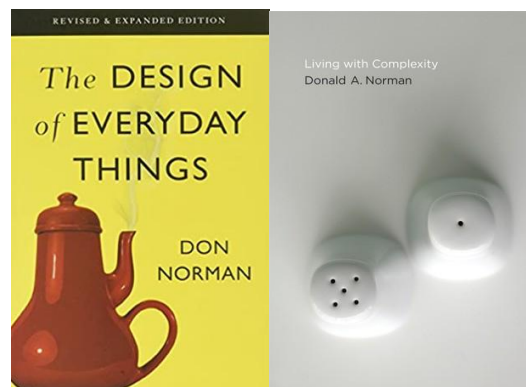# SOCIAL THEORY & DESIGN THINKING
(2410302)

Politics & Global Studies (PGS)

1st Semester 2025 (1/2025-26)
Tuesday: 1–4 p.m.
Building POL3, Room M08

Week 4 (8/26/25): The Human-Centered Design (HCD) Group Exercise

Part I: Theories and Concepts

Task: With your group members, choose only ONE from TWO items/questions below.

You may go back to the assigned readings if you have not read them before coming to class.

Then, try to answer them in your own words in a clear and concise bullet points or short paragraphs that could be put on the Microsoft PowerPoint or any other presentation computer software's and mobile phone applications' pages. You answer should be only 4 pages.

1. From *The Design of Everyday Things* by Donald A. Norman

   Explain the Human-Centered Design (HCD) based on Don Norman's book.

2. From *Living with Complexity* by Donald A. Norman (Choose this question/item if you plan to do this for Quiz#1.)

   Can the Human-Centered Design (HCD) as proposed by Don Norman be applied to service designs?

Part 2: Applications

Task: Each group is asked to solve TWO problems/items: FIRST, by choosing only 1 problem/item from the list of #1 to #12, and SECOND, every group must do #X.

In *The Design of Everyday Things*, Norman calls attention to a "paradox of technology: added complexity and difficulty cannot be avoided when functions are added, but with clever design, they can be minimized." (pp. 32-34). To propose minimizing complexity and difficulty as design values is to advocate for a **Human-Centered Design (HCD) or user-centered design practice**.

Assume that you are part of a team hired to work on the following projects. Your task is to try to answer Norman's call to minimize complexity and difficulty by thinking about your project in terms of Norman's key design parameters: *Affordances, Signifiers, Constraints, Mappings,* and *Feedback*. With your group members, brainstorm some aspects, factors, or elements of your assigned project, using the five categories and their associated questions as prompts (*see* below).

When you have reached consensus on some of the relevant factors of your design project, use the margins of this handout, or a separate sheet of paper, to sketch some ideas for how your design would make visible the Human-Centered Design (HCD) or user-centered characters indicated by the five categories (parameters).

Then, try to answer them in your own words in a clear and concise bullet points or short paragraphs that could be put on the Microsoft PowerPoint or any other presentation computer software's and mobile phone applications' pages. You answer should be only 4 pages per item/problem selected.

The next 3 groups will be randomly picked from the remaining 9 groups to give a short, no more than 10 minutes presentation at the beginning of next week's session. All 12 groups must submit their slides by uploading their PDF files into the designated folders in Week 4's folder in the course's Google Drive.

1. **Design the <u>floor plan</u> for a combined kitchen, dining area, living room, and Work From Home (WFH) office space for clients who cook, work, and entertain frequently.**

   - **Affordances**: What actions should be encouraged, supported, or facilitated?

   - **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

   - **Constraints**: What actions should be prevented, discouraged, or impeded?

   - **Mappings**: Are the relationships between controls and desired actions clear?

   - **Feedback**: Is it easy to tell whether an intended action has been carried out?

2. Each group member: describe your <u>smart phone</u>, using the criteria below. What do you like and dislike about your phone and the way it works? Compare your reactions and notes with the other group members' phones. What design parameters emerge regarding ways that the functionality of smart phones might be improved?

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

- **Feedback**: Is it easy to tell whether an intended action has been carried out?

3. Re-design an <u>airliner's unisex bathrooms</u> to be both easier for older customers, safer for small children, and people with disabilities to use.

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

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4. **Taking advantage of the latest technology, update the design of a <u>car's dashboard</u> as part of an effort to make the car more attractive to younger consumers, while promoting environmental consciousness and safety.**

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

- **Feedback**: Is it easy to tell whether an intended action has been carried out?

5. Design a <u>humanoid robot</u> that can work in a university's campus as part of the university's current policy to boost its competitive edge and global ranking, at the same time, trying to combat social inequality (such as unemployment) that might follow from using such technology.

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

- **Feedback**: Is it easy to tell whether an intended action has been carried out?

6. Design a <u>User Interface (UI)</u> of a vending machine (photo booth) that takes photographs for your identification cards, passports, or simply just for fun, such that this photo booth can be placed in any office buildings, university campuses, shopping malls, public transportations' stations, or public events' venues.

    - **Affordances**: What actions should be encouraged, supported, or facilitated?

    - **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

    - **Constraints**: What actions should be prevented, discouraged, or impeded?

    - **Mappings**: Are the relationships between controls and desired actions clear?

    - **Feedback**: Is it easy to tell whether an intended action has been carried out?

7. Choose an <u>existing packaging of any everyday product</u> that you think does not work well according to Norman's key design parameters. Re-design it to enhance its users' experience.

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

- **Feedback**: Is it easy to tell whether an intended action has been carried out?

8. Bangkok is becoming a creative city. Design a public space that people and their can walk, work, play, and perform their free-time activities in sustainable ways.

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

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9. If you were to redesign an apparel or outfit that is suitable for the extreme weathers due to the current climate crisis without falling behind the relatively recent fashion trend or style, how could Norman's key design parameters help you achieve this goal?

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

- **Feedback**: Is it easy to tell whether an intended action has been carried out?

10. Compare two subway train stations from either the different cities or different providers within the same city, according to the experiences you have encountered, using Norman's key design parameters.

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

- **Feedback**: Is it easy to tell whether an intended action has been carried out?

11. Design a wearable digital technology that can inform you about your health condition, weather forecast, crime prediction, spatial navigation, etc.

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

- **Feedback**: Is it easy to tell whether an intended action has been carried out?

12. Design a workshop studio capable of hosting a real-time and virtual classroom, laboratory experiment, and augmented reality for field trips and long distant experiences.

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

- **Constraints**: What actions should be prevented, discouraged, or impeded?

- **Mappings**: Are the relationships between controls and desired actions clear?

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X.   This is the SECOND problem/item that every group must do in addition to the FIRST selected problem/item by the group from the list of #1 to #12.

Create your own design project for a <u>Mobile App (mobile phone's application)</u> and discuss it using Norman's key design parameters, OR choose a <u>Mobile App (mobile phone's application)</u> that already exists, that which your team thinks it fails or is functionally poor; then, critique it using Norman's key design parameters. Use your imagination!

- **Affordances**: What actions should be encouraged, supported, or facilitated?

- **Signifiers**: Are there any signs/signals that communicate where the actions should take place, what actions are possible and how they should be done?

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