

Models of Disability

05-499/899 Fall 2024

Celebrating Accessibility

<https://cmu-05-499.github.io>

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What is a Disability?

- Definitions matter
 - They encode bias
- Person-first vs. Identity-first language
 - Am I a person with a disability or a disabled person?
 - There's no perfectly right choice. Every community is different.

Models of Disability

Models of Disability

- Two competing models
- Perspectives are based on a *cognitive authority*
 - Who decides what *disability* means?
 - Who decides who is *disabled*?
- The model of disability to which you subscribe matters!
 - As a designer of Assistive Technology
 - For your users
 - On our institutions and laws

Religious Perspectives

- Humans have been around a very long time.
- Religions have had a lot to say about people who look different than everyone else.



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Religions Offer Guidance

- On Causes
 - Buddhism says disability is caused by negative karma (though not imposed from the outside).
 - Judaism says disability is caused by God as a punishment for transgression.
 - Islam says disability is a challenge set by Allah.
- On Treatment
 - Gospel of Mark 8:22-26: Jesus cured a blind man in Bethsaida.
 - Gospel of Matthew 9:1-8: Jesus cured paralysis.
 - Gospel of Mark 7: Jesus cured a Deaf-mute person.
- On How to Treat Disabled People
 - Leviticus 19:14: "Do not curse the deaf or put a stumbling block in front of the blind, but fear your God. I am the Lord."
 - Koran says to treat people with intellectual disabilities with kindness and protect people with disabilities.

Medical Model of Disability

- Based on science and medicine
- Disability is understood as an individual and/or medical phenomenon that results in limited functioning that is seen as deficient.

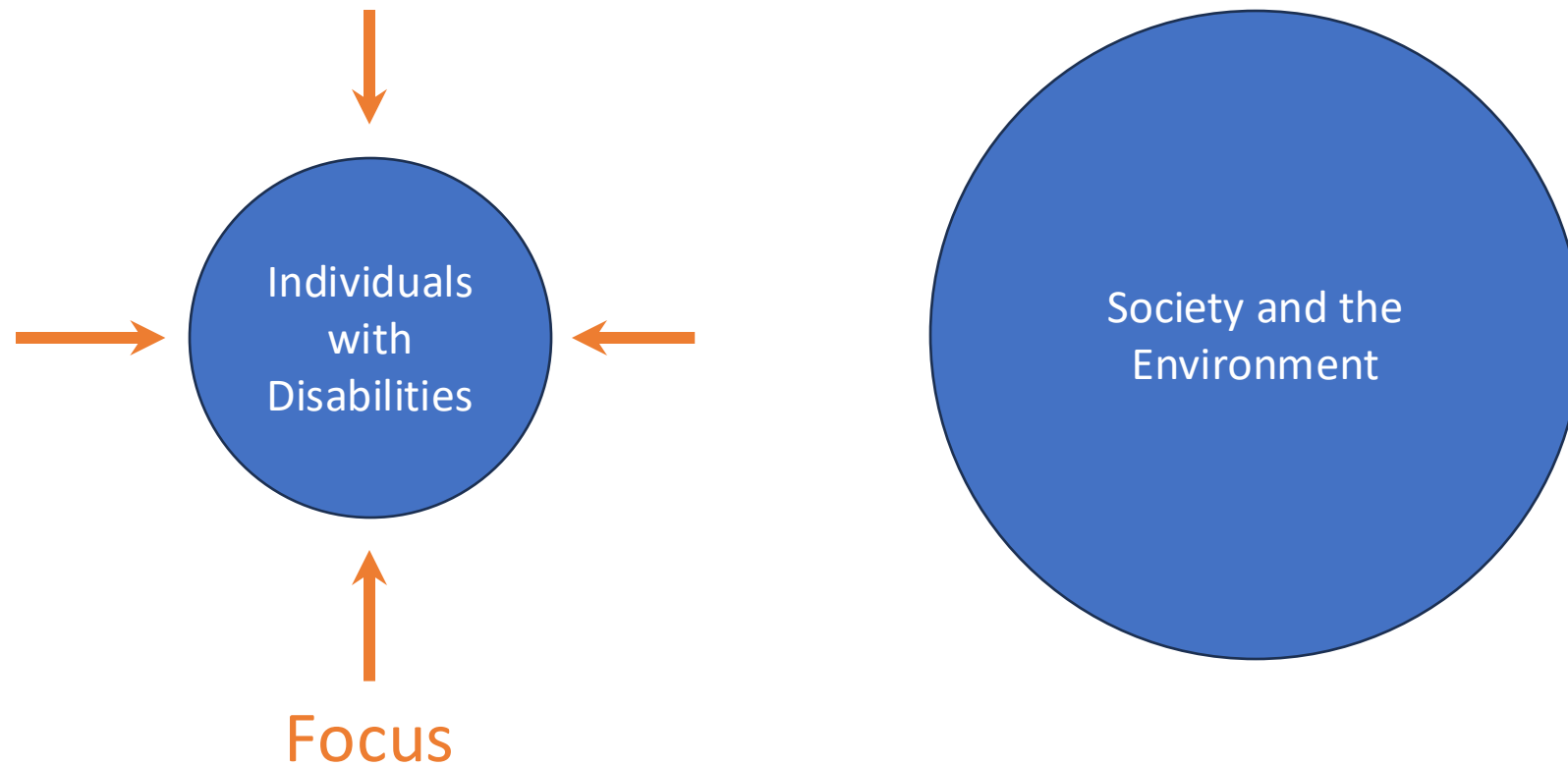
Medical Perspective

- Closely ties perceptions and definition of disability with “illness”
- Disability is something to be cured or fixed.
 - This will help the individual function in society.
- Emphasizes the value of *normal* functionality.

Aside: The History of *Normal*

- In early 1900s, people were worried about pneumonia and tuberculosis effects on underweight people.
- Insurance companies only wanted to enroll “healthy” people.
- In 1942, Metropolitan Life Insurance Company created standard tables for “ideal” height and weight based on their customers and their health outcomes.
- These heights and weights fit a normal distribution.
- Average height and weight were considered “ideal,” or *normal*.
- People who were under or overweight *deviated* significantly from the *average*. They became *abnormal*.
- Anyone that deviates from the average is now called *abnormal*.

Visual Representation of the Medical Model



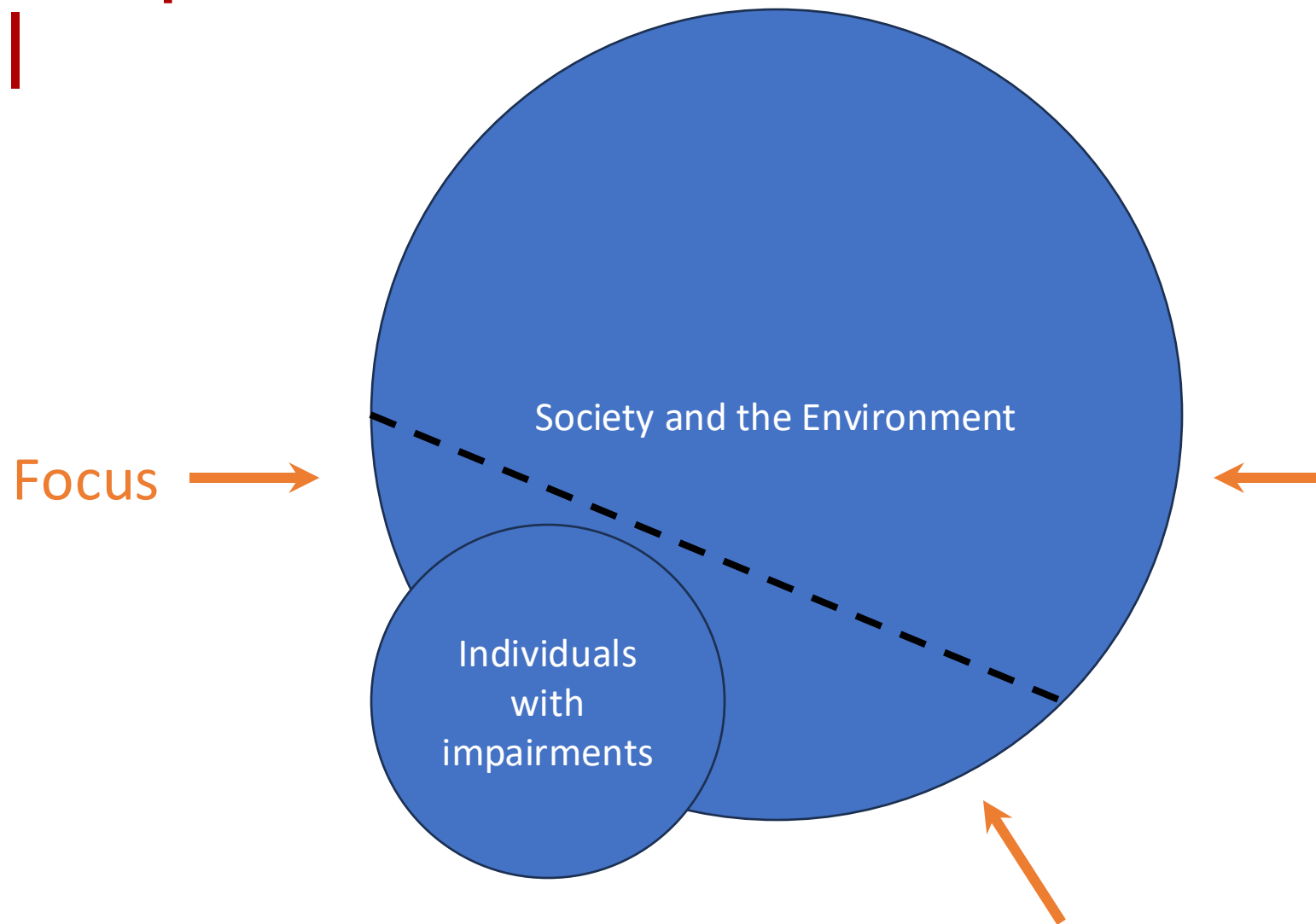
Major Critiques of the Medical Model

- The medical professional as the *cognitive authority* ends up with too much influence
- Reinforces negative perceptions of disability
- Can have impacts beyond the individual, e.g., perceptions of inability, helplessness, abnormality

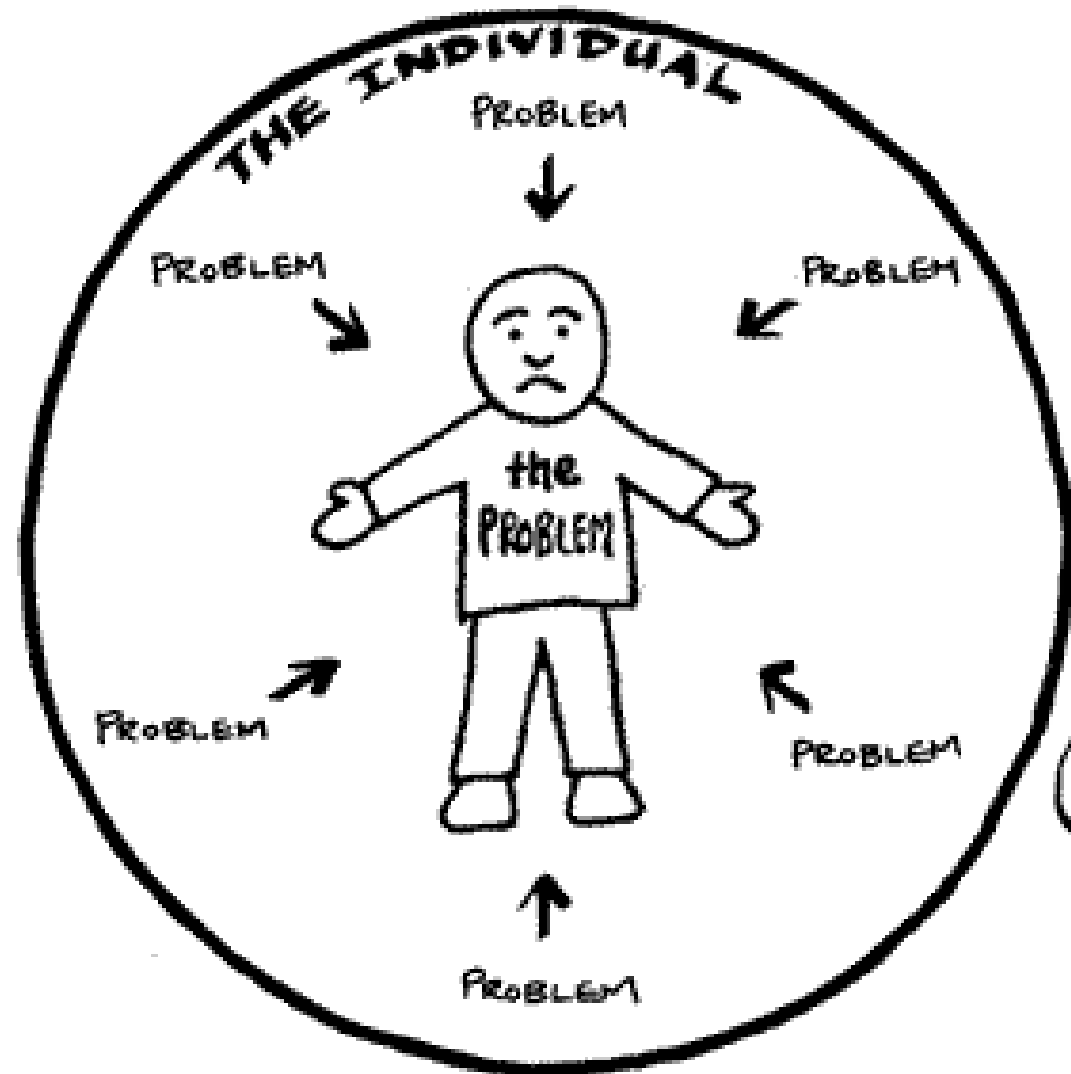
Social Model of Disability

- Disability is imposed on individuals with functional impairments
- Impairments are perceived as “a physical or biological condition of a person” meaning that a limb, organ, or function of the body is somehow negatively different.
- Disability “is a form of exclusion propagated by a society that marginalizes or discriminates against people who are seen as being impaired.”

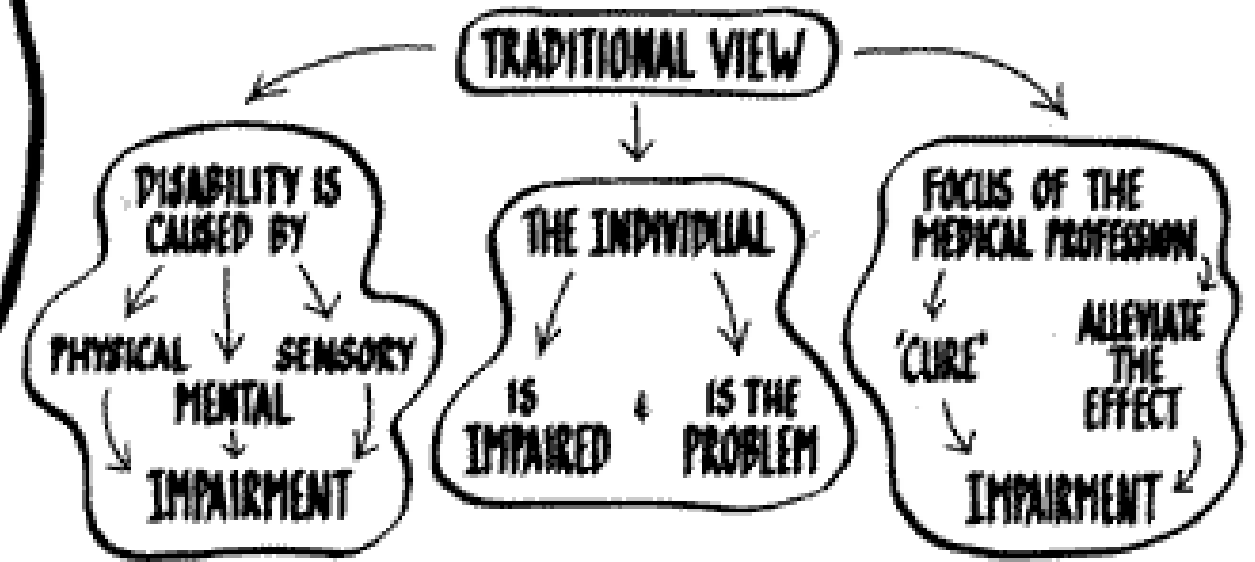
Visual Representation of the Social Model



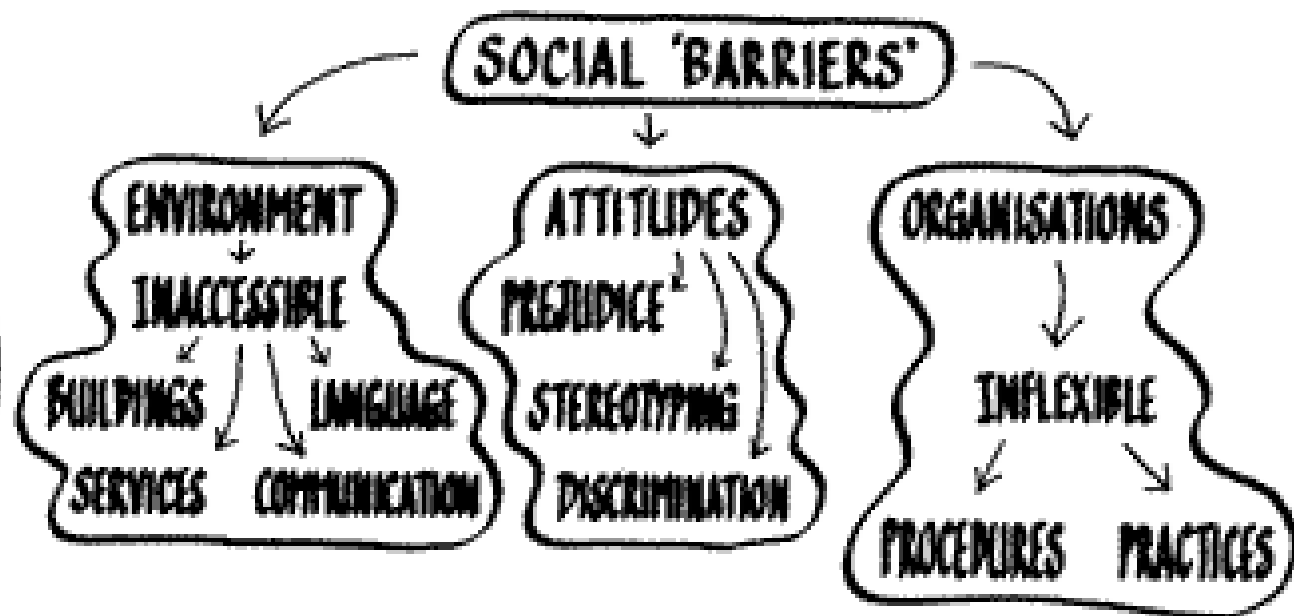
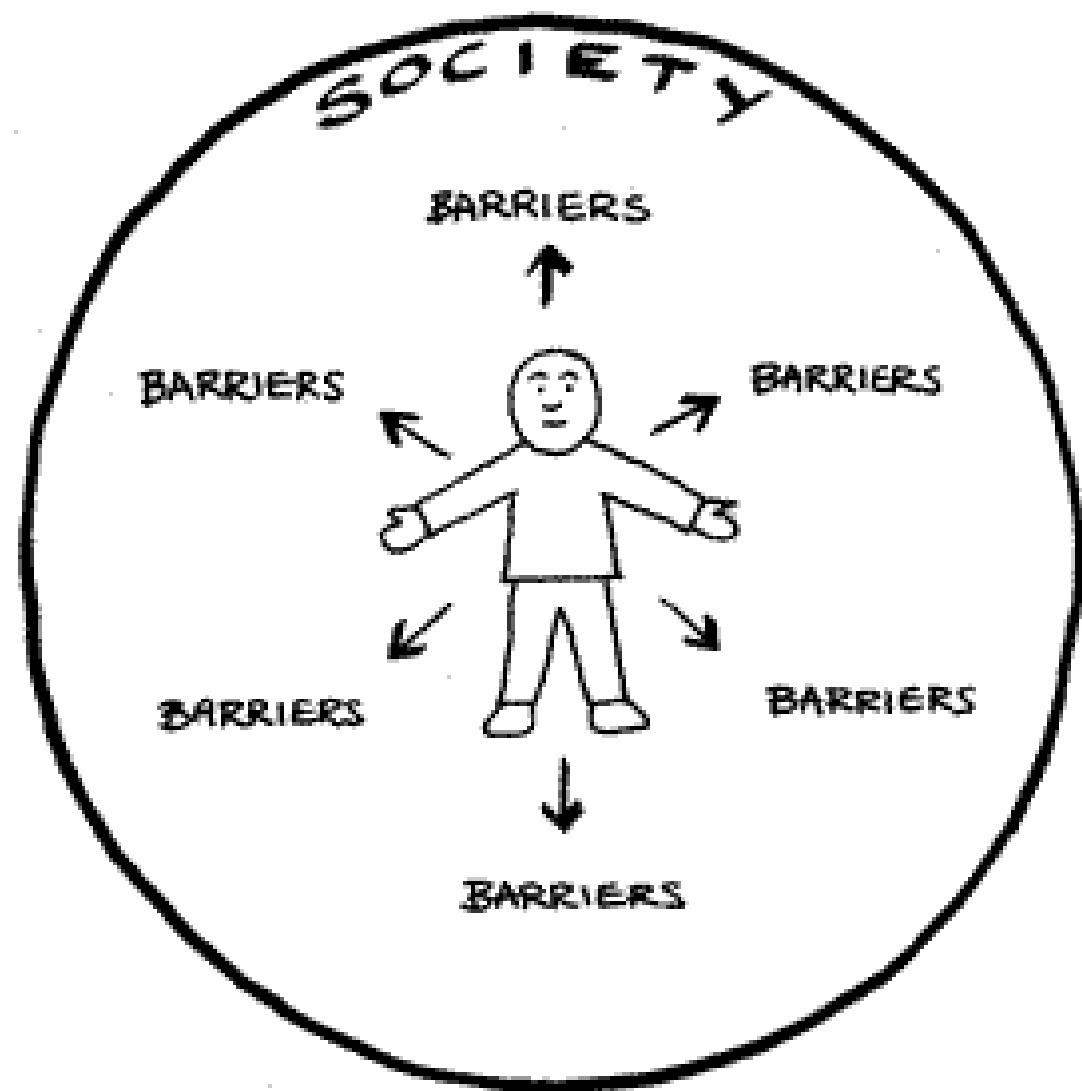
THE MEDICAL MODEL OF DISABILITY



IMPAIRMENTS AND CHRONIC ILLNESS
OFTEN POSE REAL DIFFICULTIES BUT
- THEY ARE NOT THE MAIN PROBLEMS



THE SOCIAL MODEL OF DISABILITY



Reading Reflections

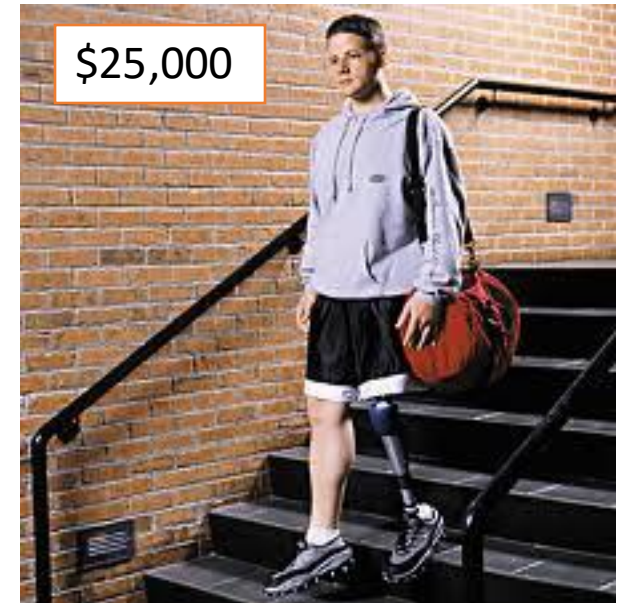
What does this mean for us?
Which model is better?

Medical vs. Social Model

- Definition of disability encodes socio-cultural assumptions
- Medical Model
 - Functional impairments reside in the individual
- Social Model
 - An experience of exclusion which resides in the interaction between individual and society

Model influences design

- Medical Model
 - Focuses on the physical and functional limitations a person demonstrates.
 - Designs intend to “fix” impairments
 - Walk down stairs
 - Move around the house
 - Increase typing speed
 - Read the computer screen
 - Help a person communicate



Medical model is useful for scoping

- Especially for programmers and engineers
- There is a functional limitation. Your goal is to enable the function.

Model influences design



- Social Model

- Look towards fixing problems of access, oppression, and activism.
- Shift from “cure” to “care.”
- Self-advocacy and peer support lead to full participation in society.
- People with disabilities become the leaders in managing their conditions.
- Solutions include promoting societal change.



Medical or Social Model

- In general, the social model is most likely preferred and more effective.
- However, the medical model has been dominant
 - Probably the first thing you thought of
 - Embedded in assistive tech paid for by medical insurance
 - Medical establishment still thinks this way

Dependence/Independence/Interdependence

- Disabled person, guardian/caretaker, family, workplace, neighborhood, village, government

Participation Activity

- Get into groups of 3 people
 - Choose one person to write/draw/take notes for your group on paper
 - Work together and follow these 3 steps:

Step 1: Choose a space to design for:

- Transportation:
Uber/Bus/Train/Plane
- Museum
- Grocery Store
- Classroom
- Bathroom
- Kitchen

Step 2: Write down a design solution to an accessibility problem in your space.

1. Choose a disability.
2. Choose a problem related to that disability.
3. Identify a medical model solution.
4. Identify a social model solution.

Step 3: Choose one person to share the highlights of your discussion with the class.

1. Be sure to explain your design space.
2. Be sure to describe your user.

Disability Deep Dive

Split up by disability group/preference

Everyone will get a post it note, write your name and AndrewID

We'll have the categories up on the table

No more than 3 per category