IMAGE DESCRIPTION CAN BE FOUND ON PAGE 2 Recommended graphic size: 1650px x 2550px

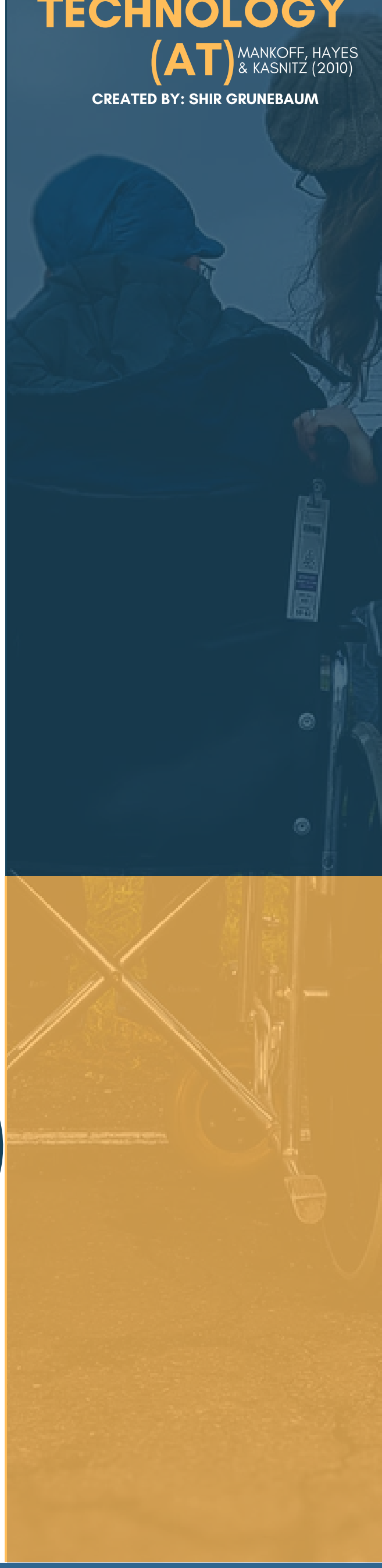
DISABILITY STUDIES

AS A SOURCE OF CRITICAL INQUIRY FOR THE FIELD OF

ASSISTIVE TECHNOLOGY (AT)

MANKOFF, HAYES & KASNITZ (2010)

CREATED BY: SHIR GRUNEBAUM



INFORMING AT DESIGN

MEDICAL MODEL OF DISABILITY

Recognizes that "the medical model may be pragmatically useful [for designers of AT] because it focuses on physical and functional limitations. These represent actionable challenges"

Recognizes that the goal of AT is to allow individuals to return to the "goal of normality"

SOCIOCULTURAL MODEL OF DISABILITY

Recognizes that a "person designing a piece of [technology], is, in some sense, defining who is disabled with respect to that [technology]"

Recognizes the importance of shifting from "cure to care"

POST-MODERN MODEL OF DISABILITY

Recognizes that it is essential to "privilege each individual's unique lived experience"

Recognizes that it is also essential to understand that "disability, illness, impairment, functional limitation, and bodily anomaly are separate but complementary issues"

UNDERSTANDING THE MODELS OF DISABILITY CAN INFLUENCE TECHNOLOGY DESIGN BY:

Urging designers to recognize that it is their "responsibility not to marginalize atypical users"

Urging designers to recognize that user's "needs may differ to the point that they are in opposition for each other" thereby requiring the use of inclusive design

Urging designers to recognize that the disability community is heterogenous

HOWEVER, TESTING A NEW TECHNOLOGY WITH A DIVERSE USER POPULATION IS NOT ALWAYS FEASIBLE. THEREFORE, IT MAY INSTEAD BE MORE USEFUL TO:

IMPLEMENT INCLUSIVE DESIGN

"through activities like co-authoring and co-editing articles with disabled individuals and the inclusion of disabled individuals as advisors"

TAKING THIS ANOTHER STEP FORWARD WITH STS

STS scholars emphasize that scientific knowledge production processes, produce, and continuously reproduce, unequal social relationships (Subramaniam et al. 2017)

STS scholars also emphasize the existence of lay end users, which are those that are impacted by the creation of technology but not permitted to engage in expert discourse (Oudshoorn & Pinch, 2008).

This is the case with AT design and people with disabilities

STS scholars also emphasize the importance of understanding that users and technologies are co-produced and interactive (Oudshoorn & Pinch, 2008). Further, users and technologies define each other through interpretative flexibility (Pinch & Bijker, 1984).

This raises the question of what is being designed, by whom, and for whom?

STS scholars also emphasize that how technologies are developed, the type of techniques that are created, and the processes by which innovation occurs, act to reinforce pre-existing relationships of dominance (Wajcman, 1995).

IMAGE DESCRIPTION

Title: Disability Studies as a Source of Critical Inquiry for the Field of Assistive Technology (AT)
Based on the publication by Mankoff, Hayes, & Kasnitz (2010)
Created by: Shir Grunebaum

On the right hand side of this research snapshot there is a sidebar containing a photo of a person sitting in a wheelchair and a person standing next to them. This picture is faded so that a dark blue background is showing through. The blue colour continues until the end of the infographic that depicts the article by Mankoff, Hayes, & Kasnitz. Following this, there is a subsection that goes beyond the text. To represent a new subsection, this side bar becomes yellow.

On the left side of the page, there is a flow chart depicting the content of the article by Mankoff, Hayes, & Kasnitz. The first item in the flowchart is "informing AT design" which is then divided into three subdivisions on the following level.

The first subdivision is the medical model of disability, depicted by a first-aid kit icon. Underneath this subheading, there are two more boxes which state that the medical model of disability "recognizes that the medical model of may be pragmatically useful [for designers of AT] because it focuses on physical and functional limitations. These represent actionable challenges". It also states the the medical model of disability "recognizes that the goal of AT is to allow individuals to return to the goal of normality".

The second subdivision is the sociocultural model of disability, depicted by an icon representing connectivity. Underneath this subheading, there are two more boxes which state the the sociocultural model of disability "recognizes that a person designing a piece of [technology], is, in some sense, defining which is disabled with respect to that [technology]". It also states that the sociocultural model of disability "recognizes the importance of shifting from cure to care".

The third subdivision is the post-modern model of disability, depicted by an icon representing a moving clock. Underneath this subheading, there are two more boxes which state that the post-modern model of disability "recognizes that it is essential to privilege each individual's unique lived experience" and that it "recognizes that it is also essential to understand that disability, illness, impairment, functional limitation, and bodily anomaly are separate but complementary issues".

These three subdivisions then combine into one box which states "understanding the models of disability can influence technology design by:" Attention is brought to this box using caution signs.

This box then divides once again into three categories stating: 1. "urging designers to recognize that it is their responsibility not to marginalize atypical users", represented by a margin icon. 2. "urging designers to recognize that user's needs may differ to the point that they are in opposition of each other thereby requiring the use of inclusive design, represented by opposing arrows. 3. Urging designers to recognize that the disability community is heterogeneous, represented by diverse shapes.

These three points combine to state that: "however, testing a new technology with a diverse user population is not always feasible. Therefore, it may instead be more useful to implement inclusive design through activities like co-authoring and co-editing articles wit disabled individuals and the inclusion of disabled individuals as advisors". The second half of this statement is highlighted by a yellow box surrounded by stars.

There is then a dotted line with footsteps which leads to a box that says "taking this another step forward with STS". There are then 8 circles organically arranged underneath (creating a stark distinction between the boxes representing the article and these additional thoughts introduced by the infographic creator). These circles state the following:

- STS scholars emphasize that scientific knowledge production processes, produce, and continuously reproduce, unequal social relationships (Subramaniam et al. 2017)
- STS scholars also emphasize the existence of lay end users, which are those that are impacted by the creation of technology but not permitted to engage in expert discourse (Oudshoorn & Pinch, 2008). This is the case with AT design and people with disabilities.
- STS scholars also emphasize the importance of understanding that users and technologies are co-produced and interactive (Oudshoorn & Pinch, 2008). Further, users and technologies define each other through interpretative flexibility (Pinch & Bijker, 1984). There is an arrow from this circle which leads to the words "this raises the question of what is being designed, by whom, and for whom?"
- STS scholars also emphasize that how technologies are developed, the type of techniques that are created, and the processes by which innovation occurs, act to reinforce pre-existing relationships of dominance (Wajcman, 1995).

3 of the circles contain icons which are a light-bulb, a USB wire, and a scientific model of a molecule

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