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Thinking and Designing Beyond the Jig-Seating Reimagined

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Abstract No.

Most chairs aren't designed to serve human bodies. This poster presents an innovative chair and table redesign project. The effort was intended to enhance comfort and functionality as well as aesthetics of seating at a table in public spaces. The poster content synthesizes the scholarly rationale and redesign principles used to craft a design for flexible seating at a table, illustrates the redesign of chairs and tables. The work then proceeds to forensically analyze the redesign to highlight what yet needs to be done to advance seating design for the full diversity of seated bodies.

Scholarly Support

Sitting is a fundamental human activity, occurring for many purposes, within diverse contexts including but not limited to rest, conversation, eating, listening, consuming culture, learning, navigation, producing, socializing, among many others. Curiously, contemporary seating in public spaces, adheres to standard chair design, "Seats are typically required to be between 16 to 20 inches (40.6 cm – 50.8 cm) tall and at least 18 inches (45.7 cm) deep. If backs are present on the seats, they typically are at least 14 inches (35.5 cm) high. If the seat has armrests, they should support the arms without raising the shoulders (https://www.dimensions.com/collection/chairs-seats).

Standard table height is usually **between 28 inches and 30 inches**, with chairs and stools measuring around 18 inches from floor to seat. Approximately 10 inches of space between the seat and the top of the table should exist for maximum comfort and spatial usage.

Enter, the impaired body, not simply as source for treatment and revision but as a challenge to standard design and impetus for innovation and creative redesign. Combined with disjuncture theory and the design adage of design for the extremes takes hold.

The theory underpinning the research: Disjuncture theory

In this theoretical framework, disability is redefined as the inability to complete a task.
The medical definition of disability as impairment is replaced with task failure, opening the floodgates for creative responses such as individual body and/or environmental rethinking and redesign.
Using this framework all disjunctured people are disabled, but not all impaired people are disabled.
Applied to seating, there are failures in seating in public places that disable all who are unable to sit and participate comfortably from a seated position.
A brain flip.

The process:
Forensic analysis and Redesign Principles

Forensic Analysis

An innovative thinking process with its name appropriated from criminal justice and engineering.

In computer science and cybersecurity forensic analysis involves a detailed investigation for detecting and documenting the reasons, culprits, and consequences of a security failure

In criminal justice the investigation focuses on the failure of a law or principle to be enacted.

In disjuncture theory, forensic analysis is an ongoing process that looks at failure as well, but focuses its lens on task failure, why can't a person access and complete a task.

Forensic Analysis Tools

1. What fails, why and for whom?
2. What does not fail and why not?
3. How can the failure identify a path or paths for change?
4. What is/are the process/es?

Redesign Principles

- Seamlessness-continuity
- Elegance-precision, quality without fanfare or opulence-replaces conspicuousness with belonging
- Proximity-central to the user
- Polyphony-many voices
- Skepticism
- Flexibility

What fails, why and for whom?

Standard seating angles, height and positioning fail the body that is too short, too tall or unable to sit at prescribed angles.
Standard table height follows in its failure as surfaces are not reachable.

What does not fail and why not?

For a flexible, symmetrical body of expected developmental height, chairs and tables, while they may pose discomfort, are accessible as is the activity that takes place at the seating location.

Redesign Models

Seamless, Flexible

Elegance

What continues to fail???
Who cannot see? Manipulate?
Hear? Sit?