We WILL facilitate discussion and imagination around sex; we WON'T be covering sexualised imagery.

We want to ensure everyone feels comfortable and included in this shared environment. Before we start, this moment is an opportunity to check in yourself or your guardian before we continue and make a call about how or whether you would like to experience our presentation.

This talk is going to be archived, so you will be able to view it at a later time if you so wish.

Be Considerate
Be Respectful
Embrace Curiosity.
Be mindful of the needs and boundaries of others.
Acknowledge the difference between intent and impact.
Make no assumptions.
Use all-gender inclusive language.
Confront harassment and reduce harm.
Embrace your mistakes, then, move forward.
What’s the Buzz About?: The Rise of Open, Personal Sex Tech

LAURA LYTLE + ALICE STEWART
LAURA LYTLE

🌴 Los-Angeles based EE

🤠 Former drone wrangler at USC & NASA's Jet Propulsion Laboratory

📝 Sex tech design blogger

👀 Enticingly hireable...

+ Website: Laura.dev
+ Blog: InsideSexToys.com
ALICE STEWART

+ Amsterdam / London-based
+ Founder of Touchy-Feely Tech
+ Creative technologist & lecturer (Royal College of Art, University of the Arts, School of Machines)

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AGENDA

+ Hi!
+ State of the Industry
+ What Matters?
+ Spotlighting the Open Source Sex Tech Scene
+ Where Open Source can help
+ The Future…
WARM UP

+ When you think of DIY sex tech, what comes to mind?
  + Is it messy?
  + Is it sexy?
  + Is it safe?
  + Can you discuss it with a friend?
  + Who is it for?
What the press thinks

Hackers could access smart sex toys and burn users by 'weaponising' devices

BUZZING! Sex-mad geeks create ‘robo vibrator’ that learns how to give ‘perfect orgasm’

This Animal Crossing-Enabled Buttplug Will Let You Hook Up In-Game

Internet-enabled male chastity cage can be remotely locked by hackers

It's the intended use case, just not the intended user

By James Vincent | Oct 6, 2020, 11:32am EDT
STATE OF THE INDUSTRY

+ Influence of Open Source on every scale

Small businesses
- The Nogasm
- Space Buck's Double-Oh
- Body Interaction Bi2
- Grassroots communities

Corporate
- Vibio Toys
- Frida: A Vibrator You Control From Your Phone

Lora DiCarlo

... and some things that have been around forever
+ Having fun! Engaging with the making process opens up a healthy space for exploration.
+ Innovating freely in an industry still rife with startups and corporate churn.
+ Serving the diversity of human identities, imaginations, or bodies out there.

“...designing a vibrator is not just about designing the shape and functions of the object itself, but about designing a space for exploration, for sharing knowledge, for asking questions, and for demanding a respectful and open attitude to a diversity of sexual desires and experiences”

— Marie Louise Juul Søndergaard, Staying with the Trouble through Design: Critical-feminist Design of Intimate Technology (2018)
An open source community that just saw the reinstatement of Richard Stallman to the FSF board must put its own house in order and actively reject the use of sexuality as a weapon before attempting to interface with it as a productive tool.

Stakeholders hail from vulnerable demographics, and bad experiences leave a lasting mark.

“foster technological knowledge and encourage research that is accessible, collaborative and respects user freedom”
— Open Source Hardware Association
+ qDot and buttplug.io: Open Source Sex Toy Control Software

+ Entry point to Open Source Sex Tech community.

+ "Sex toy control standard" to encourage inclusive approaches.

+ Emancipation of Sex Workers & Cam Models.

+ Critical research for DIY and mass-manufactured products alike.

"We want to help these communities build their own tools, they're the ones with the experience to take the tools and build what they need."

— Here's Why We Need More Open Source Software For Buttplugs (Vice)
**SPOTLIGHT**

+ Kinky Makers Community
  + Working collaboratively on a number of DIY & Open Source Sex Tech projects.
  + Open Source Sex Machine (OSSM)
  + Deepthroat Trainer
  + Active Discord and growing Wiki of ideas

“My goal from the beginning has been to provide a place where people can discuss and try new things. I know the one thing that helped me develop my talents was experimentation. I have always found local hackerspaces too restrictive, and often have a high barrier to entry.”

— James from Kinky Makers
WHERE OPEN SOURCE CAN HELP

+ Accessibility
+ Security
+ Inside Sex Toys-- forcing closed-source wide open
+ Sex tech objects that people care about and feel connected to are sexier
+ Tech as a tool for destigmatizing and exploring sex
Framing the design process as fantasy or speculative helps to bring down barriers of what we expect from our tech.

Desire to be “more” for a partner, departure from genital stimulation, body augmentation and extension, tackling societal challenges.
WHAT WE WANT

+ Open source as table stakes for companies selling IoT hardware.
+ Acceptance of sex tech in tech & investment spaces
+ Open source community were ALL people feel safe enough to exist and make sex tech.
+ Mutual awareness between DIY and OSHW
+ Some really wild stuff we can neither imagine nor show ;)

Formlabs White Paper: Dame Products
WHAT DO YOU WANT?
**HOW YOU CAN GET INVOLVED**

+ Touchy Feely Tech Hackathon!
  + hack.touchyfeely.tech
+ Stomp some bugs for Buttplug.io!
  + github.com/buttplugio
+ Join a Discord!
  + Kinky Makers
  + Touchy-Feely Tech [https://discord.gg/Aqt6dfjt](https://discord.gg/Aqt6dfjt)
  + … and many more
+ Peruse a Subreddit!
  + r/bdsmDIY (18+)
Thank you!
The following slides are random/from the old deck but keeping just in case :)
DIY Vibrator kits & workshops

TOUCHY-FEELY TECH

ALICE STEWART

+ DIY Vibrator kits & workshops

SEX

TECH

EDUCATION
TOUCHY-FEELY TECH

Before you get started...

Battery is a form of energy, resulting from the movement of charge stored in the battery. It is a source of potential energy that can be converted into electrical energy.

Battery + Switch + Circuit

Components:
- Battery: A device that stores energy and releases it when needed.
- Switch: A component that controls the flow of electrical current.
- Circuit: A complete path for the electrical current to flow through.

How to assemble your kit...

1. Battery: Connect the battery to the circuit. Make sure the battery is facing the correct direction.
2. Switch: Add the switch to the circuit. This will allow the current to flow when the switch is closed.
3. Circuit: Complete the circuit by connecting all the components together.

VIBRATION STRENGTH

The higher the resistance, the longer the vibration will last.

RESISTANCE

The higher the resistance, the longer the vibration will last.

CONNECTIONS

The fully assembled circuit contains a power and electrical connection between the two sides.
Framing the design process as fantasy or speculative helps to bring down barriers of what we expect from our tech.

Desire to be “more” for a partner, departure from genital stimulation, body augmentation and extension, tackling societal challenges.
Using Sex Tech as an example of intimate tech, however it's worth noting that Sex Tech is not the only type of intimate tech.

Design approaches evolve with reducing limitations of technology.

- Vibration is the main type of stimulation.
- Handheld, phallic shapes.
- Non-binary approaches.
- Hands-free and wearable body extensions.
- Remote controlled.

33,000
1880
1930
1940
1950
1970
1980
1990
2000 - present day
FACILITATING (BETTER) INTIMATE INTERACTIONS

+ Exploring what technology’s role in human intimacy should or could be
+ Using remoteness as an opportunity, not a hindrance

butplug.io software integrating with Animal Crossing

Aurélien Fache: Connecting a vibrator to the ISS API
(Erobots are including but not limited to)...
“erotic virtual or augmented entities, chatbots, robots, avatars, as well as their enabling interconnected, multi-layered, and multi-agent systems.”
— Simon Dubé & Dave Anctil, Foundations of Erobotics (2020)

Can critical design and maker practises, including customisation and collaborative design, offer a new perspective on what “makes” an erotic agent?

“One of the most powerful human capabilities relevant to designers is the intimate incorporation of an artifact into bodily practice to the point where people perceive that artifact as an extension of themselves; they act through it rather than on it”
**SPOTLIGHT**

- The Mod by Comingle.io
- Patents suck
- As with any open source product, you still need good UX