Designing Trans Technology: Defining Challenges and Envisioning Community-Centered Solutions

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ROADMAP TO PRESENTATION

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ABSTRACT:

This article discusses the challenges that transgender and non-binary people face, including social inequities and discrimination, and how technology can help address these challenges. The authors conducted participatory design sessions with 21 trans people to understand their most pressing challenges and involve them in the design process. The article details four types of technologies that trans people envision: technologies for changing bodies, appearances/gender expressions, safety, and finding resources. The study found that centering trans people in the design process enabled inclusive technology design that prioritized sharing community resources and connection between community members

Population targeted

The article targets anyone interested in understanding the challenges faced by transgender and non-binary people and how technology can help address some of those challenges. It particularly focuses on the experiences of trans people and includes their perspectives on technological solutions.

Goal of the study

- The study aims to understand the challenges faced by transgender and non-binary individuals and how technology can be designed to support their needs.
- Technology can be a tool to improve the lives of trans people both day-to-day and in the long term.
- The study emphasizes the importance of a community-driven approach to design and prioritizes the sharing of community resources and connection between community members in the proposed technological solutions.

Literature Survey

- The term "trans" refers to individuals whose current gender is different from their gender assigned at birth.

- Non-binary genders are those that exist outside of the binary man/woman genders.

- The study seeks to understand challenges faced by trans individuals and communities, and how technology can be designed to support them.

- There is a need for more inclusive and supportive technologies for trans and non-binary individuals. In this study, the authors aim to address this need by working directly with the trans and non-binary community to identify challenges and develop potential technological solutions.

Research question 1:

How can technology be used to build community or connection for trans people, and what are some examples of such efforts?

- Social media.
- Online forums
- Dating apps
- Virtual events
- Support groups

Research question 1 : Continuation

Some examples of efforts to use technology to build community and connection for trans people include:

- The Transgender Map

- Transgender Pulse

- The Transgender Law Center

- Transgender Day of Visibility Livestream

Research question 2:

How can technology be used to improve safety conditions for trans people, and what examples exist in this regard?

- SafeTrek

- Trans Lifeline

- Legal Aid Society's Transgender Legal Defense & Education Fund (TLDEF)

- Gender Spectrum Lounge

- Callisto

Research question 3:

What are some anti-trans technologies that cause harm to trans users, and how can technology do better to support trans people?

Examples of anti-trans technologies causing harm to trans users:

- Facial recognition software
- Dating Applications

To support trans people, technology developers should:

- Prioritize inclusivity and actively work to create products that do not harm marginalized communities.
- Seek input
- Create adaptable and customizable

Targeted
Technology

Safety

Identify

Resources

Community

Games

Internet

Technological solutions :

- *technologies for Changing Bodies*

- Body-sharing

- nanobots:

- Shifting clothing.

- Augmented mirrors/glasses.

- Buddy-finding technology.

- *Technologies for Finding Resources*

Technologies for Changing Bodies

- Participants collaborated in a design Many design ideas focused on using technology

- Healthcare affordability and accessibility

- The body-changing laboratory

- The design idea provides insight into the need for greater autonomy in healthcare and the potential for technology to improve trans lives.
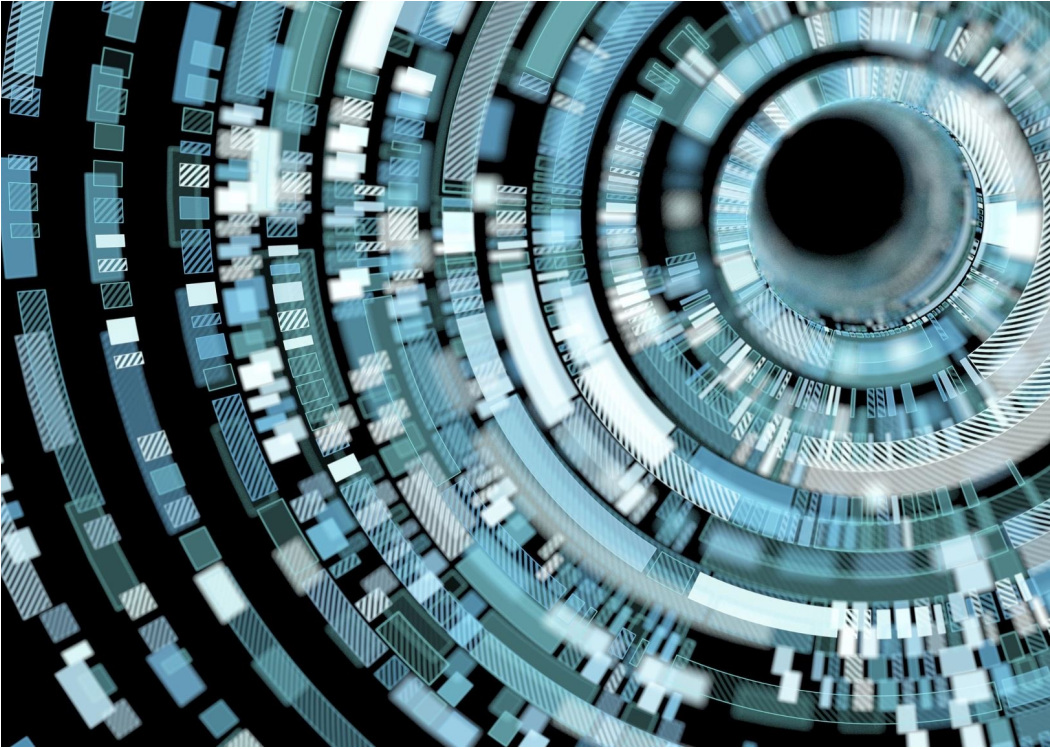
Body-sharing

- Ryder proposed a community-based body-sharing process as an alternative to machine technology for changing one's body and affirming one's gender.

- The technology would transport unwanted body parts to those who need them, with a funding model built into the design, fully funded by the government.

- The design addressed challenges such as negative experiences with healthcare providers and the inability to afford insurance.
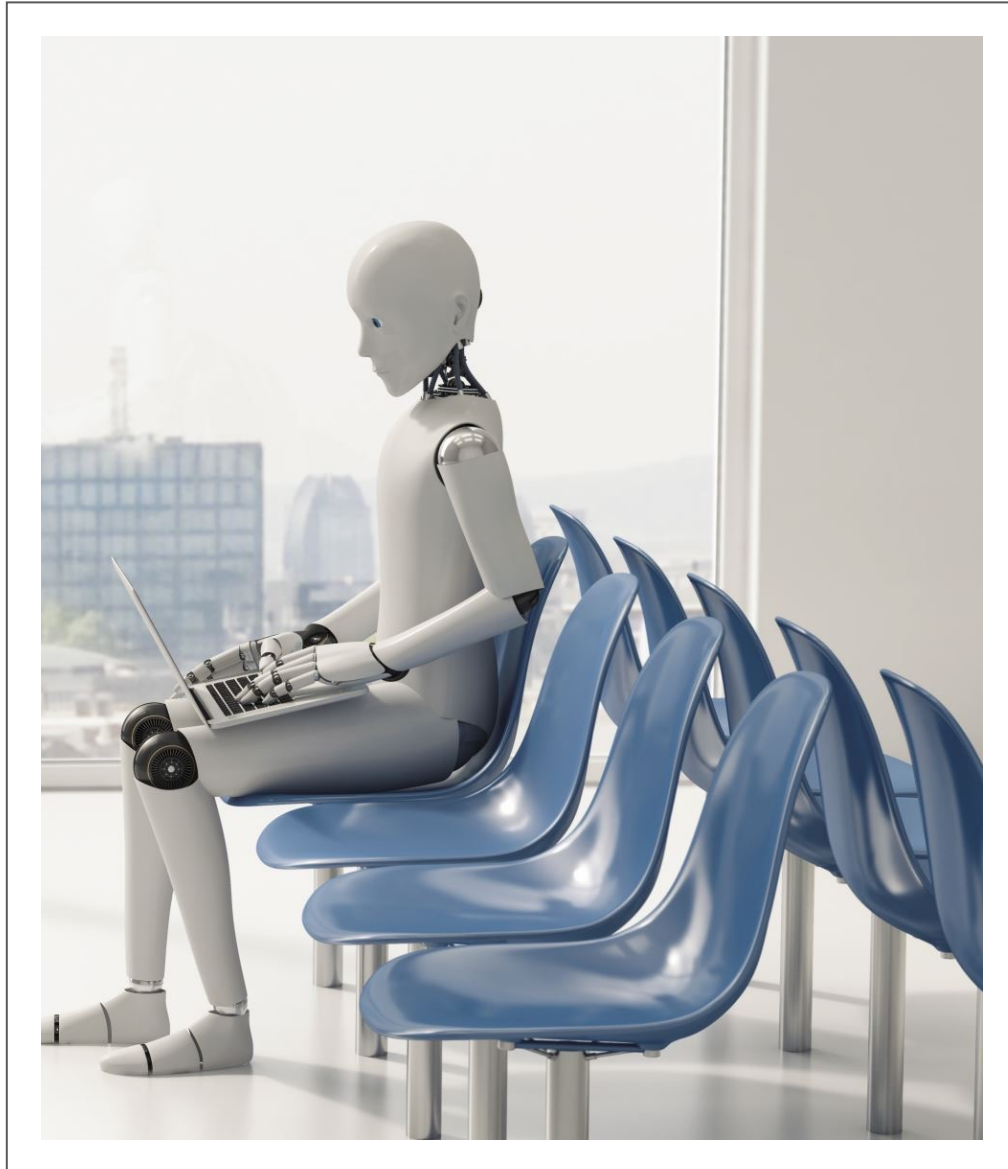
nanobots:

- Nanobots design to address medical diseases affecting trans and non-binary people, emphasizing affordability and accessibility.

- Participants in the study grappled with historical effects of medicine on trans communities and came up with technology designs to address those effects.

- Participants tackled changing appearances and gender expressions through unique clothing designs, reality-shifting interactive mirrors and glasses, and other technologies for gender affirmation.

Shifting clothing.

- Participants had different ideas for wearable technology for trans people, including both digital and physical approaches.

- Some participants wanted to design clothing to address trans-specific challenges, such as tailored menstrual pads for trans men and non-binary people.

- idea involved a necklace with interchangeable pronoun labels that flash in certain colors when a person is misgendered, and a smoke screen canister for safety.

Augmented mirrors/glasses.

- Clothing designs were proposed Ideas included fluid wearable technology that changes appearance based on personal preferences, and transformable clothing that can be folded or manipulated to be a different shape.

- Augmented technology could also change people's experiences with others, such as wearing glasses that temporarily rid oneself of transphobia or other forms of discrimination.

- The sentiment of wearing technology that could temporarily rid oneself of harm or violence resonated with many participants.
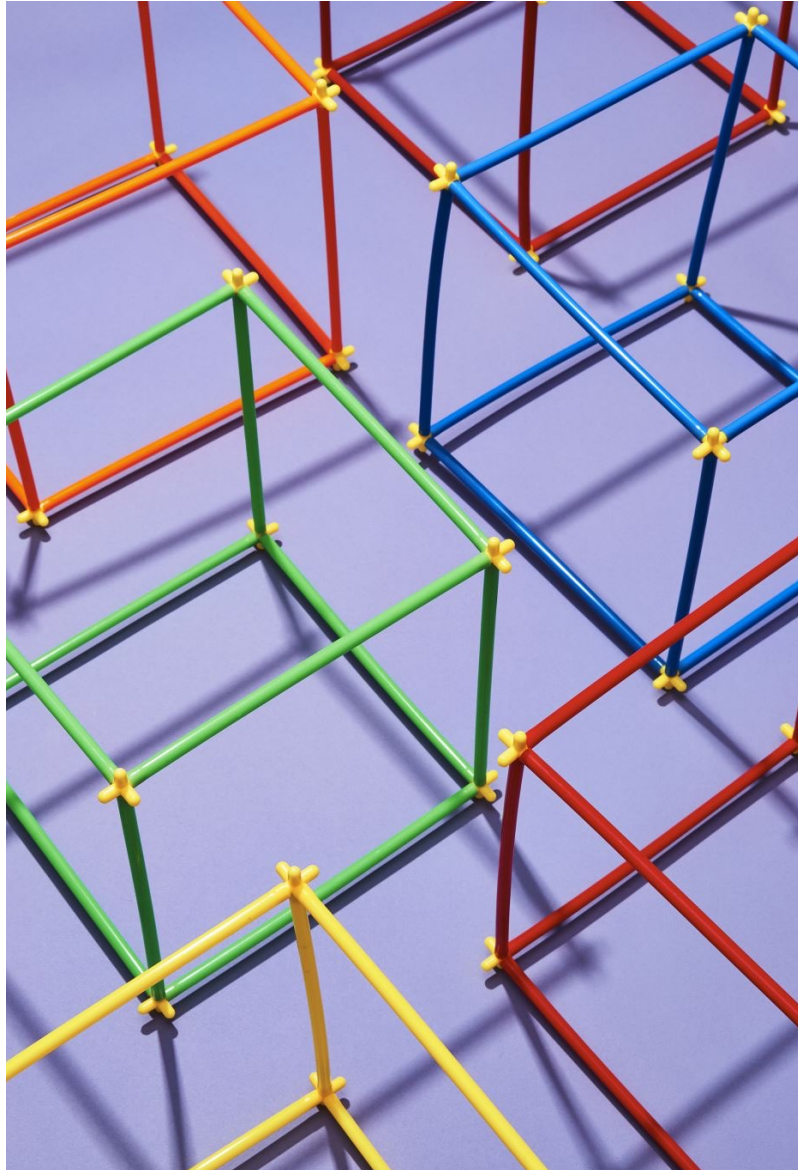
Buddy-finding technology.

- Participants conceptualized a buddy system app to help trans people find someone to accompany them in certain areas or situations.

- The app could help find trans-owned and trans-friendly businesses, as well as safety houses/spaces dedicated to providing havens from violence.

- Safety houses/spaces could also host relationship skills workshops and navigate inner-community disputes.

Technologies for Finding Resources

- Participants envisioned a "Trans Yelp" as a solution to the challenge of finding resources for the trans community.

- The Trans Yelp would offer an online space for trans people to rate and review local businesses and services and disseminate community-based knowledge.

- It would provide information on trans-friendly bathrooms, affordable housing, healthcare assistance, affordable food, and food pantries within food deserts.

- One group sketched a Trans Yelp focusing solely on healthcare resources and finding trans-friendly and trans-competent doctors, while another centered Black trans people with a URL called BTF.

Key aspects of Research design:
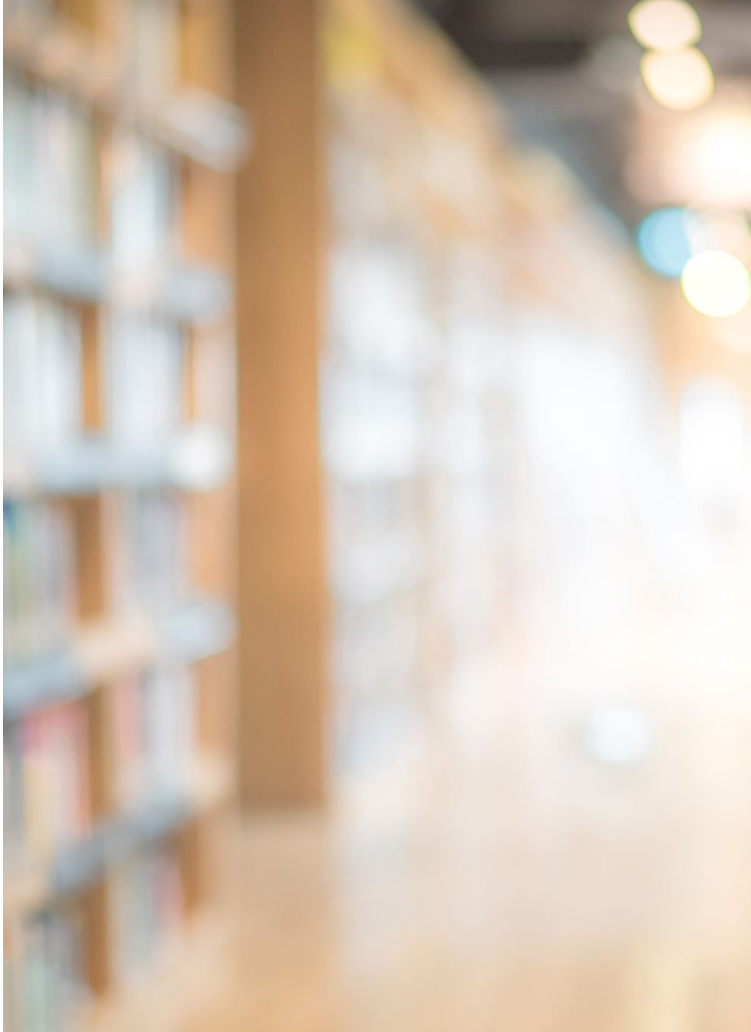
- The research methods used in this study are participatory design sessions and qualitative data analysis.

- Participatory design involves engaging the community in the design process to create solutions that meet their needs.

- Collaboratively generated ideas and sketches for technological solutions were created.

- Qualitative data analysis was used to analyze the data collected from the participatory design sessions.

Key aspects of Research design:

- The data was categorized into four themes based on the challenges faced by trans and non-binary individuals and communities: technologies for changing bodies, technologies for changing appearances/gender expressions, technologies for safety, and technologies for finding resources.

- The analysis also revealed that many of the solution ideas involved a community aspect, such as sharing community resources and prioritizing connection between community members.

Strengths:

Social technologies are important for people to integrate themselves into the world, understand their identities, and find resources.

Transgender and non-binary individuals face unique challenges such as gender transition and discrimination.

Technology is generally not created with the intention of including and supporting trans people, and this study aims to understand how technology can be designed to meet their needs.

The study conducted three participatory design sessions with 21 participants to identify challenges faced by trans individuals and communities and explore potential technological solutions.

The study contributes a community-driven categorization of challenges faced by trans people in the US and a set of ideas and sketches for technological solutions, divided into four themes: technologies for changing bodies, technologies for changing appearances/gender expressions, technologies for safety, and technologies for finding resources.

Many of the design ideas involved a community aspect, emphasizing the importance of community when designing for trans populations.

Weakness:

One weakness of this study is its small sample size. The study only included 21 participants from two U.S. cities, which may not represent the diverse experiences of trans individuals and communities across the country and globally.

Additionally, the study focused solely on the experiences of trans and non-binary individuals, without including the perspectives of cisgender individuals or other marginalized communities.

Another weakness is that the study relied on self-reported data, which may not always be accurate or reflective of participants' actual experiences.

Finally, the study's findings are limited to potential technological solutions, without addressing the larger systemic issues that contribute to the challenges faced by trans individuals and communities.

Conclusion

The study aimed to design for the challenges faced by trans people and communities by conducting participatory design sessions. Participants envisioned innovative technological solutions in various form factors, such as body-changing laboratories, buddy-finding applications, technologies to improve safety, and augmented mirrors and glasses that shift how a person views their physical appearance. These solutions fell into four categories, namely technologies for changing bodies, technologies for changing appearances/gender expressions, technologies for safety, and technologies for finding resources. The study advocates for a community-based intersectional approach to designing trans technologies to create positive change for trans people.

Personal Views

- People use social technologies to integrate themselves into the world and understand their personal and social identities and find resources that support them.

- However, most technologies are not designed to consider change and transition, causing difficulties for transgender and non-binary individuals.

- The study aims to understand the challenges faced by trans individuals and how technology can be designed to support their needs.

Personal Views

- Technology cannot solve social injustices, but it can improve people's lives in the short and long term.

- Many designs envisioned by participants involved a community aspect, such as sharing community resources and prioritizing connection between community members.

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Thank you