven insects, have consciousness, creativity and the ability to make 'rational decisions'. It might be an idea to further probe this apparent difference and also, to keep reflecting on our emerging self-image as a planetary pest. Recent headlines about pollinator disappearance and ensuing agricultural disasters exemplify that, if we carry on mindlessly, the tables on pest control might be turning. In this context, the Southbank Centre debate raised a pertinent set of questions that bear consideration for future engagements: Who profits from the concept of the 'pest'? Who or what is pest control actually controlling? And, considering the growing public support for pesticide bans, integrated 'pest' management and biodiversity programmes (e.g. plants for pollinators), whose attitude towards insects especially needs to change? It feels as if these issues need to be addressed simultaneously, if not first, in order for a significant shift to occur in imagining insect futures beyond antagonism.

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