

## Hormone Couture Project



### Abstract

Based on the context of higher life expectancy and lower pregnancy rate, ageing society is unavoidable. Technological response is necessary. Hormone Couture exhibition presents a wearable technology that aesthetically respond to women's reproductive hormone and body temperature changes. The designs address how technology creates a biopolitical issues whether the wearable technology empowers women by giving her access to biological information, or creates gendered oppression by having a technology that monitors, controls, and influences sexual behavior on the body. Both of these arguments cannot be separated as they altogether exist at the same time as two sides of the same coin. This contradictory relationship between technological advancement and gender politics was materialized into the work aiming to criticize and speculate the future of wearable technology, and how it reinforces dynamics of gender tension in society.

### Technical details of wearable technology:

A temperature sensor based on thermistor is sewed directly onto a panty liner to ensure a close contact with the body for an accurate

temperature reading. The electrical connection of the sensor with the control board is done via a stainless conductive thread. The reading of thermistor is optimized for the body temperature range

from 30-40° C with the accuracy of 0.1° C. The body temperature reading is then sampled in 1 min interval to keep track of the deviation from the long-term average across 5-day period. Any trended rise in body temperature from the long-term average will be evaluated as the ovulation and the trigger servo motors for the display mechanism that is used to open and close the petals of the Cactus Dress to deform the surface to reveal the hidden skin. Simultaneously, the temperature log will be send wirelessly to a smartphone and plot with MIT's App Inventor. The data logging, decision making, smart phone communication and servo motor driving are done by an Intel® Edison board for Arduino. The body of the Cactus Dress is fabricated by 3D printers from Polylactic acid (PLA). We kept the weight of the 3D parts minimum by setting zero infill. For the Cactus Dress, the blossoming pattern and speed of the cactus on the dress varied on biological signal picked up from the sensor.

### **Cactus Dress**

In the Cactus Dress, even if its expression can be interpreted to some extent as a part of demanding on women, like Nobuyoshi Araki's bondage art pieces, a real aesthetic function is about visualization of gender tension. It contained exaggerated cactus-like form on the dress signifying a contradictory meaning. First, a readiness of women's genitalia was represented by the flower. This metaphor served to tell about female's sexualities throughout the world history across various societies. Second, we decided to employ a cactus form to add a degree of surrealism to the design. The use of the spectacular form was intentional as we would like to bring about the juxtaposition of feelings of uneasiness yet guilty pleasure of not being able to look elsewhere. Blooming flower is often referred to a suitable period of women for reproducing; however, our cactus bloomed from its trunk rather than its petals. Its movement of the chest with a lot of prickles led to a perception about harmful instead of pleasure from breeding. We conceive our Cactus Dress to present the latest technological tension between male and female.

### **Conclusion:**

Hormone Couture exhibition presents a wearable technology that aesthetically responds to women's reproductive hormone and body temperature change. The designs addressed how the intimate relationship between human and technology creates a biopolitical debate on whether wearable technology empowers women by giving access to biological information, or creates gendered oppression by having technology that monitors, controls, and influences sexual behavior on the body. Both of these arguments could not separate because they altogether exist at the same time as two sides of the same coin. As wearable technology becomes more common in society, our work serves as a futuristic example demonstrating how technology does not only function as a tool but also contain political statement and biases of the creator.

### **Team**

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