

COGS 102A LAB 3: Designing Space

Goal: Examine how the design of space shapes cognition

Instructions: In this lab, you will design the layout of a classroom (Mande B150) to suit two very different functions. Each team will be provided with graph paper on which to draw your layout. Each square on the graph paper represents one square foot in the room. Below is a list of all the artifacts that are currently available in the room, as well as the dimensions of the room and the size of both the fixed structures and mobile artifacts. Note that you must use **ALL and ONLY** the features from this list in your design. For one of the two functions described below, you will draw the placement of every artifact, to scale. If some artifacts (e.g. chairs) are organized into a block (e.g. rows, curves, or other clusters) you can draw the entire block (to scale) and note on your design how many items fill that block (only one type of artifact allowed per block). Some artifacts will play an active role in shaping how the space is used, others may end up being put “out of the way”, but ALL must be included. Note that chalk, pencils, markers etc. are also on the list. Your report will include any markings (cognitive artifacts!) that you make with these materials. You will then explain why you created/placed each feature as you did.

During your design efforts and subsequent explanation, you will identify the affordances of every placement you chose. This will include both “used” and “unused” items. You will then discuss if these produce **Epistemic** and/or **Pragmatic** advantages. As discussed in the lecture and readings, **Epistemic** actions are those which simplify a cognitive problem (i.e. in perception, choice, or computation) while a **Pragmatic** action makes a task physically easier. Note that some of the design decisions that you make will accomplish BOTH, while others will be clear cases of one of the other.

HINTS: In general, the more “stuff” you make active use of the better, BUT it is better to edit some things out for a good reason, than to include them for a bad one - although remember, everything must appear somewhere in your design. Also, we highly recommend that you begin by making a rough sketch of the layout on your extra sheets of graph paper, before committing to a precise design. Plus, remember, the best way to break “Functional Fixedness” is to manipulate things!

DESIGN 1: THREE LINES

This room will be used for students to register for one of three activities. Over the course of a day, hundreds of people will need to pass in and out of this space, and get into one of three lines, depending on which activity they chose to sign up for. The students will first need to obtain the appropriate form, fill it out, and then present it to a staff person. In exchange, they will receive a pass to their chosen activity. If students have already downloaded and filled out their forms, they can move directly to interacting with the staff. Students must also present their ID when they register. The university will provide a supply of the forms, and three staff people, each of whom will be responsible for collecting the students’ forms and providing each with a pass to one of the three activities. Each staff person will come equipped with a register book and a set of passes for one particular activity. There will be no additional staff to man the doors or inform the students how to proceed. Your task is to design the room in such a way as to maximize efficient flow through the space, as well as make it obvious to the students where and how to complete and turn in their forms. Note that, if you need to, you can also make use of the space just outside the door(s).

DESIGN 2: DANCE PERFORMANCE

Given that this is Mandeville Hall, this room is occasionally used for performances. For this task, you need to design the space so that a small (5 person) dance troupe can perform for an audience of up to 60 people. The musical piece they will be dancing to is called "Hide and Seek". After the dancers receive your design, they will use the room, set up as you dictate, to develop their choreography. Thus, they are relying on your creativity to design a "set" for this performance (using only the features present in the room) that they can make good use of, in exploring the theme of their music. The troupe will provide an electrical sound system (requiring 2 cubic feet of space) and any length of extension cord(s) that you specify. UCSD Safety Regulations say that no such cord can cross a path used by people unless taped down, and no fire exits can be blocked during any performance. The performance will be held in the evening and is free to all, up to the seating capacity of the room.

HINT: Don't ignore the audience! Everyone wants a "good" seat and, given the relatively small size of this space, and lack of a separate stage, the audience may end up being an intimate part of this performance.

For Either Option...

For **every placement decision**, and for **every cognitive artifact** that you create, describe its **affordances** and explain how these provide an **Epistemic advantage**, a **Pragmatic advantage**, or **both**. That is, for an epistemic advantage, you must identify the cognitive problem and explain how it was simplified. For a pragmatic advantage, you must identify the physical problem and explain how it was expedited. Note that many of your design decisions will serve both. Be sure to take into consideration the cognitive biases and conventional practices, discussed in lectures 2 & 3, that can be exploited in your design.

The design you create will provide many affordances that (hopefully!) will help the people using the space to accomplish their respective tasks. The behaviors afforded can include activities like entering and exiting, moving through the space, gaining access to materials, doing what is expected/required of them, etc. Other affordances focus on access to information, including having good lines of sight, salient markings, guides to ordering events, etc. Note that you will, at times, have to look at both local affordances (e.g. of a particular path) as well as higher-order affordances (e.g. how the 3 paths are positioned relative to one another and to the doors). Take care to be specific about the particular problems being addressed and the specific solutions each design decision provides.