Module 3 Project: Cutting the cord

Aesthetic Challenges:

The project for this module challenges you artistically in two ways.

First, you must contemplate and ultimately resolve the effect that removing the traditional or expected 1:1, action/reaction/, cause/consequence or process/product pairs that typical installation art has on the viewer or listener. We will refer to this as the "unseen effect". To begin to address this you will have to define the high/low latency components of your system, both technically and conceptually.[1]

Second, to reinforce and possibly assist you in answering the above question, you will be required to both conceive of and design your system combinatorially. That is, you must continue to develop new, creative pathways while incorporating your previous experiences through the reuse of components and algorithms possibly in new, transformed ways.

Technical Challenges:

Technically, your project must be designed to take advantage of the new system configuration, specifically 1) wireless communications and 2) battery-powered potential. Previous sensors are in play, as are any potentiometers or other sensors available in AKW 123, the CEID, or that you purchase yourself.

Newly introduced are the following components:

+ Battery (3.7V 600 mAh): (*encouraged*, provided early next week)
+ Sensors: ambient light (up to 5), piezoelectric (vibration) (1): (*highly encouraged*, provided early next week)

Nodding to combinatoriality, you will also be required to design and implement your own sensor of some kind. "As Thomas Edison observed regarding technological creativity, 'To invent, you need a good imagination and a pile of junk.'"[2]

+ One sensor you make yourself (capacitive touch, touch, FRS, etc.) (*Required*)

In the lab (AKW 123) you can find conductive copper tape, wire, tin foil, soldering irons, passive components (resistors, capacitors, etc), and more. There are many available DIY sensor projects and tutorials on the world wide web.

Design Prompts:

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[1] It is possible to have both in the form of an interactive switch or sensor while another, a photoresistor for example, informs processing on a longer scale or meta-organization level. You could also play with this, working actively to foil the expectations of the consumer/viewer/listener by providing the impression of an interactive system but delivering one with a different time scale.

[2] Cambridge Handbook of Creativity Across Domains, Chapter 4

If your project is mobile, who will move it and how? How can your (or your classmates) Module 2 project inform your design decisions this time around?

Your system components may be visible or masked, a plexiglass homage to *form as function* or a black box -- impenetrable and imperceivable.

If your project is immobile, but untethered, might its physical form hint at this reality?

Component Quick Info:

Piezoelectric sensors detect vibration -- that means that, provided the sensor is mounted tightly to an object, touching the object will result in voltage from the sensor. Useful to detect touch and motion (if the motion results in vibration, such as rolling on wheels across gravel...)

Ambient light sensors (*photoresistors*) are good (sensitive) and dirt cheap. Useful for detecting... light. But if light is stationary and system is mobile, can be used to detect motion/orientation of the system itself.

Deliverables: 20 pts total

(10 pts) A link to your git repository with a program that runs on the ESP32 (possibly also the Raspberry Pi) that wirelessly communicates sensor data to a client computer for visualization or sonification. The program must meet the following criteria:

(4 pts) require wirelessness (convincingly) by addressing, in physical design and realization, the issue of "unseen effect."

(4 pts) Successfully combine earlier system configurations through use/reuse of sensors, config code, and physical design principles.

(1 pts) Design and implementation of your DIY sensor.

(1 pts) Is in the spirit of the class as broadly interpreted by the instructors. Art is subjective, we want you to get comfortable with this ethos.

Standard Documentation Deliverables:

In addition to the project specific deliverables lists above, you must also meet the following “standard documentation deliverables”. Throughout this course, we will ask you to document your work in order to slowly build a portfolio of your projects. Going forward, these types of standard documentation deliverables can be assumed to be required for all assignments unless specified otherwise.

A blog post

Using the CoursePress site available through Canvas, make a blog post describing your art. The post should give an overview of your artistic vision. In particular for this assignment, you should address how you have specialized your generative art to the space. What creative decisions did you work lead you to, and which decisions did you take? How were your decisions motivated by

your large creative vision for this project. In the same vein, also address any technical issues you encountered in your work. Particularly focus on issues that other artists may encounter when developing a generative art display for this space.

A README

On your github repo add a readme that contains a short description and key information on reproducibility/installation/usage. This readme can/should be a subset of the material used in your CoursePress blog post

A video of your art

Include in the README a link to your video. The video can be a simple video shot on your phone - the only goal is to have a record of your art in action. You can host the video wherever you like as long as the hosting platform supports in-browser playback (e.g. YouTube, Vimeo).