



## 2068: neue-plastik

Transforming Vienna's Sewage into a biodegradable bio-plastic industry

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The oil fields of the future will be within our cities. This thesis constructs an industrial urban consequence through a narrative of zero-waste architecture where bio-plastics and fuel made from waste water and sewage act as a replacement to fossil fuels once oil exhausted. The proposal of a bio-plastic infrastructure fuelled by sewage treatment in our cities aims to address morality, aesthetic, and taboo within recycling and explore the properties of cellulose and cellulose acetate as a construction material. The speculated industry is a reaction to our growing consumption levels of oil and petro-based plastics and is informed by our object permanent ignorance of sewage waste. The proposal uses a capitalistic route to propose

what might be an approvable solution but with undertones of exploitation and aesthetic when recycling is adopted as the main stream culture and a tool at the disposal of Big Oil.

When examining the waste of the human body, our digestive systems are unable to break down the cellulose found in our diets. Cellulose, one of the most abundant polymers on the planet forms the structural component of the plant cell wall. One artist, Jalila Essaïdi, has designed a process which takes surplus manure from farmers and uses compounds and chemicals extracted from the faeces and urine to create paper mulches and plastics.



Cellulose acetate, this bio-degradable bio-plastic, combines cellulose and acetic acid to provide a replacement to petrobased polymers. However, what shift in our society will it take to lift this taboo? In *The Three Ecologies*, Guattari proposes that in order for lasting environmental change, we must also address the ecologies of the Social and Mental. Hundertwasser's facade design for a waste incineration plant in Vienna is praised as 'making waste beautiful' yet this is no more than a colourful appearance applied to the process of incineration. This thesis counters the aesthetic and authenticity of a facade on waste and ecology in architectural technology explored by the process of making by using fiction as a narrative to fabricate and speculate on a process of reality and what alterations and absurdities might come from a zero-waste but consumer led culture.

### Eschatologist:

As research to this thesis, I directed a short mockumentary film in which we followed the daily life of a 'zero-waste blogger' who recycled everything, including her own faecal matter., to make 3D printed structures fueled by her own digestion. This narrative is used as a way of exploring how we view taboo within recycling, and acts as a precursor to the proposal in 2068 after the exhaustion of oil. The structure was constructed and the film was shot over 10 days in Bangkok in December 2017.

Both works are complimentary to each other and fuel one another's goal. The film is the present day pioneer of the processes that drive the architectural proposals of the sewage-plastic plants in 2068. The present day recycling asks the question of 'if this how we live zero-waste, do we want to?' and the future proposal of bio-plastic plants as an infrastructure pose the question of 'why aren't we doing this already?'

