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013 ABSTRACT

Adventurous *Upcrafting* Ventures.

Markus Wernli

210–213

Since 2015, the Research Institute of Organic Treasures (R.I.O.T.) has combined fermentation practices and social experimentation in Hong Kong to give biological byproducts from human and urban metabolisms a regenerative purpose. Here putrescible wastes emitted from our kitchens, toilets, and bodies are considered our most foundational design material that contributes to a "world of eaters" (DuPuis, 2015). In this applied design work, the concept of upcycling is socio-materially extended into shared forms of upskilling, and therefore referred to as *upcrafting*. In an effort to combine practical outcomes with long-term welfare creation, R.I.O.T. brings together laypersons, natural scientists, and artists, into open-ended explorations of alternative knowledge and change making, or what Melanie DuPuis calls "extended peer communities" (*ibid*: 155).

#Urine fermentation

#Generative vulnerability

#Radical homemaking

#Risky collaborations

#EID

Mary Douglas defined waste as the result of the "impure," that is, a mental construction to make up for our lack of social relations (Liboiron, 2016). Here, the "social" is not just about inter-personal, institutional, or technological relations. Moving beyond our purification treadmills necessitates a "digestive turn" that brings us into full contact with the more-than-human world where we "make bargains for our safety with those who will not make us fully safe" (DuPuis, 2015:158). Composting feces and fermenting urine can be considered hyper-social design. Bacteria can be steered but never fully controlled; hence, we enter into durational collaborations with uncertain outcomes. Here, being social means encountering vulnerability with adequate support derived from a cultivated sense of our selves and for others (Stevenson, 2016). Design enables a wealth of boundary negotiations, where the precarious nature of *upcrafting* human waste can be an opening for connection, spontaneity, and innovation. Through an experimental study with twenty-three participants (or would-be "precarity pilots") in a horticultural urine *upcrafting* mission – with humbling technical shortcomings – how such generative vulnerability can be a source of individual agency and social renewal was evaluated.

In the video shoot depicted below, a cast of adventurous homemakers, shop vendors, and construction workers bring their organic residues to the Kung Fu master (center) to have it fire-transformed (bio charred) into a potent purifier and probiotic medium for air, water, soil, and interiors. As part of a business pitch, R.I.O.T. attempted to wow the Green Building Council in Hong Kong with a social *upcrafting* venture. Built on courage and desire to learn, ventures are missions with potential of failure. The proposed enterprise was rejected, yet remained a social enactment of re-investing into our biological humanity and rehearsed more convivial forms of "waste treatment," which proved to produce fun: https://vimeo.com/socialorganism/bc.

This article derives from a PhD research project entitled *Adventurous Homemaking and Design of Generative Vulnerabilities* that looks at what collaborative dynamics can support the purposeful reuse of human waste in contemporary urbanity. Directly re-engaging with our visceral role in metabolic circulations as part of human-environment health interactions, whereby reclaiming our "agro-ecological" potential (DuPuis, 2015), is life affirming. The research, which was conducted over two years, explored, forms of collective and durational forms of human waste *upcrafting* in a series of activation probes. The resulting main study engaged twenty-three Hong Kong residents in a socio-horticultural venture for *upcrafting* urine over eight weeks – without any dropouts.

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Fermentation

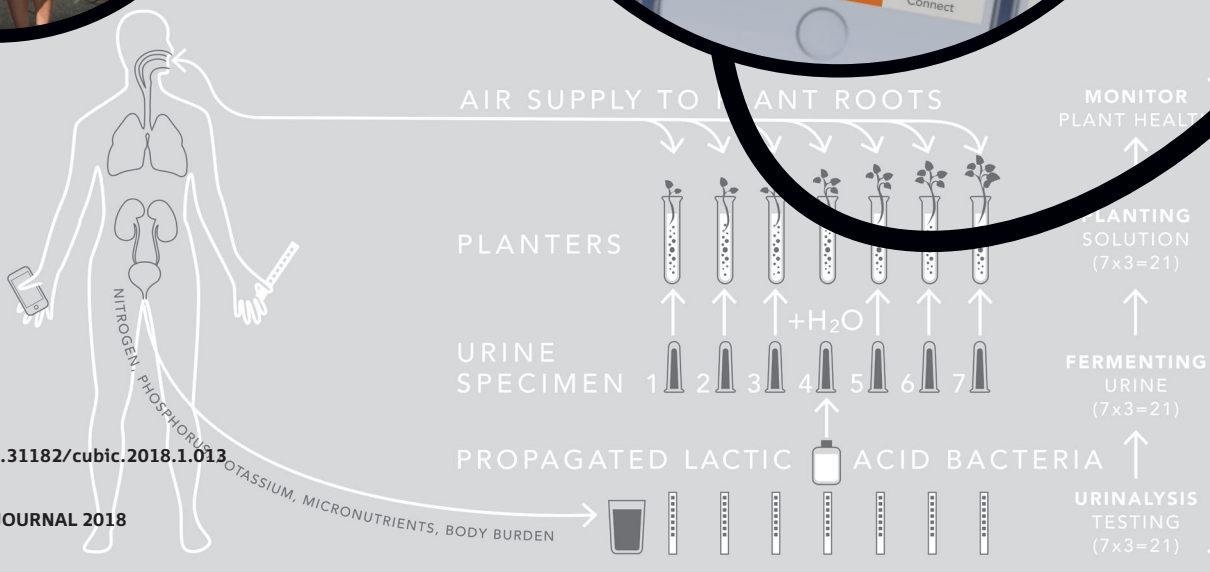
Bio

Markus Wernli is a doctoral candidate at the School of Design of the Hong Kong Polytechnic University. Markus Wernli is a PhD candidate with the Hong Kong Polytechnic University, researching the bodily role of city dwellers in biochemical circulations. Markus' work takes inspiration from learning encounters found at eating design studio Proef of Marije Vogelzang in Amsterdam, practicing Japanese tea ceremony with Imotosenke master Obana Ichiro in Kyoto, and impromptu composting school with ecologist David Freudenberger at the Australian National University in Canberra. In Hong Kong Markus is honing with fellow rooftop gardeners and plant enthusiasts the practice of 'lazy farming' on the impermeable clay soils of the Pearl River Delta.

Upcrafting Ventures

Bokashi collective at Hong Kong University farm (Workshop)

Black Circle Biochar purifyer as trackable social process (Business Pitch)



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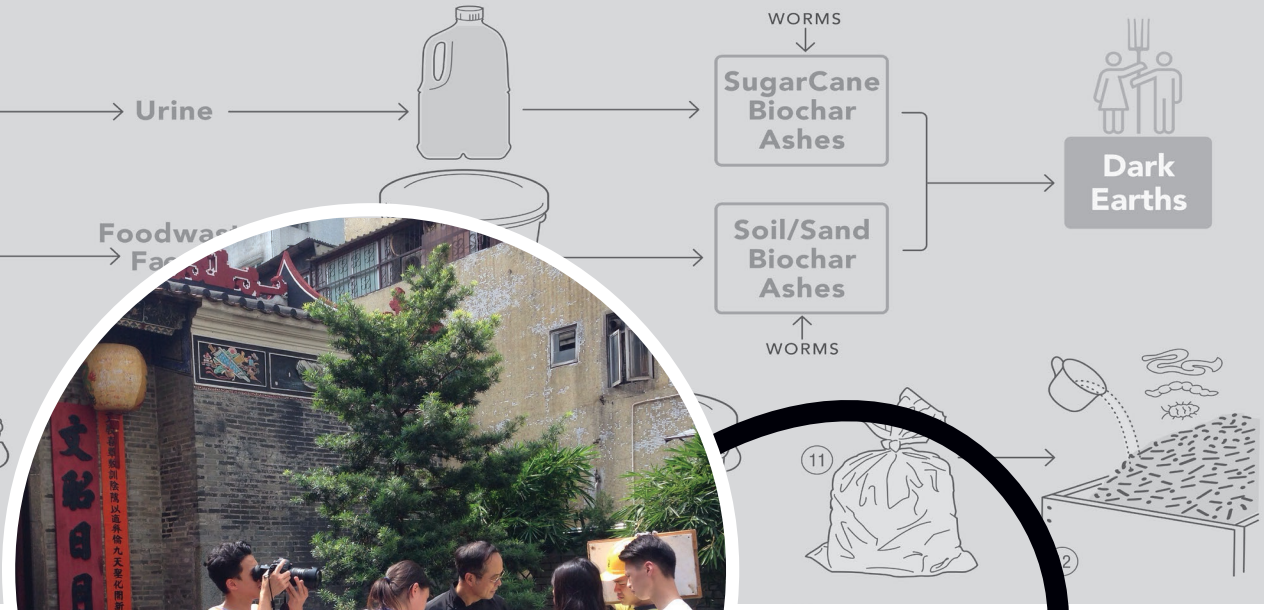

Black Circle videoshoot with biocharring Kung Fu master (Business Pitch)

Aquaforming Mars: Urine as time capsule for orchard nurturing on Mars (Exhibit)

Generative Vulner-*ability*

Nutrients accountability with the use of sense organs for recirculating urine into consequential food loop with plants.

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