



THE GROCERY STORE

How do population stereotypes shape our interactions with manufactured environments?

A new grocery store opened near my home a little while ago, and for periods of time I watched with bemusement as shoppers tried to enter the store. Many went to the automatic door, which would not open automatically, looked up, backed up, and then went over to the other set of doors to enter. What was the problem? In this case, the problem was simple: as you approached the store from the parking lot, the doors to enter the store were on the *left*, and the doors to exit were on the *right*. North Americans have spent a lifetime learning to do just the opposite. Highways and bicycle lanes are set up so that you pass to the right of oncoming traffic. Uncrowded sidewalks and hallways are the same. And when someone violates that principle, it results in an awkward little dance to avoid running into the other person. Most stores are set up similarly—as you approach the store the set of doors to enter are located on the right and the doors on the left are used for people exiting the store. The store that opened near me violated a simple principle, called a *population stereotype*—a type of habit.

Think about some of the other strong population stereotypes in North American culture. People tend to flip a switch up to turn lights on, and down to turn lights off. The color red usually means “stop,” or refers to danger, whereas green means “go” or “safe.” Turning a dial clockwise usually means

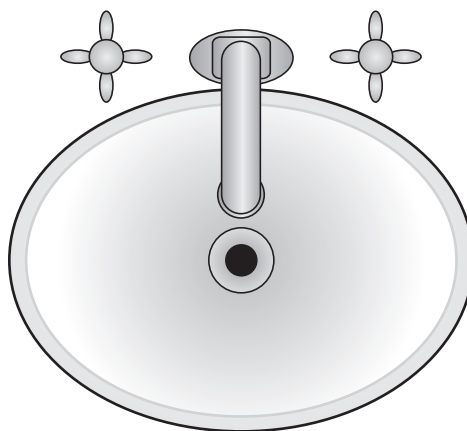


Figure 1.3 Typical hot and cold water taps in a bathroom sink. Which way would you turn them to start the flow of water—both to the left, both to the right, both inward, or both outward?

to increase the value of something; turning it counterclockwise decreases it. Notice that these examples refer to manufactured products. However, other features of our manufactured environment are less stereotypical. For example, look at the faucets in figure 1.3. There is a strong stereotype in North American society to associate the left faucet with hot water and the right faucet with cold water. But, which way would you turn the left and right knobs to start the flow of water? Both clockwise? Both counterclockwise? Or would you turn them in opposite directions, and if so, how (both inward or both outward)? The stereotype for controlling the flow of water is not nearly as strong as the stereotype for hot on the left and cold on the right.

We had the master bathroom in our house remodeled a short time ago and gave the designer some artistic freedom with some of the details. Figure 1.4 is a drawing of how the bathtub faucets are now arranged (viewed from above). The faucets are illustrated in the upper left corner. Which ones do you think control the hot and cold water? To this day I still have no idea which controls which, not to mention which way to turn the knobs to get the water flowing.

Strong population stereotypes have both positive and negative consequences. For example, knowing that hot water will flow from the tap

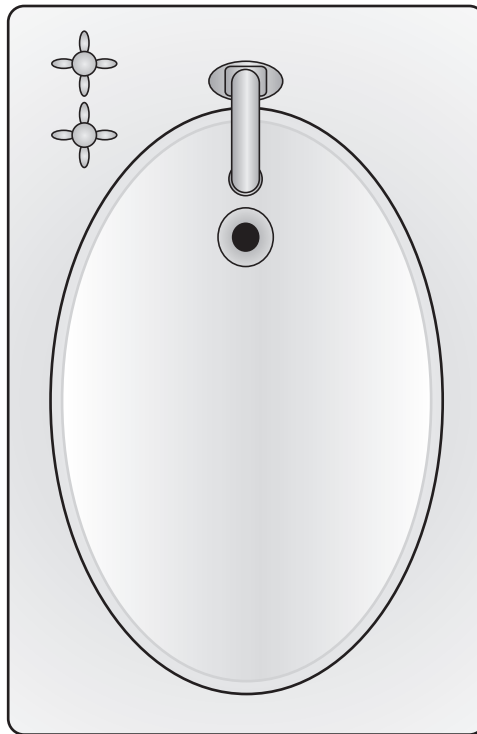


Figure 1.4 Our redesigned bathroom tub. Which tap controls the hot water, and which way should the knobs be turned to start and stop the flow of water?

on the left makes the operation of the taps simpler and more efficient, and reduces the need for signs and labels to tell you how to use them. However, the occurrence of strong population stereotypes can also lead to errors or accidents when someone violates them. And they can lead to *many* mistakes when an interface is designed so that a correct action is in violation of the stereotype. Arranging doors in a public place in violation of a strong population stereotype, as the grocery store near me did, is an open invitation to accidents.

SELF-DIRECTED LEARNING ACTIVITIES

1. Define the term *population stereotype* in your own words.
2. Identify three strong population stereotypes that are different in North America than in another part of the world. Suggest a reason or hypothesis for why they are different.
3. Design a questionnaire with questions about daily actions for which you think population stereotypes might exist; then have 20 or more people respond to it. What items in the questionnaire revealed strong stereotypes, and what items revealed weak stereotypes?
4. Design a research study that investigates the comparative strength of two population stereotypes. Be careful to explain what behavior is measured in your experiment, and why this measure allows you to make conclusions about stereotype strength.

SUGGESTED READINGS

- Barber, P.J. (1988). *Applied cognitive psychology: An information processing framework*. London: Methuen.
- Jordan, P. (1998). *An introduction to usability*. London: CRC Press.
- Proctor, R.W., & Van Zandt, T. (2008). *Human factors in simple and complex systems* (2nd ed.). Boca Raton, FL: CRC Press.