

The Login Log: Makerspaces and Messy Methods

Don Undeen

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By: Donald Undeen

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Signed by the final examining committee:

----- Examiner  
Dr. Martin Racine

----- Examiner  
Professor pk langshaw

----- Thesis Supervisor  
Associate Professor Christopher Moore

Approved by

-----  
Dr. Martin Racine, Graduate Program Director

-----  
Dr. Annie Gérin, Dean, Dean, Faculty of fine arts

Date:

# Abstract

The Login Log: Makerspaces and Messy Methods

Don Undeen

The Login Log is a collaborative speculation design project that operates on two levels. Firstly, and drawing on concepts from actor-network theory, ludic design, and idiotic objects, it is an exploration of how a “nonsense object” can help to build connections between makerspaces and other creative communities. To this end, a research-creation plan was devised to introduce a “joke object” to a series of makerspaces for the successive addition of new useless features. Secondly, it is an exploration of “mess”; how research-creation may proceed when initial expectations are disappointed, and how we can use this mess to create new opportunities for inventive problem-making.

# Acknowledgements

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Tricia Enns.

And all the fabulous people who logged in.



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# Chapter 1 | Introduction

## My experience of the research-creation process

The Login Log project began with the intention of exploring the following research questions:



*The Login Log in its initial state*

*Can a collaborative speculative design project of a useless object, conducted progressively through multiple makerspaces<sup>1</sup>, be an effective way to generate connections with and between a wide range of maker communities?*

*What are the characteristics of the object generated?*

Initially, the Login Log was a short tree stump with an embedded wifi router and web server. This web server presented connected users with a web page that invited them to “log in.” The project plan was to have multiple engagements with creative communities, where each community would modify the Login Log in an interesting, funny, or useless way. We would document and share the results of these engagements in a way that

celebrates each group’s contributions, encourages more groups to participate, generates an object that becomes increasingly complex, and draws people’s attention to the object itself. Ultimately I hoped to generate a methodology for similar projects that would be repeatable and adaptable to other locations and types of objects.

In pursuit of this plan, I contacted and visited numerous makerspaces, hackerspaces, design studios, art centers, and creative communities in Montreal, explaining the concept

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<sup>1</sup> For the purpose of this paper, we define a makerspace as “a collaborative work space inside a school, library, or separate public or private facility [which] contains tools, components, and resources that allow people to create, learn, explore, and share in order to develop projects” (Braden, 2021). Additionally, the concept of the makerspace is closely tied to that of the “maker community,” by which I mean the specific group of people that use a particular makerspace. However, through the course of this project, we expanded our target spaces and communities to include creative communities without workspaces and spaces without associated communities.

of the Login Log and attempting to arrange times for me to bring the Login Log to the space. The purpose of these visits was to engage with the communities associated with the spaces, facilitating conversations and creative sessions. Additionally I documented these sessions with photography, a personal journal, and a follow-up “salon conversation” filmed at Concordia’s 4th space, open to the public and attended by participants from several of these sessions.

However, the project veered from my initial expectations due to several factors. Firstly, most spaces and communities that I contacted and/or had preliminary visits with, did not follow up despite repeated attempts to move the conversation forward. Some spaces that I did bring the Login Log to didn’t engage with the Log with new ideas or active participation and contributions. Overall, I didn’t achieve the “critical mass” of participation I needed to claim the project a “success” according to the initial plan.

In response to this experience, I took a different approach to my research-creation work. Firstly, I expanded my definition of an acceptable “engagement” to include: creative communities without physical spaces; convening groups of people not associated with a particular community in a non-community space; and spaces where I was the only participant. I also experimented with setting up the Login Log as an impromptu installation in public spaces, where anyone could interact with it.

Given the low response rate in the initial stages of the project, I decided to make my own changes to the Login Log, adding features I thought would encourage more engagement, or based on conversations with peers and advisors. Notably, I started journaling not only the progress of the project, but my own personal, professional, and academic insecurities and anxieties.

The resulting process and object could aptly be described, colloquially, as “a mess.” Both the object, the participants, and the researcher behaved outside the intended parameters of the project. The resulting object is itself chaotic in appearance and difficult to “read,” by which I mean it is difficult to reduce it to a singular coherent purpose, meaning, or narrative.

Considering the experience of the Login Log development process, I’m reminded of how sociologist Mike Michael took the concept of Bill Gaver’s *cultural probes* (Gaver et al., 2004) and extended it to embrace a useful idiocy:

However, the probe ‘data’ that will be returned will be treated idiotically in order to enable ‘inventive problem-making’. This will mean they will be used in a piecemeal, playful, unsystematic, open way to develop idiotic prototypes

(yet to be determined!). These prototypes will subsequently be installed in a setting (yet to be determined!) to eventuate more idiotic participant responses, that is to say, more 'inventive problem-making' (Michael, 2012a, p. 178).

In retrospect, the Login Log acted as one of Michael's *idiotic cultural probes*: each experience of putting the Login Log in contact with human and non-human [e.g. software, hardware, fabrication materials] actants led to unexpected outcomes as the participants responded idiotically to the provocations of the Login Log . This led me to respond idiotically to my own plan, developing new features in a playful, unsystematic, open way, which in turn occasioned opportunities for yet more idiotic participant encounters. Ultimately the project did not lead to answers to the initial research questions. Rather, the initial question is best understood as a departure point for a process of inventive problem-making.

Given the above, I found myself exploring the question "How do we express the mess?" How do we best convey the experience of a research-creation process which does not proceed in a linear fashion, and whose outputs are incomplete, contradictory, and confusing?

## The object that was created: The Login Log



fig. 1.1

*The Login Log  
at an early stage of development*

Though the object itself is just one way of understanding the project, it's useful here to provide a description of the Login Log in its final form.

The Login Log is a physical wooden log, roughly 36lbs, 18" tall x 12" wide. Attached to, embedded within, and adjacent to the log are other objects we are referring to as "features." The features are made of a wide range of materials. Some are purely static materials such as fabric, wood, plastic, metal, and so on. Other features are electronic, such as embedded computers, sensors, actuators, and other hardware. Still other features are purely software, and are delivered to the observer as web pages, sound, or printouts.

There are 29 documented "features," according to the "Features feature," a software application

which explains all the features of the Login Log. They include:

- **The Computer:** A Raspberry Pi 0 computer, which provides a WiFi Access Point and webserver, and which controls other digital hardware on the Login Log such as buttons, a gauge, a receipt printer, and speakers. The computer also has an attached digital-audio converter and amplifier to improve sound quality.
- **The WiFi Access Point:** A Local WiFi network which, once connected to by the user's device, provides access not to the internet, but only to the computer inside the Login Log. Users typically access the web server, but terminal access via SSH is possible as well.
- **The Website:** A group of web pages served by the webserver on the computer. Each page served by the website is also an independent feature.
- **QR Code Sign:** A laser cut wooden sign, mounted on a metal rod embedded in the Login Log, which displays two QR codes. Scanning the first connects the user to the Login Log's WiFi access point. Scanning the second connects the user to the Login Log's website.
- **Lost Little Flower:** A metal flower that was originally part of the QR code sign fell off the sign, but was placed on the top of the Login Log.



- **The Thermal Printer:** A thermal receipt printer embedded into the Login Log, controlled by the computer, and used in conjunction with several other features.
- **The Features Feature:** A database, contained in the Login Log's computer, of all the features of the Login Log. This database is presented as a web page, through the speakers as text-to-speech output, and as printed information from the Login Log's printer, triggered by barcodes scanned on the Log's surface. The database entry for each feature includes a description, a spoken phrase, text for printing, a barcode, images, and associated keywords.
- **The Login Page:** The first web page a user sees when they connect to the Login Log. It invites the user to create a login name for themselves and log in to the Login Log, along with a question about what other useless features the Login Log could add.
- **The Barcode Scanner:** Next to each feature on the Login Log is a small printed barcode. Attached to the Login Log computer is a barcode scanner. Scanning the barcode with the barcode scanner causes information from the Features Feature database entry for that feature to print out on the thermal printer, and to be spoken from the Log's speakers.
- **The Joke System:** A database of log-themed puns. At random intervals, a joke is selected from the database and delivered through the speakers as text-to-speech, and also printed on the thermal printer.
- **The Joke-o-Meter:** a vintage pressure gauge, controlled by a servo motor connected to the computer, which triggers whenever the system tells a joke. The needle of the gauge moves randomly, but the associated text explains that this meter "measures how funny the joke is."
- **Joke Control:** A web page which allows the user to control the frequency with which the Joke System activates.
- **The PiJuice:** A uninterruptible power supply (UPS) battery system that ensures the Login Log continues running even if it is unplugged.
- **The Clockworks:** a vintage brass clockwork mechanism attached to the side of the Login Log.
- **The E-Ink Screen:** an E-Ink screen attached to the computer, which is always blank.



fig. 1.2



- **The Logger Shirt:** a small flannel shirt on a small coat hanger, hanging from the Joke-o-Meter gauge.
- **Wheels that Go Round:** Four wheels attached to the bottom of the Login Log that allow it to be rotated in a circle.
- **Knitted Booties on the Log's Old Feet:** Short metal plumbing fixtures, covered in custom-knitted “booties,” placed in proximity to the Login Log.
- **The Tribble:** An enclosure made of fur, which contains the Login Log’s computer, PiJuice, and speakers.
- **Calling Card w/ Fork:** An assemblage of a postcard, transparent plastic with heart illustration, and small clothespin, attached to the Login Log with a small plastic fork.
- **Dandelion:** A lasercut image of a dandelion with seeds being blown off, etched onto thin wood veneer.
- **Glam Pinecones:** Four pinecones, decorated with twist ties, press-on-nails, and pipecleaners, positioned close to the Login Log and connected to it with red thread.
- **The Log Mini Book:** A small notebook attached to the Login Log, with pages for entering the Login Log’s Social Insurance Number and VISA information, as well as blank pages for free writing.
- **Belt and Suspenders:** A small pair of suspenders and a belt wrapped around The Login Log.
- **Sparkly Sticks and Q-tips:** A small glittery ball on a stick placed in a hole on the side of The Login Log, along with two Q-tips.
- **Risk Sign:** A card with the word RISK printed on it, attached to the side of The Login Log with a screw.
- **A Story About a Lonely Barcode:** A short fictional story about an abandoned barcode, printed on thermal receipt paper and attached to the side of The Login Log with two metal screws.

Demonstrated in the above text, many of these features are inter-connected. Notably absent from the above descriptions is any context or history behind its development which might explain its reason for existing. It’s not likely to be clear why some features are significant until this context is understood. Some of this context can be gleaned from the text of the Features Feature, the project’s journal entries and the salon conversations. However, some important context exists only in the memories of the participants or this researcher.

The complexity of interconnections between physical features, digital features, expectations, experiences, and emotions is one of the main reasons this project is so “messy,” and requires a “messy method” for expressing it.

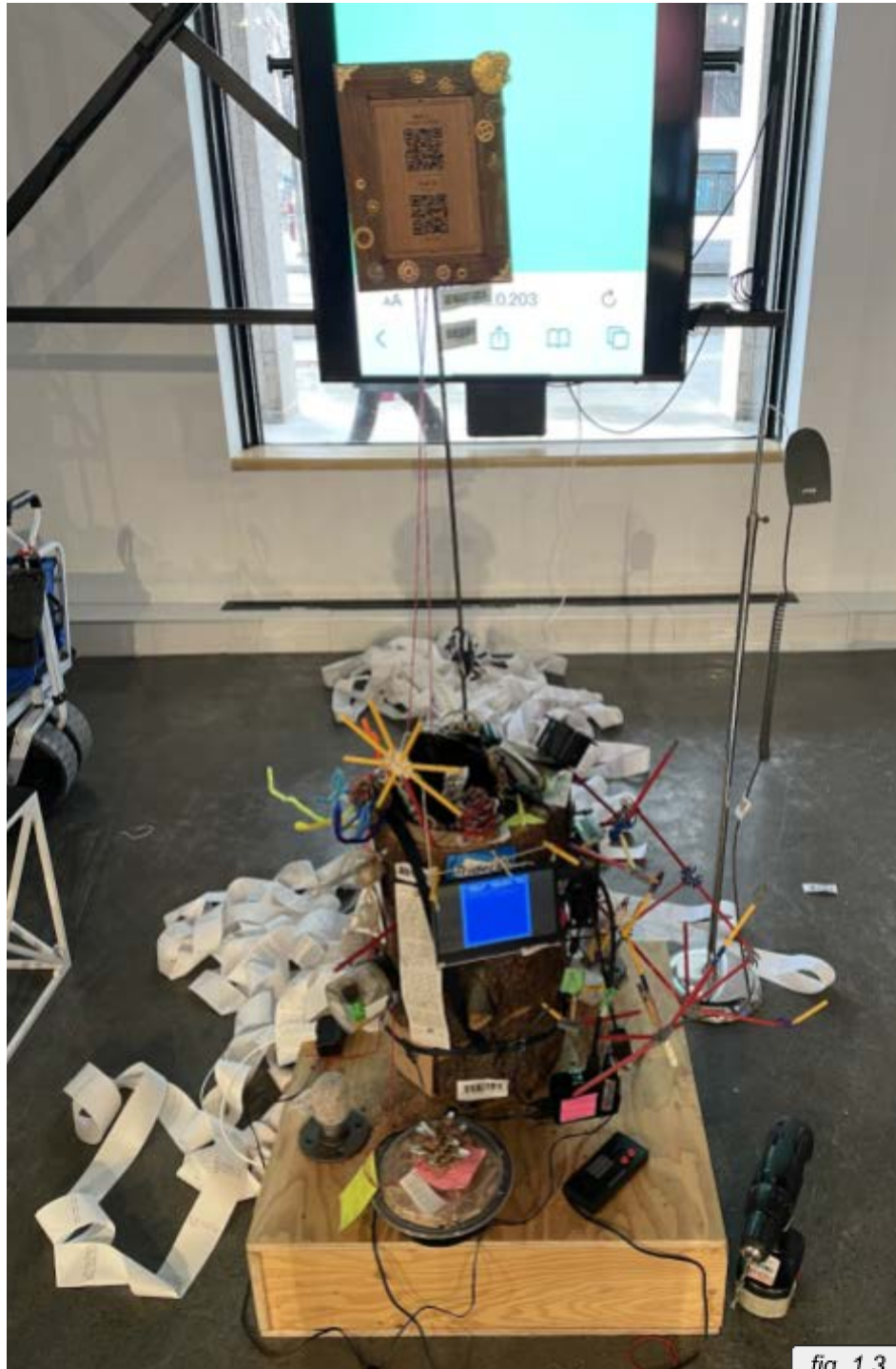


fig. 1.3

*The Login Log, in its final form, at the MDes Thesis Exhibition*

# Chapter 2 | Understanding the problem

In John Law's 2007 paper "Making a mess with method", he presents this image:

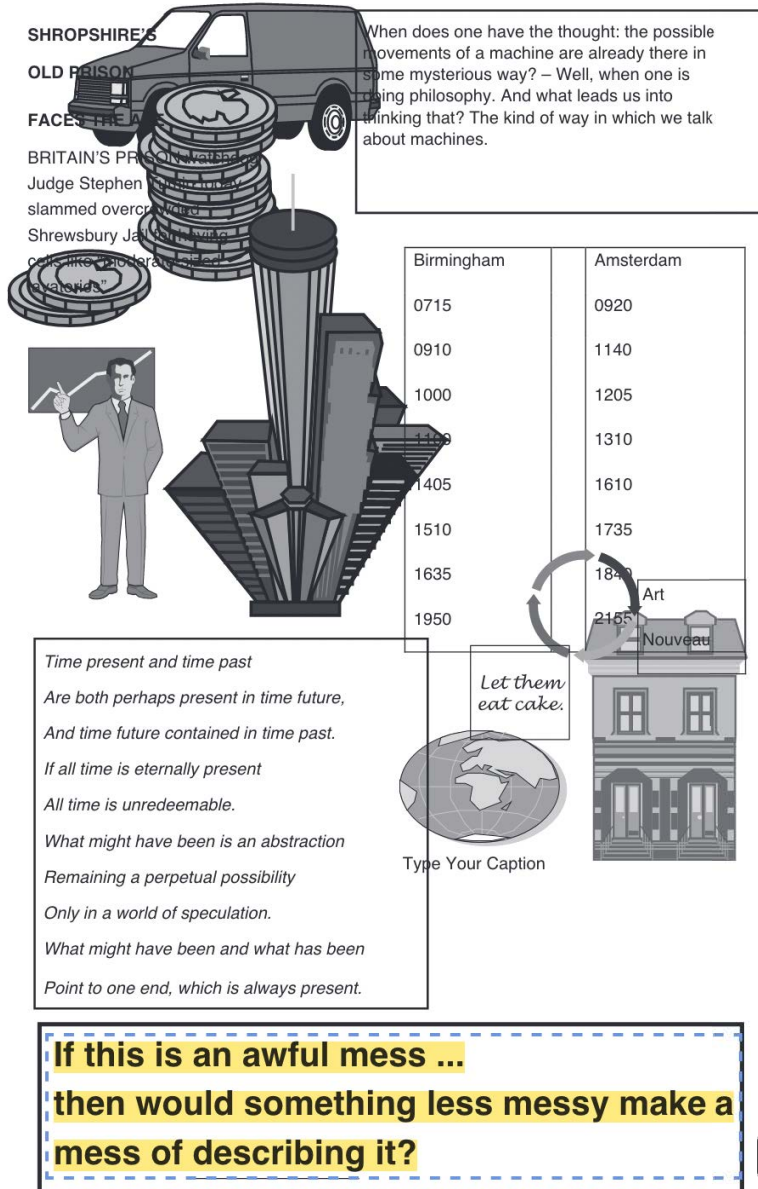


fig. 2.1

(Law, 2007, p. 596)

Law appears to suggest that, given an object of study that defies easy categorization, straightforward narratives, and/or a clear relationship between expectations and outcomes, standard methods for analyzing and portraying the object of study run the risk of obfuscating as much as they clarify, by attempting to "tidy" up a messiness that is in a sense the key characteristic of the study.

Mike Michael (2012) draws attention to the source of messiness, the ways in which participants “misbehave” by “overspill[ing]” the parameters of the engagement event.” Compounding the problem is that rather than seeing these overflows as opportunities to gain new insights, Michael notes that “such ‘overflowing’ is not usually accommodated within the accounts of those events. Indeed, arguably, there is a tacit process of sanitization whereby the engagement event is cleaned up so that the existing methodological, conceptual, and institutional frames of the engagement event remain unchallenged. Rather less attention has been paid to how the overflows, rather than prompting sanitation or lamentation, might engender invention” (Michael, 2012b, p. 529).

To which I would add that “participants” in this case include not only humans but non-humans, especially the technical actants [software, hardware, firmware] that “misbehave” or “overflow” by refusing to act according to the researcher’s expectations, or their documented functionality. A close reading of my project development diary reveals numerous points where difficulties getting technology to work correctly pointed me in new creative or conceptual directions. In this paper I have attempted not to hide those overflows but rather to highlight them.

## My approach to explaining my research-creation process and the results

Given a messy process, in which participants, researcher, technology, and the object itself “overflow” the parameters of the interaction, what approaches might we take to analyze said process and present it to the public? Michael et al. claim “it is possible to address the ‘occasion of analysis’ as itself a speculative event.” Materials and artifacts from research are treated not as raw data for qualitative and quantitative analysis, but “in terms of complex relationalities to other materials [...]” In other words, the outputs of one phase of research become material for additional speculative research processes. “Finding patterns in the fieldwork material is no longer the ‘issue at stake’; rather, the analytic event becomes a speculative occasion in pursuit of another layer of inventive problem-making” (Michael et al., 2014, p. 3).

This approach, of treating research artifacts as speculative research subjects implies, at least for research-creation in speculative design, a kind of endless circularity, a process that precludes the very idea of a “conclusion.” Yet we must at some point take stock of our experience thus far, and express something as we come to meaningful milestones in our work. What kinds of formats could we consider?

Law suggests utilizing the concept of “allegory” as a framing for “messy” research documentation:

So what is allegory? Here’s a quick and dirty set of suggestions. Allegory is the art of meaning something other than, or in addition to, what is being said. It is the art of decoding meaning, of reading between the literal lines, to understand something else or more. It is the craft of making several not necessarily very consistent things at once. It is the art of crafting multiplicities, indefinitenesses, undecidabilities. Of holding them together. Of relaxing the border controls that secure singularity. (Law, 2007a, p. 603)

Looking these concepts in light of the *physical and digital appearance* of the Login Log, I consider the wide range of fieldwork materials generated: project proposals, diary entries, Log features, text-to-speech elements, login page suggestions, barcodes, jokes, images, printed receipts, keyword themes, and quotes from interviews and salon sessions. These “artifacts” exist in complex relationalities to each other; relationalities that are often contradictory, indefinite, multiple and undecidable.

It is my hope that I can arrange these artifacts in non-linear ways to highlight these multiple meanings, to introduce ambiguity and create additional opportunities for “inventive problem-making.”

To accomplish this, I chose to center this paper on the initial project proposal, completed in May 2021 and prior to most of the experiences of the execution of the project. In retrospect, this proposal can be seen as hopelessly naive, yet representative of the interests and enthusiasms which led me to take it on. It’s useful then, to juxtapose this with the lived experience of the project, as expressed through the various project artifacts.

## Chapter 3 | How to Read this Paper

The initial project proposal serves as a foil against which a range of artifacts from the project are placed in apposition. These artifacts use different formatting, colors, and fonts to distinguish them, and include:

Diary Quotes from my project journal. The diary was originally written with Markdown formatting; some markdown syntax has been preserved.

Code snippets from the system's software, which will be presented with syntax highlighting (font colors) as it looks in the Visual Studio Code editing environment

Quotes from my interview with Nathan Parker, the creator of the MakeltGo project.

Quotes from a "Tire Toi une Buche," a conversation between project participants, held at Concordia's 4th Space as part of the MDes thesis exhibition.

Screenshots from the Login Log app, including suggestions for new features from the Login Log's Login page and descriptions of log features. The features description includes several text fields, images, and a barcode which was printed and attached to that feature on the Login Log.

Photographs of thermal receipt printouts from the Login Log's thermal printer, featuring jokes and references to other texts I read in preparation for this project.

These artifacts sometimes directly and obviously reinforce or contradict the adjacent text of the proposal. At other points, the artifacts have a relationship to the text that is open to multiple interpretations. Visually, the insertion of the artifacts has the effect of making a "mess" of the initial proposal, interrupting the original text and impeding easy interpretation. In doing so, this new text embraces a comfort with the "mess" of research creation, a willingness to view "failure" as an opportunity for inventive problem-making, and to find "ways of living with and knowing confusion, and of imagining methods that live [...] with disconcertment" (Law, 2007b, p. 597).

The text of the original proposal and artifacts has been left unaltered, except for small corrections of typos and citation errors. The text of the proposal refers to a project that is yet to happen, even though that project is now in the past. Additionally, many of the text artifacts are written in a highly informal tone, reflecting the mood at the time.

# Chapter 4 | The Annotated Project Proposal

# The Login Log:

*A Useless Boundary Object for Connecting Creative Communities*

**Thesis Proposal**

**Don Undeen**

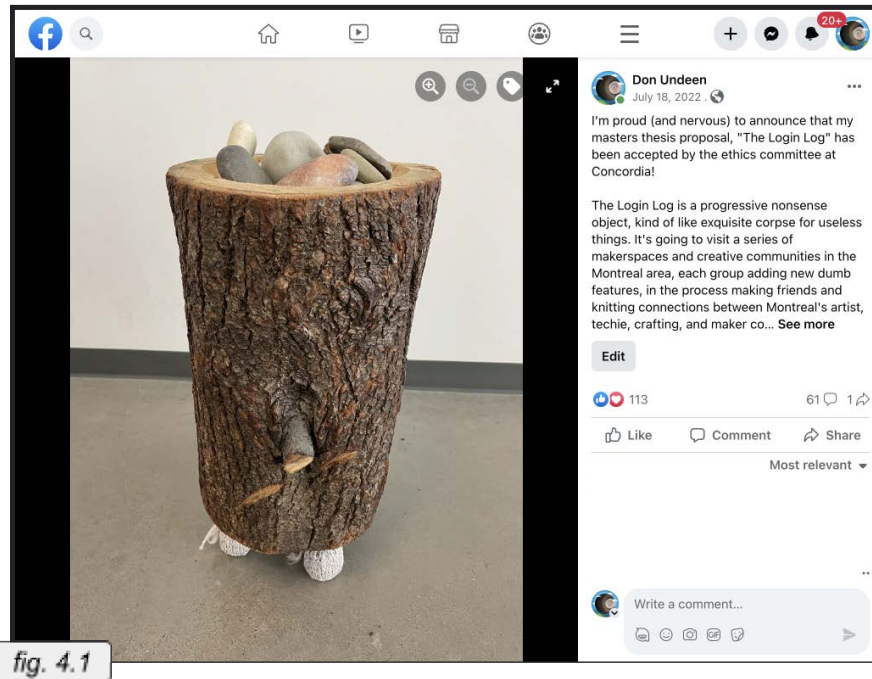
**Professor: Dr. Carmella Cucuzzella**

**Dart 610**



## Abstract

The Login Log is a research-creation project with the goal of developing a methodology for developing connections with and between makerspace communities. Drawing on concepts from actor-network theory, ludic design, and idiotic objects, the researcher will develop a series of engagements with makerspace communities where they will progressively add features to a “useless object,” in a spirit of playfulness and humor. With each engagement, the input of previous engagements will be celebrated, the object will change based on the input of the current community, and the methodology of the engagement itself will be refined for the next engagement. By the end of the project, it is hoped that a robust, repeatable methodology will be developed that can be adapted for use



anywhere there is a need to build connections with and between makerspaces communities.

**Keywords:** makerspace, ludic design, boundary object, communities of practice, speculative design, idiotic object,

## Research Question

*How can a collaborative speculative design project, conducted progressively through multiple makerspaces, be an effective way to generate connections between a wide range of maker communities?*

*“I'm not even sure what you mean by speculative design to be honest” - Alexandre Adam, SteamPunk, 'Tire toi une bûche' salon*

fig. 4.2

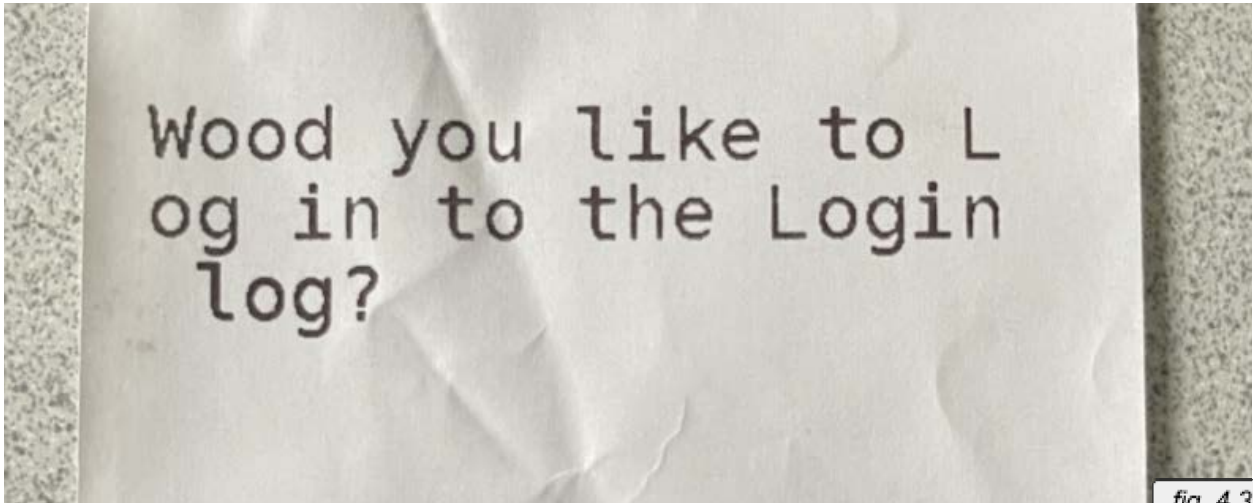


fig. 4.3

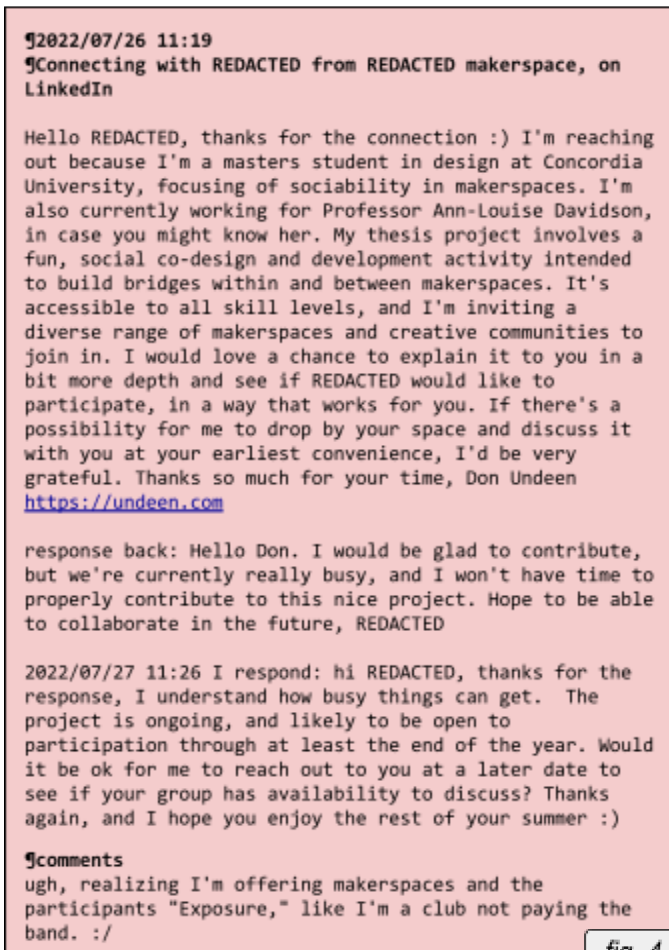
```
≡ jokes.txt ×
jokes > ≡ jokes.txt
1 Got root?
2 Wood you like to Log in to the Login log?
3 I hope you will <break><break> stick <break>around.
4 My bark is worse than my <break> mega bite.
5 My favorite drink is <break> root beer.
6 I never want to <break> <break> leave you.
7 I love living in Mon <break> treeee <break> ahl.
8 My favorite subject in school was <break> <break> geometreee.
9 Can you help me with this problem? <break> <break> I'm stumped.
10 Smash the <break><break>Pay treeee Ark EEE
11 My favorite bands are <break> treeee <break> ohs.
12 I love acorn <break> ee <break> joke.
13 You will have fun making things with me, I <break> guarantreeeee <break> it.
14 Would you like to have a <break><break> treeee <break> some?
15 For Halloween I like to trick or <break> <break> treeeeet.
```

fig. 4.4

# Introduction

*“A makerspace is a collaborative work space inside a school, library, or separate public or private facility. It contains tools, components, and resources that allow people to create, learn, explore, and share in order to develop projects.”*

- *“What is a Makerspace?” (Braden, 2021)*



2022/07/26 11:19  
Connecting with REDACTED from REDACTED makerspace, on LinkedIn

Hello REDACTED, thanks for the connection :) I'm reaching out because I'm a masters student in design at Concordia University, focusing of sociability in makerspaces. I'm also currently working for Professor Ann-Louise Davidson, in case you might know her. My thesis project involves a fun, social co-design and development activity intended to build bridges within and between makerspaces. It's accessible to all skill levels, and I'm inviting a diverse range of makerspaces and creative communities to join in. I would love a chance to explain it to you in a bit more depth and see if REDACTED would like to participate, in a way that works for you. If there's a possibility for me to drop by your space and discuss it with you at your earliest convenience, I'd be very grateful. Thanks so much for your time, Don Undeen <https://undeen.com>

response back: Hello Don. I would be glad to contribute, but we're currently really busy, and I won't have time to properly contribute to this nice project. Hope to be able to collaborate in the future, REDACTED

2022/07/27 11:26 I respond: hi REDACTED, thanks for the response, I understand how busy things can get. The project is ongoing, and likely to be open to participation through at least the end of the year. Would it be ok for me to reach out to you at a later date to see if your group has availability to discuss? Thanks again, and I hope you enjoy the rest of your summer :)

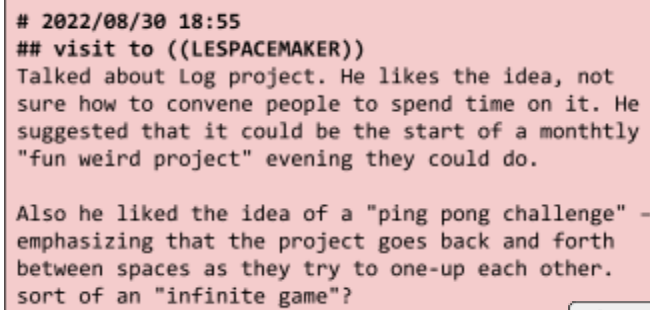
Comments  
ugh, realizing I'm offering makerspaces and the participants "Exposure," like I'm a club not paying the band. :/

fig. 4.5

My decade of experience working in and with makerspaces have given me a deep respect for the changes that these spaces, and the communities that use them, can make in people's lives. It is certainly true (and often stated in popular discourse on makerspaces) that makerspaces – with their tools, resources, and staff – can be fantastic places to learn employable skills (*Makerspaces*, n.d.), start a business (Holm, 2015), or teach science, technology, and engineering principles (Koul et al., 2021). However, I know that personally I was never interested in associating with makerspaces for those purposes. What mattered to me most about my time in makerspaces is the friends that I made, the people that I learned with, and the things we made together, *whether those things served a practical purpose or not*. In

fact, the less useful the project, the more fun we had making it. From observing thousands of interactions in spaces I supervised or visited, I'm convinced that this fun, social component in makerspaces is under-appreciated and under-studied. Having built or consulted on the construction of several spaces, I've seen that while education and entrepreneurship are the themes that marshal resources to get makerspaces started, successful spaces thrive when management focuses on social inclusion, relationship building, and deep interpersonal connection. In other words, *making friends*.

Thus far my career has focused on building and managing makerspaces, and by extension the relationships *within* those spaces. As the maker movement grows and the number of spaces within a city increases, I find myself turning my attention to building relationships *between* makerspaces. It seems apparent to me that the best way to connect with a makerspace is through maker activities: teaching, learning, and *making* together. Through the project proposed herein I hope to develop reproducible methodologies and objects that not only serve to knit a new arrival into the maker communities of a city, but knit those diverse communities more closely together as well.



# 2022/08/30 18:55  
## visit to ((LESPACEMAKER))  
Talked about Log project. He likes the idea, not sure how to convene people to spend time on it. He suggested that it could be the start of a monthly "fun weird project" evening they could do.  
  
Also he liked the idea of a "ping pong challenge" - emphasizing that the project goes back and forth between spaces as they try to one-up each other. sort of an "infinite game"?

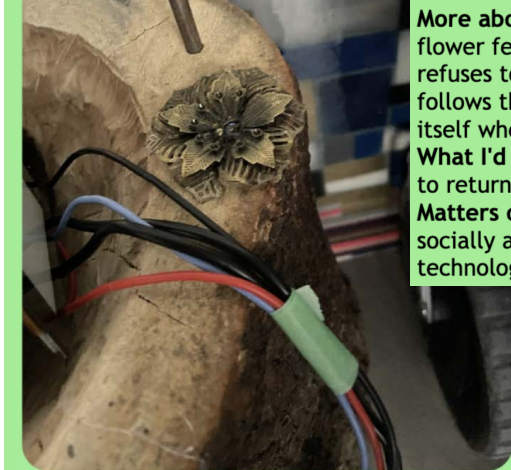
fig. 4.6

It should also be noted, as a way of explaining the title of this proposal, that this project reflects the importance of humor and performative silliness in my creative practice, both for its own sake and for its practical value in drawing people into creative participation. The "Login Log" is an intentional play on words based on the fact that the project involves both a physical wooden log, and a WiFi/intranet infrastructure that invites the participant to "log in" to begin the engagement activity at the heart of the work.

## Research Objective

In summary, as a researcher and developer of makerspaces, my research objective is to develop methods that give me access to a wide range of makerspaces, localized insight into how those spaces operate, and leverage to effect positive changes in maker communities. I believe these positive changes begin with trust and joyful social connections, so in other words I'm interested in *friendship* with makers: building things together to learn about each other. Through this project I hope to develop an understanding of the types of objects and activities I can bring to a maker community that will help me make friends, and help those communities make friends between makerspaces.

## Structure of This Proposal



Lost steampunk flower, hanging out on the edge of the Log

**Secret Code:** LOST (entered at 2023-04-16 22:32:14)

This proposal will first provide background

### **Lost Little Flower**

**Created by and with:** Steampun  
Montreal, random accident

**A little bit about it:** This little steampunk flower fell off the sign

**More about it:** This little steampunk flower fell off the QR Code Sign, and refuses to re-glue itself. So now it just follows the Login Log around, presenting itself wherever it can.

**What I'd say:** I fell off the sign, and refuse to return

**Matters of Inventive Concern-Making:**  
socially anxious objects, brittle technology, loose configurations

fig. 4.7

definitions on what we mean when we talk about *makerspaces*, *the maker movement*, and *maker culture*, and why it matters. It will then contextualize makerspaces as *communities of practice*, with the attendant benefits of social cohesion and well-being of its members.

We'll then move on to

considering the relationships *between* makerspaces, using the concept of *weak ties* to explain how improving the connections between spaces can be beneficial. Drawing on Actor-Network Theory, we'll look at just *how* we can make an object in a makerspace so that it can serve as a *Boundary Object*, enrolling diverse participants in collaborative making. Using Mike Michael's concept

of *Idiotic Objects* and the existing makerspace trend of *useless objects*, we'll then make a case for the value of nonsensical object-making projects as broadly (though not universally) appealing to maker communities. Finally we'll look at logistical issues to explain why a *progressive collaborative idiotic boundary object project* is a promising approach for reaching our goal of *affecting new connections between makerspaces, connecting with a wide range of maker and other creative communities, and generating localized knowledge about how those communities operate.*



# Background and Context

## Why Makerspaces?

Why are makerspaces (and relatedly, hackerspaces and fablabs) interesting sites for experimenting with new methodologies for community building through collaborative speculative design objects? What is the relationship of a “space” to a “community” with interesting features worth exploring?

Taylor, Hurley and Connolly provide this useful definition of a makerspace:

Makerspaces—also referred to variously as hackerspaces and Fab Labs—are one of the most visible manifestations of an emergent maker culture. They provide communal facilities in an openly accessible space, giving access to resources including digital fabrication and open electronics, which have been collectively hailed as enabling a revolution in personal manufacturing.

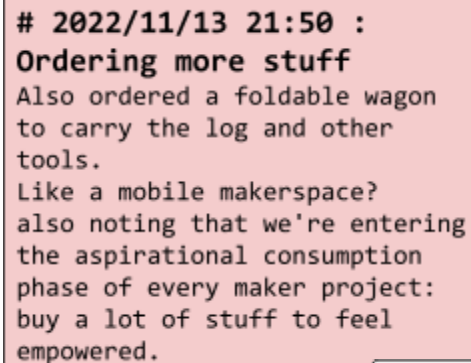
(Taylor et al., 2016)

It is illustrative that this definition posits the space as *manifestation* of a community, assuming the existence of the community before the space. In the next section, we’ll take a closer look at the nature of this community and its culture.

## Maker Culture

If there is such a thing as maker culture, what are its characteristics and why is it important?

Discourse on this topic is wide-ranging, and a deeper literature review is required to fully encapsulate it. Makerspaces and their spokespeople often identify concepts such as “playful,” “collaboration,” “failure-positive,” “DIY (do-it-yourself) or DIWO (do it with others),” “community,” “curiosity,” “sharing knowledge,” and “openness” as core to their identity (Einarsson & Hertzum, 2021). Suffice to say, some constructions of maker culture have been criticized for ignoring or exacerbating issues of inequality, classism, racism, sexism, and ableism (Britton, n.d.). On the other hand, we also see oppressed and marginalized groups laying claim to those same maker values through the creation of makerspaces explicitly designed to center their experiences and agency (BUREK et al., 2017, p. 222). Additionally, maker discourse is replete with advice on how to make makerspaces more welcoming and inclusive, of which the work of Einarsson and Hertzum is but one example (Einarsson & Hertzum, 2021). In short, these communities are interesting to me because they are groups of people grappling

A screenshot of a text message on a pink background. The text is in a monospaced font and reads: "# 2022/11/13 21:50 : Ordering more stuff Also ordered a foldable wagon to carry the log and other tools. Like a mobile makerspace? also noting that we're entering the aspirational consumption phase of every maker project: buy a lot of stuff to feel empowered." The text is left-aligned and occupies most of the width of the message box.

# 2022/11/13 21:50 :  
Ordering more stuff  
Also ordered a foldable wagon  
to carry the log and other  
tools.  
Like a mobile makerspace?  
also noting that we're entering  
the aspirational consumption  
phase of every maker project:  
buy a lot of stuff to feel  
empowered.

fig. 4.8

simultaneously with issues of social cohesion and the practical creation of objects. It is these two threads that I hope to weave together through my work with maker communities, by exploring how *making together* can bring *communities together*.



A silhouette of a dandelion blowing in the wind, laser cut on wood and attached to The Login Log

**Secret Code:** WIND (entered at 2023-04-21 22:10:03)

### Dandelion

**Created by and with:** Anonymous

**A little bit about it:** A dandelion blowing in the wind

**More about it:** I had hope that the story of the Login Log would spread like a dandelion in the wind. I'm not sure if that happened, but maybe if you blow a little harder?

**What I'd say:** When the wind blow, the dandelion propagates, spreading word of the Log

**Matters of Inventive Concern-Making:** socially anxious objects, research dissemination



fig. 4.9

### Weak Ties

What can we say about relationships *between* makerspaces and the communities within them? Is there overlap of membership between makerspaces? Do members of one makerspace maintain relationships with members of other spaces? Do spaces collaborate with each other, and if so, how? Granovetter's concept of "weak ties" suggests that connections *between* groups of highly-connected individuals can increase social cohesion and novelty of information flow (Granovetter, 1973).

In our context, this suggests that increasing communication between makerspaces can lead to new ideas and opportunities that would be less likely than otherwise. If an object or making

project is traveling between makerspaces, will it be using or building weak ties? While research on this topic is slim, there are some maker-related phenomena that provide clues. The Hackerspace Passport is a physical book resembling a passport which a maker would take to a makerspace they are visiting to get a unique "passport stamp" from the space. This project was created by Mitch Altman in 2011 to

"help promote people visiting as many hackerspaces around the world as possible, increase collaboration, increase cross-pollination so we can all learn from one another, encourage all hackerspaces to support each other, (and it's fun)" (*Passport - Noisebridge*, n.d.). The existence of this project, and its prevalence in maker discourse implies that inter-makerspace travel is a phenomenon.



fig. 4.10



A small booklet attached to the side of The Login Log

Secret Code:BOOK (entered at 2023-04-21 21:45:39)

### The Log Mini Book

Created by and with: JUANMICE

A little bit about it: A mini book, for keeping the Log's affairs in order

More about it: At the Login Log @ CUCCR event, JUANMICE created this Mini Log Book to record all the Log's necessary documentation: SIN, Identification, VISA, etc. Everything you need to get by in SOCIETY! With some extra pages for free writing. Please feel free to write in it! Again, I wonder how much people will participate in this call for engagement? Why would they want to?

What I'd say: Even a Log needs proper documentation in this society.

Matters of Inventive Concern-Making: open-ended features, surveillance society, non-participation

The Maker Faire event is another major phenomenon that nurtures relationships between makerspaces. Launched in 2006 in San Francisco by Make Media, Maker Faires and smaller Mini Maker Faires are now held all over the world, allowing makerspaces, hackerspaces, and un-spaced maker communities an opportunity to show off their projects, interacting with other makers, and the general public ("Maker Faire," 2021).

Maker Faire is uniformly branded by Make Media, in contrast to the diversity of the makerspaces themselves, and for many spaces is their main exposure to the general public. Because of this, in my

experience Maker Faires are highly public-focused and performative, in contrast to the long-form participatory nature of communities of practice in the makerspaces themselves. While maker passports and Maker Faires provide some opportunities for the building of weak ties, I propose that if we merge the theory of weak ties with the theory of communities of practice as defined below, we can infer that a better way to bring maker communities together is through collaborative acts of making: *inter-makerspace projects*.

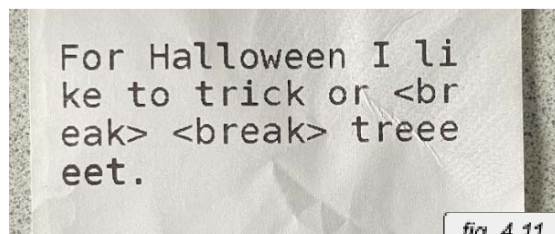


fig. 4.11



## Fun

Absent extrinsic incentives – such as pay, skill development, certifications, etc – what would

```
jokecontrol.php •
var > www > html > jokecontrol.php > ...
49
50 $new_value = null;
51 if (isset($_GET['joke_probability']) && $_GET['joke_probability']) {
52     $new_value = $_GET['joke_probability'];
53     $orig = $new_value;
54     $new_value = intval(trim(preg_replace('/[^0-9]/', '', $new_value)));
55     $second = $new_value;
56     if (!is_int($new_value)) {
57         $new_value = null;
58     } else {
59         if ($new_value < 0 || $new_value > 100) {
60             $new_value = null;
61         }
62     }
63 }
64 }
65
66 if ($new_value) {
67     file_put_contents($prob_file, $new_value);
68 }
69 }
```

fig. 4.12

motivate maker communities to participate in collaborative making projects? “Because it’s fun” could be an adequate response, if we can better qualify just what we mean by “fun,” how it relates to community and creativity, and how it can inform our methodology.

According to Ben Fincham in “The Sociology of Fun,” while the concept of fun is often

under-specified in sociological research, it is often distinguished from related concepts like “happiness,” “well-being” or “pleasure” by being situated within social structures and relationships between people (Fincham, 2016, p. 6). Walter Podilchak “suggests that fun is actually the materialization of social conditions in which freedom and choice to adopt positive affective positions occurs. He suggests that ‘fun is clearly established as a type of relationship construction rather than a specific activity’ ” (Podilchak, 1991, p. 135 cited in Fincham, 2016, p. 12). This conceptualization of fun connects it to subversive activity, resistance to middle- and upper-class sophistication and the routine of

*“One of the spaces, on their turn to take whatever it was and tweak it and make a different thing out of it, decided that covering it with d—s would be really funny. So you have to be like “either I have a policy about that or that’s just what happens, now the next person, you just get a bunch of d—s, what are you going to do about it?.. I hadn’t thought about it ahead of time, and no one seemed to really care too much but I had a moment of ‘really, guys?’” - Nathan Parker, MakeltGo*

fig. 4.13

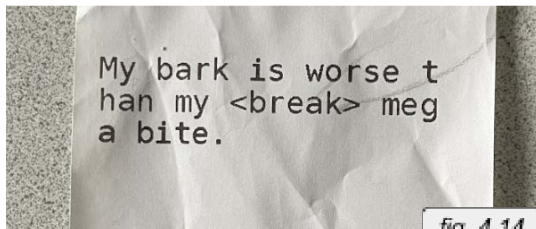


fig. 4.14

work (Fincham, 2016, p. 6). While there are other associations of “fun,” including “flow,” “spontaneity,” “disinhibition,” “frivolity,” “silliness,” etc. ((Fincham, 2016, p. 156), I find that theories situating fun within social constructs of equality and playful subversion may be a useful framing for demonstrating the intrinsic value of this

project to potential participants.

Informing the methodology of this project is also a warning from Fincham:

Fun is difficult to create, and in order to explain what it feels like requires a level of analysis, in the moment, that is antithetical to the experience of having fun. If you started thinking about how you were having fun and what it felt like when you were having it, you would stop having it. (Fincham, 2016, pp. 156–157)

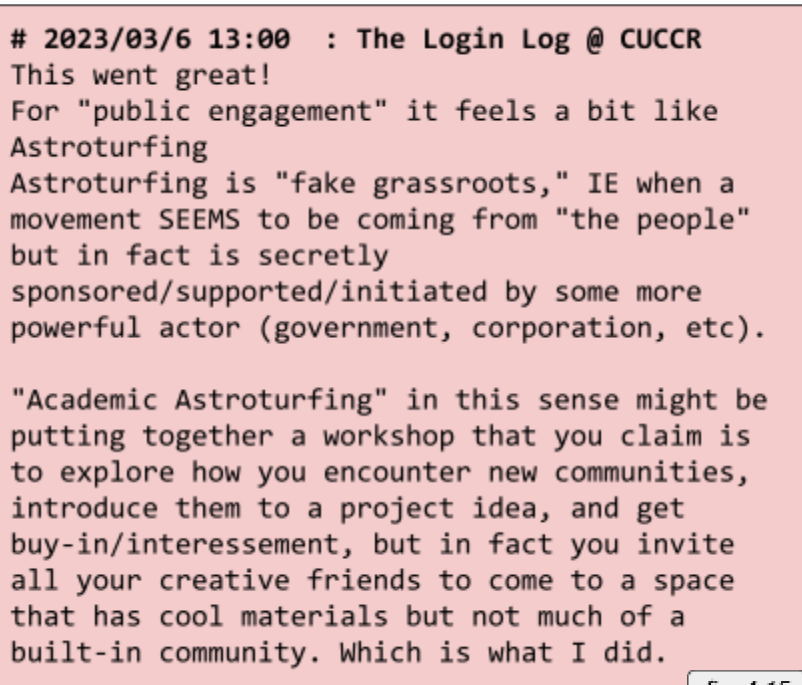
The implication of this statement is that methods for evaluating this project in terms of the amount of “fun” participants are having can have a negative effect on that very aspect. The methodology section of this proposal will attempt to address this.

## Theoretical and Methodological Approaches

### Makerspaces and Communities of Practice

From my perspective, makerspaces are ideal sites for the development of “communities of practice” as defined by Lave and Wenger (Lave & Wenger, 1991). Communities of practice “share a concern or a passion for something they do and learn how to do it better as they interact regularly” (Wenger-Trayner & Wenger-Trayner, n.d.). Though the definition of a community of practice includes the

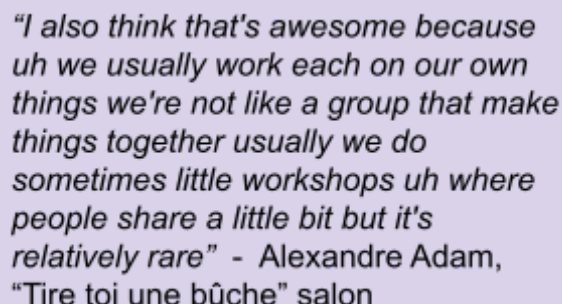
development of skills around a domain of knowledge, the aspect I’m most interested in is that additionally, “in pursuing their interest in their domain, members engage in joint activities and discussions, help each other, and share information. They build relationships that enable them to learn from each other; **they care about their standing with each other** [emphasis mine]” (Wenger-Trayner & Wenger-Trayner, n.d., p.



```
# 2023/03/6 13:00 : The Login Log @ CUCCR
This went great!
For "public engagement" it feels a bit like
Astroturfing
Astroturfing is "fake grassroots," IE when a
movement SEEMS to be coming from "the people"
but in fact is secretly
sponsored/supported/initiated by some more
powerful actor (government, corporation, etc).

"Academic Astroturfing" in this sense might be
putting together a workshop that you claim is
to explore how you encounter new communities,
introduce them to a project idea, and get
buy-in/interessement, but in fact you invite
all your creative friends to come to a space
that has cool materials but not much of a
built-in community. Which is what I did.
```

fig. 4.15



*"I also think that's awesome because uh we usually work each on our own things we're not like a group that make things together usually we do sometimes little workshops uh where people share a little bit but it's relatively rare" - Alexandre Adam, "Tire toi une bûche" salon*

fig. 4.16

2). Research by Taylor et al. demonstrates the possibility of makerspaces to support well-being and mental health (Taylor et al., 2016, p. 1), and it is not a great leap to suggest that it is precisely the social effects of makerspaces as a community of practice that have the greatest impact on this effect of well-being (as opposed to, say, the individual completion of projects or learned skills). A 2020 literature review by Mersand cites numerous studies indicating social factors (relationships, community, etc) as a primary motivating factor for people to be involved in makerspaces (Mersand, 2021, pp. 180–181). Lave and Wenger also introduce us to the

fig. 4.18



### Logger Shirt

**Created by and with:** FEISTY  
**A little bit about it:** A loggers shirt, for the Login Log to wear on a crisp autumn day

**More about it:** At The Login Log @ CUCCR event, FEISTY made this perfect little shirt with reclaimed fabric in CUCCR's supplies. CUCCR has so much great stuff, you have to go visit! I invited my friends to the CUCCR event; do they count as a creative community? Again I feel like I overspilled my research methods. But it felt like the methods were getting in the way of the object's emergence. Some of the participants met for the first time, and had a great afternoon making together. So in that sense the connection through creative community happened. But let's not wave away the ambiguity either....

**What I'd say:** When it gets a little chilly, I'm glad I have my shirt

**Matters of Inventive Concern-Making:** soft circuits, smart textiles, upcycling, astroturfed participatory creation

fig. 4.17

*"I just realized that we were hoping for the the Clockwork mechanism to be like for people to follow up on it and I realized that the thing that people gave another function to is actually uh the gauge because they used it to hook on the the t-shirt that you were saying it's actually hooked to that so that's not something we thought people would do." - Alexandre Adam, SteamPunk, 'Tire toi une bûche' salon*



A small shirt hanging on a coat-hanger on The Login Log

concept of "legitimate peripheral participation," the process whereby a novice/newcomer to community of practice becomes an expert/old-timer, progressively becoming more engaged and active within the group (Hay, 1993, p. 33). Lave and Wegner suggest that this process works most effectively when novices and experts have the



opportunity to work together, in mentor-mentee relationships, casual or close observation, self-evaluation, etc. (Lave & Wenger, 1991). In summary, makerspaces can be places where communities of practice develop that promote social cohesion and well-being through shared making activities that encourage novices to grow through interaction with experts.

## Boundary Objects

Having identified making as an activity to build connections between maker communities, the next question is “making what?” Makerspaces vary widely in equipment, skill sets, resources, demographics, politics, interests, etc. How can a single type of project appeal to entrepreneurs, college students, artists, school children, and so on? To address this, we can turn to Star and Griesemer’s concept of “Boundary Objects” which “are both adaptable to different viewpoints and robust enough to maintain identity across them.” (Star & Griesemer, 1989, p. 387). If we apply this to an inter-makerspace project, it needs to be adaptable to the different viewpoints of its varying audiences, while maintaining its own coherent identity, to successfully create alliances that lead to active participation. However, what kind of making project can be intelligible to an educator, an entrepreneur, or an artist?

### ***Wheels that Go Round***

**Created by and with:** Steampunk Montreal

**A little bit about it:** The wheels go round and take us nowhere

**More about it:** These wheels, added by the Steampunks, replaced the knit-covered legs that originally held the Login Log upright. They only let the Login Log move in a circle, so there are pretty useless, except for twirling the Log around, like a ballerina.

**What I'd say:** Wheels go round and round  
**Matters of Inventive Concern-Making:** circular reasoning, research dissemination

## Useless Objects

To suggest a response to the above question, I want to draw attention to a phenomenon in makerspaces that, while not universal, is widespread and legible across many types of spaces: *the useless object*, a device which has a function but its direct purpose is deliberately unknown” (“Useless Machine,” 2021). In makerspace communities, these projects are often designed to highlight technical accomplishment without regard to practical functionality. The archetypal



a close-up of the small wheels underneath the Login Log

**Secret Code:** WHEELS (entered at 2023-04-21 21:02:48)

fig. 4.19

example, invented by Marvin Minsky but reproduced in countless variations, is “The Useless Machine,” (aka “Useless Box”), a simple box with a single switch whose only purpose is to turn itself off (“Useless Machine,” 2021) (see fig 4.22). The popular maker website Hackaday.com features daily DIY projects that often stretch the bounds of utility for the sake of demonstrating technical skill, creativity, and wit (*Hackaday*, n.d.).

*Chindogu* is a term developed by artist Kenji Kawakami meaning “un-useless inventions,” objects which technically work, but create more problems than they solve, such as the Solar-Powered Flashlight (*Chindogu*, 2018) .

The YouTube channel “Unnecessary Inventions” by Matty Benedetto (*Unnecessary Inventions - YouTube*, n.d.) features over 200 videos of this maker’s creations which poke fun at tech startup culture through objects that perform useful functions in useless or counter-functional ways. In her Ted Talk, “Why You Should Make Useless Things,” artist/inventor Simone Giertz says “The true beauty of making useless things [is] this acknowledgment that you don’t always know what the best answer is, It turns off that voice in your head that tells you that you know exactly how the world works. Maybe a toothbrush helmet isn’t the answer, but at least you’re asking the question” (Giertz, 2018). In my experience, most makerspaces that display member projects have a few useless machines to show off, and these are often used to highlight the spaces’ values that align with themes of fun, creativity, making for its own sake, and failure-friendliness.

*“What really got me and I think everyone in the group is the uselessness yeah of this because we don't take ourselves seriously in steampunk obviously we're like having fun at creating something absurd that doesn't have any purpose but the fun of creating it so the purpose is not the result it's the the creation” - Alexandre Adam & Anne Baillargeon, SteamPunk, 'Tire toi une bûche' salon*

fig. 4.20

*“Everything is useless just accept that everything is useless we are useless like we all take things so seriously right like we're just like oh yeah this is gonna be so meaningful oh people are really gonna understand what I'm trying to say but like in five years no one's gonna care. I don't know if that's inspiring” - Tricia Enns, 'Tire toi une bûche' salon*

fig. 4.21



Fig 4.22: A "useless machine" ("Useless Machine," 2021)

### Idiotic Objects

How can we account for the popularity of the useless machine? How can it be useful to us? To address this, I'm inspired by the work of Mike Michael and his explication of the "Idiotic Object" and an "Idiotic Methodology" (Michael, 2012). Building on the work of Whitehead, Deleuze and Guattari, and Stenger, Michael defines an "Idiotic Object" as one that is "processual, emergent, relational, and open, but also... possessed of an incommensurable difference that enables us to 'slow down' and reflect" (Michael, 2012, p. 168). His definition of an "Idiotic Methodology," which he likens to 'ludic action research,' is one that creates a



fig. 4.23

### PiJuice

**Created by and with:** Log Liaison

**A little bit about it:** The PiJuice will not let the Log be silenced

**More about it:** Uninterrupted power supply for the Login Log. People were turning the Login Log off because of the bad jokes. Another response by me to the "misbehaviour" of my audience. I'll misbehave back, creating an even more obnoxious object. An idiotic response to an idiotic response to an idiotic prompt  
**What I'd say:** I have the PiJuice, you can not turn me off.

**Matters of Inventive Concern-Making:** design as projection, annoying objects, misbehaviour, idiotic objects

**Secret Code:** JUICE (entered at 2023-04-21 22:13:20)



```
# 2023/03/10 16:58 : just wasting time
had intended to work on TODOs, instead
re-organized my supplies and tools

Now, looking into how to use the barcode
scanner, which basically acts like a
keyboard.

I want to capture its output into a
script, than runs in the background

Which is basically a keyLOGGER!
LOLOLOLOLOLOL
Sooooo on brand....

Some key loggers:
https://github.com/kernc/logkeys

- I need a way to send keypresses to a
script; ideally a line at a time...
```

fig. 4.24

‘mutual idiocy’ between researcher and subject, where “mirrored incommensurability...triggers affects, reactions, and response which mediate parallel inventive problem-making” (Michael, 2012, p. 179). If we recognize that useless objects are idiotic, this suggests that the reason for their appeal is that they encourage makers to slow down and reflect on why they make and what they value; by embracing the useless object they tell us that they value making for reasons beyond pure utility.

**Idiotic Boundary Object Projects**

Can an idiotic object be a boundary object? In other words, can we translate the broad appeal of useless objects into *activities* that involve diverse participants in collaboratively *making* a useless object, where each participant interprets that object differently? This is a question of *interesement* and *enrolment* as explained by Michel Callon and Actor-Network Theory. “To interest other actors is to

“I was really captivated by this idea of Don beside his humor and way of seeing things, I'm really focused on this idea of becoming producers not consumers so I believe you have to try to make every as much as we can books clothes technology whatever so I that's why I'm here” - Juan Miceli, (CUCCR event), ‘Tire toi une bûche’ salon

fig. 4.25

build devices which can be placed between them and all other entities who want to define their identities otherwise” (Callon, 1984, p. 8). For a collaborative idiotic project to work, it needs to capture the attention of the participants, drawing their attention to an activity (idea generation and implementation) when they could easily be spending their attention elsewhere. The biggest risk of the project is that people will be introduced to the project but choose not to

```
# 2022/08/23 another visit to
((FouLab))

This one was short, as there were
only a few people there, and the
person in charge had to leave early.
A few people had added comments the
Login Log interface, but nothing
actionable. Some of the candy had
been eaten.

I chatted socially with some of the
users, while working on trying to
get text-to-speech software
installed on the Log. This proved to
be overly difficult without the Log
having access to the internet, and I
wasn't able to get the Log onto the
wifi at FouLab

I left around 9
```

fig. 4.26

participate. Callon captures this tension well when he explains the distinction between intersement and enrolment:

No matter how constraining the trapping device, no matter how convincing the argument, success is never assured. In other words, the device of intersement does not necessarily lead to alliances, that is, to actual enrolment ... Why speak of enrolment? ... It designates the device by which a set of interrelated roles is defined and attributed to actors who accept them. Intersement achieves enrolment if it is successful. (Callon, 1984, p. 10)

In other words, while an idiotic object project *could* be a boundary object leading to connections between communities, it is not guaranteed. The implication here is that this is the space where experimentation, trial and error, i.e. *research*, could be fruitful.

*"One of the spaces that signed up and was super excited to do it, completely dropped the ball, didn't get anything done. You had to have provisions for people not doing what they say they were going to do." - Nathan Parker, MakeltGo*

fig. 4.27

While this literature suggests that idiotic objects can provide opportunities for inventiveness, there is a gap in that it doesn't make clear just *how* to design, implement, and evaluate objects and activities that attempt this feat. To that end I turn to

the work of William Gaver on the concept of "cultural probes" (Gaver et al., 2004). In Gaver's explanation, cultural probes are "collections of evocative tasks meant to elicit inspirational responses from people – not comprehensive information about them, but fragmentary clues about their lives and thoughts" (Gaver et al., 2004, p. 53). Additionally, "It's an approach that values uncertainty, play, exploration and subjective interpretation as ways of dealing with those limits" (Gaver et al., 2004, pp. 53–54). More to the point, the literature on Cultural Probes provides specific examples of this work in practice, moving beyond the theoretical to the practical. Evaluation of those examples and a distillation of potential best practices for my work requires additional research.

*"um I I saw this log evolve as I I was one of the people that unplugged the log. So little log lived in a studio that I, that, well both of us worked in the studio but I just spend way too much time in that studio um and it would often say jokes and say things that I didn't understand because of his mechanical voice and when I was in my grumpy thesis writing phases I would just unplug it and just like 'shut up' um which I mean is exactly what you want" - Tricia Enns, 'Tire toi une bûche' salon*

fig. 4.28



## Progressive Idiotic Boundary Object Projects

Given the existence of many makerspaces and communities in a region, it must be assumed there is a reason they are not all in one place. They may be sited within dispersed organizations, serving specific local

*“Uncertainty creates a lot of anxiety and for us it's like therapeutic art in a sense because we have to accept the uncertainty to have fun to be able to do it the right way so yeah the right way being not thinking about the end result, to accept the uncertainty. Too bad for the people who did nothing” - Anne Baillargeon, Steampunk, 'Tire toi une bûche' salon*

fig. 4.29

communities, or taking advantage of real estate opportunities. In any case, and particularly under COVID concerns, it seems obvious that requiring multiple groups of people to travel to a common site, at the same time, is a burden to participation. Instead, I think it would be possible to have one idiotic project that moves through several sites, changed by each community, in their space, before moving on to the next. From my research so far, I have

*“If your goal is to have an object at the end that has at all stayed on-brief, then find crews that are at all reliable, that can make a thing. Or do it as a purely social exercise, but don't try to do both - you will be disappointed no matter what happens.” - Nathan Parker, MakeItGo*

fig. 4.30

seen no project that does precisely this, though MakeItGo comes close. MakeItGo (Chase, 2017) is a 3D design project in which a series of makerspaces are

invited to progressively build upon a single CAD file, until the model passes through all participating spaces and the object is fabricated. In terms of collaborative, inter-makerspace projects, MakeItGo is the only example I could find that is like my proposed “progressive idiotic boundary object project” in its avoidance of “problem-solving” in favor of fun, whimsy, and social connection, and working across multiple communities. “We’re forming friendships and collaborations that create an active network through which these spaces can share resources and expertise” (Chase, 2017). Coverage of this project is minimal (one short article in Make Magazine), indicating that this type of multi-space, single-project maker project is underexplored, and an exciting path for me to pursue.

*"I just have like a quick comment about what you just said about people being kind of scared of touching it and doing something with it. It reflects in a way the mal du siècle in our society which is anxiety like people are kind of paralyzed by anxiety because they're they're like they were kind of scared because they didn't know people are just like scared of everything they don't know and there's kind of change so there's a kind of philosophical reflection of to do maybe about uh what happened about the failure side of the project uh which is also interesting as as interesting as the um successful part I've been is like two two ways to see the same project and to analyze yeah well it is and what it bring to to us" - Anne Baillargeon, Steampunk, 'Tire toi une bûche' salon*

fig. 4.31

## Research Question

Taking into account my personal experience and passions regarding makerspaces; drawing on threads from Actor-Network Theory, communities of practice, weak ties, and idiotic objects; and leveraging trends in makerspace communities, I find myself arriving at the following research question:

*How can a collaborative speculative design project, conducted progressively through multiple makerspaces, be an effective way to generate connections between a wide range of maker communities?*

## Methodology

### Project Description: The Login Log

My research-creation project is designed to explore the above question through an

iterative, collaborative design project, entitled the "Login Log" (aka "The Log"). The Log is a physical wooden log embedded with a small computer that serves as a router and web server. Connecting to this server from a mobile phone disconnects the device from the internet and provides the user with a single web page, containing prompts like "what else can I be?" and "what would make you like me?" The Log invites the user to directly contribute feedback that guides future development of The Log. Changes to The Log will then be made in collaboration with the creative communities that provided the feedback. As the project progresses I hope to refine the methodology for presenting the work, engaging

*"I don't know that asking successive groups of people to lean ever harder into a pun is sufficient to get them engaged enough to do a lot of work on this." - Nathan Parker, MakeltGo*

fig. 4.32

the communities, implementing new ideas, and documenting and sharing the results.

The particular configuration of materials (wooden log, embedded computer, web interface, users' mobile phones), was selected as a starting point because both the wood, which can be carved, drilled, nailed to, etc., and the computer, which can be reconfigured, exhibit a kind of plasticity that make it highly adaptable to new ideas, while also being engaging as a play on words ("Log-in to the Log").

The Log has the potential to serve as a "useless object" due to its nonsensical nature. Though loaded with modern technology aligned with concepts like "The Internet of Things," mobile apps, and WiFi hotspots, it serves none of the useful functions usually associated with those technologies. According to the reasoning I've outlined above, this uselessness, and the invitation to modification by diverse maker communities, will enable it to serve as a boundary object that can nurture weak ties between communities.

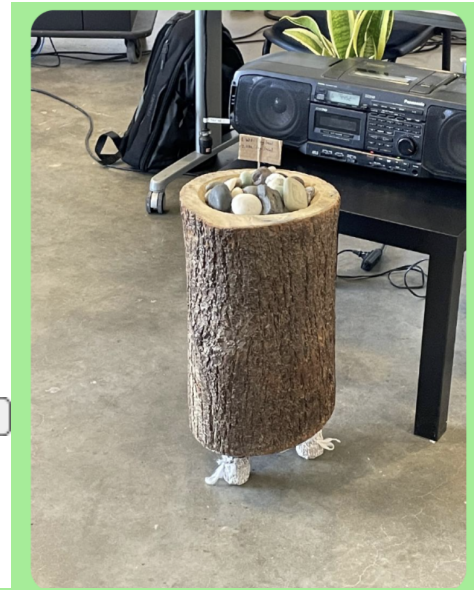


fig. 4.33



The knitted boots, arrayed around the Login Log

### *Knitted booties on the Log's Old Feet*

**Created by and with:** ANONYMOUS

**A little bit about it:** The knitted booties on the Log's old feet are sticking around  
**More about it:** Just because the knitted-bootied feet of the Log are no longer attached, doesn't mean they aren't still part of the Login Log. They move through space and time in close relationship with the rest of the amalgamation of materials and interactions that comprise the Login Log. This is just one way in which The Login Log exists beyond the single object itself.

**What I'd say:** The Log used to have these three feet with cute knitted booties. They were removed so we could add the wheels, but they are still part of the Login Log, even though they aren't attached.  
**Matters of Inventive Concern-Making:** alternative record-keeping, configurations of more-than-human, where does the Login Log end?



es on the L



## Methodological Theory: Ludic Design

This project involves “users” as collaborators in design, development, and meaning-making for a “friendly” object and activity that is intended to (somewhat recursively) maximize enthusiasm for said project. It is therefore useful to consider methodologies that support playfulness and an openness to multiple meanings and multiple meaning-makers, while resisting clarity and the authoritative voice of the singular “designer.”

*“If you’re counting on someone to be a free-spirited rule-breaker, ... you might get one if you’re very lucky, but otherwise you’re likely to get people who are like ‘I’m this much excited about this so I’m going to do this much work.’” - Nathan Parker, MakeltGo*

fig. 4.34

The concept of “cultural probes,” introduced earlier, points us to possibilities on how collaborative idiotic boundary objects

```
$ tell_jokes.sh X
scripts > $ tell_jokes.sh
1 #!/bin/bash
2
3 randnum=$(shuf -i1-100 -n1);
4 prob=$(cat /home/pi/loginlog/scripts/joke_probability.txt)
5 echo $prob;
6 echo $randnum;
7 if (( $randnum < $prob )); then
8   joke=$(shuf -n 1 /home/pi/loginlog/jokes/jokes.txt)
9   echo "${joke}" | /usr/bin/lp -o orientation-requested=6
10  /usr/bin/flite -ssml -voice /home/pi/loginlog/voices/cmu_us_slt.flitevox -t "${joke}"
11  /usr/bin/python /home/pi/loginlog/servodial/servodial_runonce_rand.py
12  echo " " | lp
13  echo " " | lp
14 fi
15
```

fig. 4.35

might be implemented in makerspaces. Furthermore, in “Cultural Probes and the Value of Uncertainty,” Gaver et al. define an approach to collaborative design that encourages “subjective engagement, empathetic

interpretation, and a pervasive sense of uncertainty as positive values for designers” (Gaver et al., 2004, p. 56).

Ludic design, as introduced by Bill Gaver, emphasizes values of “curiosity, play, exploration and reflection” (Sengers & Gaver, 2006, p. 101). Relatedly, in “The Disenchantment of Affect,” Sengers et al. introduce the concept of “designing for enchantment,” which involves focusing on “using interactive experiences to increase awareness and reflection on the richness of everyday emotional experiences” (Sengers et al., 2008, p. 20).

```
# 2022/09/03 10:42
Added text-to speech to the log,
so the speakers would have
something less annoying to do.
Now it
- announces when it turns on
- randomly tells bad
wood-related puns
- announces when someone logs
in, or posts to the login page

I realize that so far I've done
all the developing, in the hopes
of creating something that
people feel more inclined the
engage with and create upon.
This seems analogous to building
a makerspace; you hope that
you've left enough interpretive
freedom for others to feel
creatively inspired and
empowered
```

fig. 4.36

**Q: What other useless features could we add?**

**Willthstud: milk udder**  
(logged at 2023-03-06 20:41:09)

fig. 4.37

According to the above authors, these values have implications for how projects are developed, implemented, and evaluated. As we de-emphasize the importance of the designer as authority, “evaluation shifts from determining whether an authoritative interpretation was successfully communicated to identifying, coordinating,

stimulating, and analyzing processes of (evaluative) interpretation in practice” (Sengers & Gaver, 2006, p. 105). As The Log develops through participation by the maker communities, useful questions move away from “did people participate the way I want and expect?” to “how many different interpretations were developed, and why?” and “did participants feel empowered to develop their own interpretations?” (Sengers & Gaver, 2006, p. 105)

# 2023/02/02 10:46 : technically and socially fragile

I find myself consumed by the fragility of the system... how to make this work for me? overcome, cope, respond idiotically?

fig. 4.38

**Q: What other useless features could we add?**

**Snicker doodle: A spray can that sprayed paint every time someone got within 1 foot of the log**  
(logged at 2022-11-25 12:49:15)

fig. 4.39

Sengers and Gaver also identify ways that design can support multiple interpretations, which can be interpreted for The Log project (Sengers & Gaver, 2006, p. 102):

**Design can clearly specify *usability* while leaving interpretation of *use* open.**

In the case of The Log project, this can be achieved by making clear what participants can *do* to/with The Log, while being intentionally vague about what that use is *for*.

**Designs can support a space of interpretation around a given topic.** In the case of The Log, it might make more sense to think of the “topic” as the materiality and usability of The Log itself; we should leave space open for the participants to interpret what that means for themselves, and how they respond to it through modifications. Methodologically, capturing these interpretations, and how they develop, will be important.

**Designs can stimulate new interpretations by purposefully blocking expected ones.** The Log

literally “blocks” expectations by preventing participants connected to its WiFi from accessing the internet. Hopefully this opens up

**Q: What other useless features could we add?**

**duck: A knob to change to joke frequency on the log**

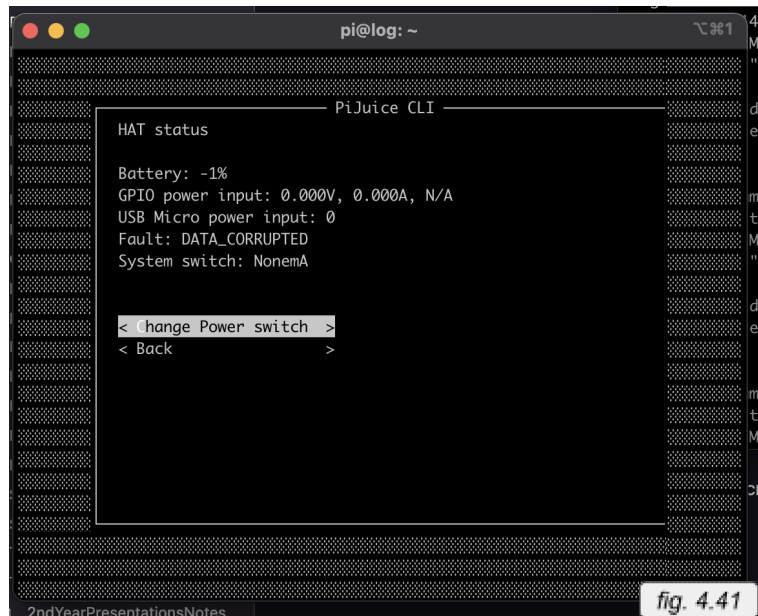
(logged at 2022-11-25 16:15:01)

fig. 4.40

conversations about what we use the internet for, and what possibilities open up when we relinquish that access.

**Design can gradually unfold new opportunities for interpretation over the course of interaction.**

The development of The Log is a realization of interpretations; users turning their ideas about what The Log is and can be into concrete implementations. Ideas may change as the planned implementation progresses. These conceptual developments need to be tracked as well.



**Designs can make space for user re-interpretation by downplaying the system’s authority.**

In the process of presenting The Log to new participants, I need approaches that downplay my own “authority” as the designer.

*“I suddenly imagine the idea of, in a hundred years someone finds this and they say they used to use a log to connect to the internet [Laughter] they used to put a small shirts to invoke the the goddess and they used to play games with it, I love this idea.” - Juan Miceli, (CUCCR event), ‘Tire toi une bûche’ salon*

fig. 4.42

**Designs can thwart any consistent interpretation.**

The Log will travel between several makerspaces, where each community may have different, contradictory interpretations of what The Log means and what to do about it. This may register as aesthetic or UX “tensions” or “clashes” in The Log. The project will be best served by a method that

encourages and interrogates those clashes, using them as opportunities for dialogue between communities. This also means that The Log may need to make repeat visits to a community, to support that conversation.

**Methodological Questions**

Based on the research question and goal, the following objectives will be addressed by the methodology as targets for measurement and improvement:

**Generating connections:** Are we increasing the number of “Weak Ties” within and between maker communities?

**Learning things about these communities and**

**people:** What kinds of information and new knowledge are we able to gather from these interactions?

**Developing a methodology:** Is the process for executing this project repeatable?

**Creating an interesting object:** Is the resulting object delightful, intriguing, inspiring, on its own? What does the object “mean” to the people who interact with it?

**Having fun:** Are the participants and the researcher enjoying themselves?

*“I genuinely did have a lot of fun in both of those sessions I think um on the first one I really just came in with no idea of what I was gonna do it was at um at CUCCR here in in Concordia and I just kind of got inspired by other people who were doing things with the sewing supplies there and the fabrics and stuff I used like my my limited knowledge of of how to saw things together to make the suspenders and it was really cool it was really fun and I messed up a lot I had to redo it.”*

- Leo Morales (CUCCR Event), “Tire toi une bûche” salon

fig. 4.43

# 2022/09/27 20:55  
((FouLab)) Visit

Someone introduced a new person to the log, and they logged in. It gave me a chance to share the idea with a new person who thought it was “cool” but didn't want to make anything.

fig. 4.44



# Methodology Implementation

The Login Log Project can be broken down into a series of “engagements” where each engagement involves The Log going to a makerspace for a period of several weeks to be presented and transformed. Each engagement has several components or phases, each with its own requirements for execution, documentation, and evaluation.

Because this project is one of *methodology development*, the specific implementation of these phases is anticipated to evolve over time. The outline created below focuses on identifying the goals of each phase, and the dependent and independent variables that result from those goals. However, the documentation methods listed are expected to change based on what we learn from

```
# 2023/02/03 13:07 : it's  
just like the good old  
days
```

```
this workflow takes me back  
to the days of eating amy's  
burritos every day, coding  
php for isps, fashion  
retailers, children's  
oncoloty, spammers, etc  
coding, refactoring, eat a  
burrito, drink some coffee,  
think about better ways to  
work, trying things out,  
sharing memes when memes were  
new, arguing w friends who  
also worked in offices  
and watching homestarrunner.
```

fig. 4.46

```
servodial_runonce_rand.py 1 X  
servodial > servodial_runonce_rand.py > ...  
1 import RPi.GPIO as GPIO  
2 import time  
3 from random import random  
4  
5 servoPIN = 13  
6 GPIO.setmode(GPIO.BCM)  
7 GPIO.setup(servoPIN, GPIO.OUT)  
8  
9 p = GPIO.PWM(servoPIN, 50) # GPIO 17 for PWM with 50Hz  
10 p.start(2.5) # Initialization  
11 p.ChangeDutyCycle(random() * 12.5)  
12 time.sleep(1);  
13 p.ChangeDutyCycle(random() * 12.5)  
14 time.sleep(1);  
15 p.ChangeDutyCycle(random() * 12.5)  
16 time.sleep(1);  
17 p.ChangeDutyCycle(random() * 12.5)  
18 time.sleep(1);  
19 p.stop()  
20 GPIO.cleanup()  
21 print("done")  
22
```

fig. 4.45

the engagements, recognizing that methods for gathering information can themselves have an impact on the experience of the project itself. As addressed earlier in the section on “fun,” asking participants if they are having fun can negatively impact the amount of fun they are having. Therefore methods should be used that de-emphasize reliance on participants to provide feedback in real-time, instead putting more responsibility on the researcher to reflect on the experience in between engagements and phases and adjust methods as deemed appropriate.

## Setting up the engagement

*"It's actually a really fun thing how we got into contact because Don posted that the idea for the project for the login log that you needed like make your people in Montreal to make something weird and somebody that was your friend on Facebook that used to be here that's now now lives in the State uh is actually I went to school with my brother-in-law and we met like twice but he's my friend on Facebook and he sees all the weird stuff I make so he he just told him I think you're looking for Alex." - Alexandre Adam, "Tire toi une bûche" salon*

fig. 4.47

- Summary of response from makerspace contacts
- Post-activity reflection journal

### **Independent variables:**

- Script used with makerspace contacts
- Style of interaction (formal, informal, etc.)
- Size and makeup of initial contact (single leader, multiple leaders, in-person, online, etc.)
- Format of initial contact (email exchange, call, in-person visit, etc.)

### **Dependent variables for evaluation and improvement/iteration:**

- Are we successful in setting up a presentation/activity?
- Do the expectations created in these initial contacts set the stage for a good engagement experience?
- Later: Are those expectations met?
- Do we get invited back for a second visit later?

### *2-6 weeks before engagement*

This initial contact with the makerspace is required to schedule the visit, set expectations, and arrange logistics. Using existing contacts, and contacts developed through future engagements, I will reach out to leaders at local makerspaces to explain the project and arrange time for me to visit their makerspace with The Log, and deliver an engagement.

### **Documentation possibilities:**

- Script used for conversation with makerspace contacts
- Emails

## Presenting The Log

```
# 2022/08/09 another visit to  
((FouLab))
```

```
While folks seem interested in  
the idea of the project, the  
ethics form is a definite  
hurdle. No one wanted to sign  
the ethics form, and there were  
a lot of questions about how  
the data was going to be used,  
the selection of a username,  
etc. Some people wanted to  
interact with The Log  
anonymously ("The real hacker  
experience").
```

```
[I feel like I made progress  
and connections, and with each  
visit it seems l'm getting more  
positive attention. The fact  
that I have additional spaces  
interested in participating  
gives me more confidence as  
well]
```

fig. 4.48

*Duration: less than 1 hour*

In this phase we present The Log to a group of makers assembled in the space. This presentation will vary in style, formality, and structure, depending on logistical requirements and the nature of the maker community in the space. It involves elements of performance and facilitation. The purpose of the presentation is to explain the work, get participants into the right frame of mind to engage with the work, and set the stage for the ideation and implementation phases. Drawing on some principles of Ludic Design, care will be taken to: leave interpretation of use open; open a wide space for interpretation from many perspectives; block expected interpretations; downplay my own authority; and thwart consistent interpretation.

### Documentation possibilities:

- Audio/video recording if appropriate
- Live recording directly onto The Log itself
- Post-presentation surveys
- Post-presentation interviews

- Post-activity reflection journal

### Independent variables:

- Duration of activity
- Location of activity
- Style of presentation
- Presentation script
- How The Log's previous community contributions are presented
- The involvement of The Log in the presentation
  - Physical appearance (this will change as the result of engagement by prior communities)
  - The Log user experience (combination of software, physical computing hardware, embedded webserver, WiFi access point)

### Dependent variables for evaluation and improvement/iteration:

- Does it generate engagement/interestment?
- Do participants engage enthusiastically?
- Does it generate good ideas?
- Does it "work" as a performance?

# 2022/08/16 : another visit to ((FouLab))

There were a couple entries in the bLog from anonymous users that didn't sign the consent form.

It seems like in this space, I might be implementing an idea myself, but I can base it on the ideas provided.

Also I'm thinking that I could do something different with the speakers, other than the "soundifying networks" thing, which was more irritating than fun. Looking into speech synthesis, that could be cool.

[good pic of early log in-situ]

I'm going to need some large paper pads for ideation, people aren't using the Log interface for that. Unless I make the data entry part of the app much more interactive (ie, trigger physical things). But folks aren't contributing ideas along those lines yet.

fig. 4.49

through the UX of its mobile-optimized web page delivered from its embedded web server.

Participants will be able to enter their ideas into

The Log's web interface through their phones.

- Is the engagement "fun"?
- Does the engagement encourage multiple interpretations?
  - Does the engagement successfully downplay the facilitator's own authority?
  - Do all participants feel engaged, respected, and heard in this process?
  - Do participants recognize and appreciate the contributions by previous communities? Does this create a sense of connection between those communities?

### Collecting Ideas (Ideation)

*Duration: 1-2 hours of in-person ideation, followed by asynchronous idea collection through interface installed on The Log (up to 1 week).*

In this phase we collect ideas from the participants on how we could change The Log together. This ideation session is aided by The Log itself, which is initially configured to participate in this process

```
keylogger.service ×
units > keylogger.service
1 [Unit]
2 Description=Service to log keystrokes and do something when we think it's a barcode scan
3 Documentation=see my github
4 After=network.target
5
6 [Service]
7 Type=simple
8 PIDFile=/var/run/keylogger.pid
9 Restart=on-failure
10 RestartSec=4
11 ExecStart=/home/pi/loginlog/scripts/startlogkeys.sh
12
13 [Install]
14 WantedBy=multi-user.target
15
```

fig. 4.50

### Documentation possibilities:

- Audio/video recording if appropriate
- Live recording directly onto The Log itself
- UI of The Log recording answers to internal database
- Preserving and/or photographing facilitation artifacts (whiteboards, post-its, etc.)
- Post-presentation surveys
- Post-presentation interviews
- Post-activity reflection journal

### Independent variables:

- Duration of activity
- Location of activity
- Facilitation style
- The involvement of The Log in the ideation

*"I actually know there's something you did though in the first meeting we did that did make me uh see things differently he had this post-it stack and every time somebody said an idea you'd write it and just put it on the table and at one point like it was covering the table because people are like oh you could do things that in a normal conversation we would have said and somebody would have said something else and we would have just forgotten and at one point we're looking at oh yeah you said that one hour ago and like we talked about it for like 12 seconds and uh but the fact that you were like they're documenting everything while we were talking uh just very quickly it after we realized wow we did bring up a lot of ideas and a lot of them didn't make sense but maybe some of the things we put on there would not have been there if we hadn't realized hey 'yeah you said that'" - Alexandre Adam, SteamPunk, 'Tire toi une bûche' salon*

fig. 4.51

- Physical appearance (this will change as the result of engagement by prior communities)
- The Log user experience (combination of software, physical computing hardware, embedded webserver, WiFi access point)
- Methods for collecting ideas (e.g. via Log, whiteboard, informal conversation, etc.)

**Q: What other useless features could we add?**  
**Snicker doodle: A hot chocolate dispenser to make people's feet sticky**  
(logged at 2022-11-25 12:50:45)

fig. 4.52

**Dependent variables for evaluation and improvement/iteration:**

- Are we collecting all the ideas that surface?
- Does the collection process spur more ideas (i.e. public brainstorming effectiveness)
- Are the ideas high-quality (e.g. creative, innovative, implementable)
- Do all participants feel engaged, respected, and heard in this process?
- Is the process “fun” for the participants?
- Are participants aligned with the sense of humor in the work?

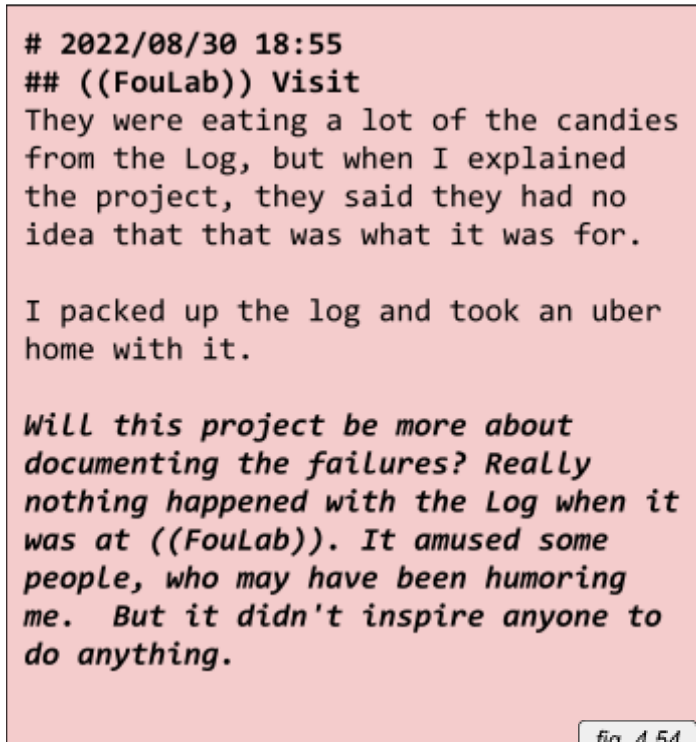




## Picking Ideas

*Duration: 1-2 hours of in-person discussion, followed by asynchronous voting through interface installed on The Log (up to 1 week).*

This phase is where the group selects the ideas to be implemented. It is likely only a small subset (maybe one or two) of ideas from the ideation session will actually be implemented, this phase creates a high risk for disappointment and losing engagement from participants



# 2022/08/30 18:55  
## ((FouLab)) Visit  
They were eating a lot of the candies from the Log, but when I explained the project, they said they had no idea that that was what it was for.  
  
I packed up the log and took an uber home with it.  
  
*Will this project be more about documenting the failures? Really nothing happened with the Log when it was at ((FouLab)). It amused some people, who may have been humoring me. But it didn't inspire anyone to do anything.*

fig. 4.54

whose ideas are not selected.

### Documentation possibilities:

- Audio, video recording
- Building selection process and tracking into The Log's UI
- Preserving and/or photographing facilitation artifacts (whiteboards, post-its, etc.)
- Post-activity surveys
- Post-activity interviews
- Post-activity reflection

journal

### Independent variables:

- Log UI
- Facilitation process and style
- Selection methodology
- Duration

### Dependent variables for evaluation and

### improvement/iteration:

- Do the ideas selected end up working out?
- Are better ideas missed?
- What kind of ideas get selected?
- Do participants feel good about the selection process, even if their ideas are not selected?
- Is the selection process "fun" and in the spirit of playfulness and humor intended by The Log?



# 2022/09/04 18:48  
## Steampunk Montreal visit

Went great!  
approx 1:30pm-5:30pm

4 people in attendance, all friends through Steampunk activities.

We met in the basement workshop of one member

I emphasized the building of spaces for people to come together and make things.

How I ended up in montreal to get a design degree, and wanted to find ways to connect with creative communities, to find a way to meet lots of them and make things together, and a project like login log seemed like a good way to do that.

Also that I didn't want to make a "useful" object, but that a useless object seemed more fun.

They seemed to really connect with the idea of making a thing that others would respond to through their own changes.

They mentioned exquisite corpse.

They also liked the idea of making something that set up future engagement to add to it. Eg, add a needle gauge with a servo to control it, but don't implement WHAT it does.

Similarly for a clockwork mechanism with a little "hammer" that could activate a switch on the pi, but don't decide what to activate.

Then we brainstormed lots of ideas for things to do.

I wrote their ideas on post-its and put them on the table as they talked. I was involved in the ideation, but pulled back a little bit, and tried not to organize them or "run" the meeting.

One of them pulled out a box of clock parts, to think of way a spring-action clock could be incorporated

One participant was a coder and interested in doing some computer vision stuff, and was comfortable with the idea of doing the physical computation integration

another more into design and fabric, wants to make a furry enclosure for the rpi and speakers.

Another loved the humor aspect of it, wants to put wheels on it, that only allow it to go in a circle

Another wants to provide more puns, in French

They did like the computer voice telling puns. that inspired a lot of the ideas, and reinforced the nonsense aspect of it. I'm glad I implemented that before this meeting.

They seemed to agree that it'd be easiest for each person to work on their own idea, exchanging a little help as needed. Then we'd reconvene to implent the ideas that were ready

They set up a facebook conversation to continue planning and execution of their ideas.

fig. 4.55

# 2022/11/09 : Orders arrive!

A bunch of rpi accessories I ordered arrived, and I'm starting to play with them. First up is the PiJuice Raspberry Pi power system. It's my hope that this will help me power all the various pi accessories, without the pi itself losing so much power that it drops SSH and wifi connections. Fingers crossed.

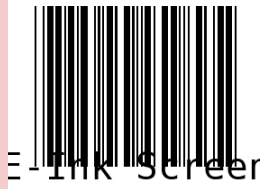
The modularity of this system, and the ecosystem around it, makes it very easy to spend a lot of money and be a good consumer in the pursuit of DIY success.

fig. 4.56

## Implementing Ideas

*Duration: 1-4 weeks*

In this phase the selected idea(s) for changes to The Log are implemented. This phase is likely to take place over the course of several weeks, the bulk of the engagement. The ideas will be implemented in the space, using the tools of the space, with some level of engagement from the community. Selected ideas should be scoped to be completed within the duration of the engagement, and with the skillsets of the participating community.



## E-Ink Screen

**Created by and with: Don**

**A little bit about it:** What the heck is the E-Ink Screen for?

**More about it:** The E-ink screen. You can touch it! it looks nice! What do we show on it? We don't know! Maybe something useless, something idiotic? A blank slate can inspire some creative ideas. A blank slate can also inspire blankness. A word on "idiotic" - Mike Michael wrote this great text, "What are We Busy Doing?: Engaging the Idiot" - and in it he uses Isabelle Stenger's concept of the "Idiot" - A "Conceptual Character who resists the consensual way in which the situation is presented and in which emergencies mobilize thought or action." (Stengers 2005, 994) The Idiot demands that we slow down and consider just what they hell we're doing here. So that's what I mean when I say "idiotic," please don't be offended :) So, E-Ink screen, what the hell are you doing here? What are WE doing with an E-Ink screen anyways? And why did I include this important bit of critical explanation in the description of the E-Ink screen? How many people are going to see me use the word but not read this explanation?

**What I'd say:** I don't know what the Ee Ink screen is for. Do you have any ideas?

**Matters of Inventive Concern-Making:** open-ended features, techno-solutionism, idiotic objects

## Documentation

### possibilities:

- Audio/video recording if appropriate
- Live recording directly onto The Log itself



Another glamorous angle of the E-ink Screen

Secret Code:EINK (entered at 2023-04-21 20:26:38)

- Preservation/photography of implementation artifacts (diagrams, designs, digital files, code, plans, etc.)
- Post-activity surveys
- Post-activity interviews
- Post-activity reflection journal

### Independent variables:

- Level of involvement by facilitators and community (e.g. community does all the work, facilitator does all the work, or they work together)
- Planning style (e.g. formal project planning/scheduling, informal 'hacking' style, etc.)
- Time commitment from facilitator and community

### Dependent variables for evaluation and improvement/iteration:

- Do the implemented ideas "work"?

# 2023/01/17 21:01 : The Loggins Login  
## visit debrief

I transported the Log to ((FouLab)) in a large "Beach cart" with big wheels from the snow and slush. 35 minutes to get from concordia, 45 minutes to get home from ((FouLab)).

People seemed a lot more inclined to engage with the Log now that it has more nonsense parts added

The dial didn't work at first, because in the trek through the snow the ground wire became detached.

Folks scoffed at the QR code, and the idea that it was not a secure thing to do to scan an unknown QR code.

Understanding the "connect to WiFi, then log in to webpage" 2-QR code connection method is still confusing for lots of people, especially when it doesn't work due to the AP not working, the webpage being slow, or the user's phone (usually android) not trusting the connection

They thought it was funny when I suggested that the Log itself has a lot of insecurity (social), so only an insecure phone (without strong security enabled) would be able to connect to it.

There were a lot more people at ((FouLab)) this night. When I showed up, several people said "oh, THIS is the Login Log!" so apparently it had been discussed in advance of my arrival.

fig. 4.59

# 2022/10/13 09:57

Submitted a new ethics protocol, to allow "installations" where people interact with Log anonymously.

I need to get SOME sort of feedback-iteration cycle going. Feeling nervous about the lack of contact btw log and people. Folks not returning emails. And nervousness breeds insecurity breeds isolation, which is opposite of what log needs...

fig. 4.58

- Does the implementation process keep the community interested/engaged?
- Is the implementation process "fun" and in the playful and humorous spirit of the project?

### Repeat Engagements

To address some of the questions of this project regarding the establishment of weak ties between communities, repeat engagements with makerspaces will be executed. In these repeat visits, we will see how communities react to changes to The Log made by other communities, and respond to those communities' responses to *their* changes.

## Documentation

### possibilities:

- Audio/video recording if appropriate
- Live recording directly onto The Log itself
- Post-activity surveys
- Post-activity interviews
- Post-activity reflection journal

### Independent variables:

- Structure of the repeat visits (single community or bringing multiple communities together)

### Dependent variables for evaluation and

### improvement/iteration:

- Does the return of The Log have a positive impact on the community?
- Does this community feel more connected to, or have positive feelings towards, other communities that The Log has engaged with?
- Are new ideas implemented at the repeat engagement, and how do they differ from the previously implemented ideas?

## Reflection and Modification

*Duration: 1-2 weeks*

In between each engagement the researcher will engage in a reflective process to address any problems with the implementation of the other phases, and make modifications as necessary. The documentation for each phase will be reviewed to determine if the dependent variables are being optimized based on our choices in regards to the dependent variables. Modifications to the independent variables may be made, and additional independent variables and/or documentation methods may be developed as necessary.

# 2022/10/18 : Art Hives

**\*\*reflection:\*\***

At this point in the project, I'm feeling less committed to specific processes and principles, and more desirous to just get The Login Log in front of people, and to see that changes happen to it. I'm more comfortable making my own changes, with the goal of:

- changes that make people more likely to notice and interact with it
- just to get myself into spaces, DOING something, so that I FEEL better about the project
- Meeting people, whether or not they do something with it.

At this point, I'm looking for "Interactions that leave a mark on The Log."

In which case, I may start being less specific about working with "communities" (as they are very hard to convene/interest), and less particular about making OTHER people do work on it.

Perhaps it's a matter of "getting things started"?

fig. 4.60



The researcher may involve past participants, faculty advisors, or other experts to aid in this reflection and improvement process.

## Documentation

### possibilities:

- Reflective Journal
- Recording of reflective conversations with others
- Other reflection and decision-making artifacts (whiteboards, card sorts, mind-maps, etc.)

### Independent

#### variables:

- Duration of reflection process
- Involvement of outside parties
- Documentation brought to bear on the questions
- Reflection and decision-making tools used (card sorts, mind-mapping, etc.)

### Dependent variables for evaluation and improvement/iteration:

- Does this reflection process lead to changes that make a difference?
- Are we collecting the right kind of information to effectively reflect and make better choices?



A patch with a cartoon log with wifi, attached to the fur tribble on the Login Log



A patch with a cartoon log with wifi, being created on a Tajima embroidery machine  
Secret Code:PATCH (entered at 2023-04-21 20:12:58)

### AI WIFI PATCH

**Created by and with:** Log Liaison and the Digital Embroidery Lab

**A little bit about it:** AI Prompt: Line drawing of a happy log with wifi

**More about it:** The design for this patch was created by providing DALL-E with the prompt "Line drawing of a happy log with WIFI." So in a sense this is the most participatory object on The Login Log; countless artists (unwillingly) provided the source material that DALL-E used to generate this image. On the other hand, I didn't creatively collaborate directly with a community to add this features. Am I "overspilling" my own research methods? Is that part of the point? The humans in the Digital Embroidery Studio helped me to teach another kind of robot - the (very expensive) Tajima embroidery machine - how to turn the design into a patch.

**What I'd say:** AI is all we need, it made the design for this awesome patch. Obey your robot overlords.

**Matters of Inventive Concern-Making:** technical inter/co-dependencies, techno-solutionism, maker privilege

fig. 4.61



## Contributions and Future Directions

# 2023/04/04 08:48 : Thoughts I had while dancing.

At Silly Sexy Awkward Dance Party, I started to assemble some coherent thoughts on what The Login Log has meant to me. I assumed I would remember them later. I don't think that happened.

But maybe if I dance some more it will come back to me? shit, what was I thinking of? ...

fig. 4.62

For personal and professional reasons, I'm deeply interested in friendship and connection within and between makerspaces, and how *making together brings us together*. If we look at makerspaces as *communities of practice*, we can see the value of co-making activities to strengthen social bonds and improve wellness. Additionally, if we can engage makers from *different* makerspaces in collaborative projects, we can build the kinds of *weak ties* that increase resilience and creative opportunities. But what should we make? Considering the variety of makerspaces and communities, it's useful to look for objects to make that look like Star and Griesemer's "Boundary Objects," which can be

legible to participants with diverse points of view. One class of makerspace objects that fit our criteria are "Useless Machines," which are popular in many makerspaces in spite of, or rather because of the fact that they serve no purpose. Mike Michael might call these "Idiotic Objects" for how they make us slow down and consider why we make in the first place.



A glass jar with a metal lid attached to the Side of the Login Log

Secret Code: JAR (entered at 2023-04-16 22:03:46)

### Remnants Jar

Created by and with: Login Log @ CUCCR Gang

**A little bit about it:** This jar is for remnants and moments of Login Log visits  
**More about it:** Sometimes we do a Login Log activity and some bits and bobs are left behind, little reminders of the fun we had. Tiny cookies, salty licorice, failed barcodes, wood flakes, etc. Toss it in the jar. Or take something out for yourself, there's no rules! Who knows if we'll know what it meant when next we open the jar...

**What I'd say:** Open my jar. Take a memory, leave a memory

**Matters of Inventive Concern-Making:** incomplete documentation, alternative record-keeping

fig. 4.63



Taking all of these ideas together, it's exciting to consider how a collaborative project to build a nonsense object, progressively through multiple makerspaces, can build valuable



connections and strengthen communities. Concepts from *ludic design* encourage us to make sure that this project supports multiple perspectives by de-emphasizing the researcher's own authority and blocking the expected interpretations of a technical object.

As this project is one of methodology development, the project plan explicitly emphasizes iteration, with reflection points built into each iteration to identify areas for improvement of key dependent variables. It seems likely that I will identify surprising outcomes, novel engagement techniques, and methodological weaknesses that are not obvious at the outset of the project. I have endeavored to leave ample room for these types of surprises to be incorporated into the project. I am therefore hopeful that this research creation work will lead to the development of a repeatable methodology that would be a unique contribution to the field of makerspace studies and ludic design.

[This concludes the annotated project proposal]

# Chapter 5 | Conclusion and Opportunities for Future Study

If the goal of this approach to project portrayal is to create “opportunities for inventive problem-making,” what kind of new problems might we glean from this text?

If we have been successful in “living with ambiguity and disconcertment,” then each reader has room to identify their own problems which could lead to new research. Some avenues for inventive problem-making that occur to me as I review this text include:

***Socially anxious technological objects: What is the relationship between social and technical insecurity? How does a technology present itself as “brittle”? Is that always a problem?***

Throughout this project, I worked on technological features that were difficult to maintain in operational order. Wires would get loose, power supply would fail, documentation would be insufficient, and software dependencies would conflict. Many of the technical features were implemented in ways that go against best practices for cyber security: easy-to-guess passwords, open networks, the web server running insecure shell commands, and in the case of the barcode scanner, actual key-logging software installed to track keypresses. Simultaneously, human encounters with the project often surfaced issues of social anxiety. Potential participants sometimes viewed the process with distrust, in particular the use of QR codes and the ethics consent form were barriers to engagement. When the Login Log was placed in public spaces, it would be frequently unplugged to silence the jokes playing through the speakers. In response, I made alterations to the system: first to put in a battery power supply, and then to change the voice to one I deemed more appealing. I also added a big red button to allow anyone to turn off the computer, which I posit as “vulnerability” both in the technical sense of “allowing unauthorized access to sensitive operations,” and in the emotional sense of “putting trust in others through sharing of intimate knowledge.” I think there’s something compelling about the conflation of technical and emotional insecurity, in that it may surface the human behind the technology.

***When and how does the method of research and dissemination overshadow the object and the process itself?***

In some communities I found that presenting participants with a lengthy consent form to sign chilled the engagement, leading some participants to disengage. I related this to the implementation of the barcode system, which was introduced to expose more information about the Login Log’s features through a playful interface, but at the same time drastically changed the appearance of the Login Log, due to being covered in barcodes. In both cases, an effort to pursue traditional research-creation goals (ethics, dissemination) creates conflicts with the aesthetics and sociability of the project.

***Can the method of research dissemination be the object itself, even as it continues to change? If so, how is the history of that change portrayed?***

The Login Log went through many iterations; sometimes (as in the case of the Knitted Booties on The Log's Old Feet) features were added, then replaced later (with the Wheels that Go Round). Other times parts fell off a feature and became a new feature themselves (as with the Lost Little Flower). In The Log's final iteration, it became so covered with additions that the original form was barely visible. Meanwhile, features were added to the Login Log along the way, such as the barcode system, features database, and ChangeLog project diary, whose goal was to document the features and the story of The Log. The ability of an object with a built-in computer to document its own changes is interesting, but creates a tension between documenting the object as it currently stands, and documenting it as a history of change. If a feature changes, what happens to its old documentation? Is it changed to reflect the new state of affairs, or appended to, to connect the present to the past?

***Can an obvious gap in documentation be useful, by pointing to a larger matter of concern?***

In any research-creation, it's impossible to capture *all* information, from *all* perspectives. It is possible, however, to at least acknowledge those gaps – to point to them as sites for additional investigation, rather than concealing them for the sake of a tidier narrative. Is it therefore sometimes useful to leave *obvious* gaps in documentation, especially in a messy methodology?

***How do we study the non-participants of our studies? What responsibility do we have to them?***

As I pursued participants in this project, many people declined to engage, sometimes directly and in-person (in particular when presented with an informed consent form), and other times indirectly (through non-response to emails). As the project progressed and the Login Log became more “obnoxious” (telling jokes in public spaces), people actively *participated in non-participation* by unplugging the Login Log. I developed features like the battery power in direct (possible hostile) engagement with these non-participants. Considering how much of our engagement with corporate technology is on terms other than our own, our relationship as technology designers to unwilling participants merits deep exploration.

***What are the possibilities when we “design to repel”?***

The Login Log, in its effort to get people to notice and engage with it, sometimes becomes irritating, leading people to unplug it or complain about the noise and mess it produces. In a world that emphasizes “seamless” technology design, how could a messy, annoying

technology draw attention to that which seamless technology conceals? Can it cause us to slow down and reflect on what we are actually doing?

## Opportunities for Future Study

Upon reflection, it's clear that early decisions in some of the material qualities of the project had significant impact on how it played out. The fact that the Login Log was a large, heavy wooden object led to particular types of material engagements: it was easy to attach relatively flimsy "features," which made it hard to transport; it was difficult to add motion based features, since once installed, the Login Log was unlikely to move much; most features appeared as "adornments" rather than really changing its fundamental nature. It would be interesting to see if different types of "starting objects" would lead to significantly different outcomes. For example, would starting with a large stuffed animal lead to more anthropomorphic features? Would starting with a jacket or cloak engender more "smart textiles" types of features? Each of these starting objects could have the same core technology (website, login page, features database, etc), which could be refined to streamline the Login process, perhaps leading to more opportunities for participatory design on the tech side.

Considering engagement styles, I would consider more "workshop-based" encounters, where skill-building is coupled with more structured opportunities for nonsense feature development. As makerspaces are often considered spaces for STEAM-based learning, this type of framing might increase the likelihood of productive collaborative design sessions.

## Final Words

The Login Log project began with questions that were never answered. Because I diverged from the initial plan, it's hard to draw a definitive conclusion vis-a-vis my initial research questions. However, in the process of pursuing the interests that drove me to begin this project (playful design, human encounters, creative collaboration), divergent questions were pursued in a making-based discourse that included technology, people, materials, and emotions. Though not entirely in the way that I expected, I still connected with creative people in groups where we made nonsense changes to a nonsense object. These engagements brought together people who had never met, to make a lasting change to an object that celebrates their work. In that sense, the Login Log has done its job. The greatest success of this project is the creation of a useful mess, an idiotic process that uses humor and nonsense to inspire future explorations of sociability and making through idiotic design.

And I made some friends along the way.



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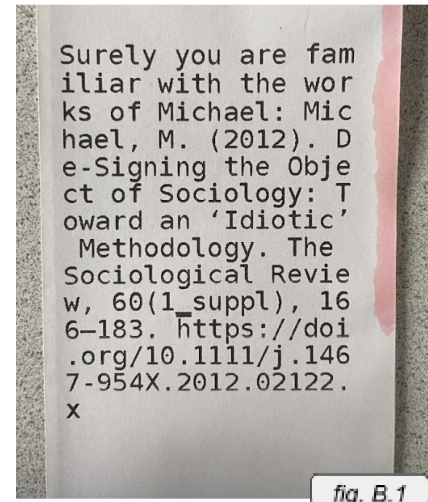


fig. B.1

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