

## Hey, which side do you use for cutting?



This is a nice attractive knife. Just one problem. Which side do you use for cutting? Although you can tell which end is the handle and which end is the blade, it isn't clear which side of the blade cuts.

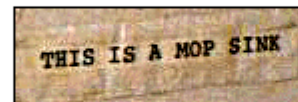
### Design suggestion

The shape of an object should reveal how it is to be used.

## This is a mop sink



This picture is from a restaurant in Santa Barbara. There is no urinal in the men's restroom. The fixture in the corner *affords* a certain activity. To try to discourage this activity someone taped a small sign to the wall above the fixture. The sign says "This is a mop sink."



### Design suggestion

The mop sink looks enough like a urinal to use it as one. When simple things have signs, especially homemade signs, it is usually a signal that they aren't well-designed.

## Please push slowly!



Ever wonder why doors are made out of glass? This picture gives a hint. Imagine that these restaurant doors are both closed and someone tries to leave in a hurry just as someone else tries to enter the restaurant from the outside.

The doors are made of solid wood and are beautiful to look at but you can't see if anyone is standing on the other side.



Here is a close-up picture of the sign posted on the inside of the door... This sign was probably motivated by someone getting whacked by the door being opened.

### Design suggestion

Make sure your design provides displays of everything a person needs to see.

## Ejection seat



A friend, who was sitting in this mini-van seat, wanted to slide the seat back. He reached down under the front of the seat, feeling for the seat adjustment control. Upon feeling a lever (see arrow), he grabbed it and pulled it. Which of the following do you think happened?

- (a) Pulling the lever allowed the seat to slide smoothly back.
- (b) Pulling the lever detached the seat from the floor, causing the seat to fall over.

You guessed it! The seat fell over. Pulling the lever allows one to quickly detach the seat to make room for cargo. Perhaps a little too quickly!

Most people expect to find a lever near the front of a car seat which allows the seat to slide forward or backward. Most people wouldn't expect a lever near the front of the seat to detach the seat from the floor. In fact, it could be quite dangerous to detach the seat while sitting in it!

### **Design suggestion**

I don't think anyone is going to want to detach a van seat from the floor while sitting in it. The control could be repositioned beneath the seat in such a way that it can not be reached while sitting on the seat.

## Raising the driver's seat



This picture shows the driver's seat control in a car we rented. The way it works is that you grab the knob and pull in the direction of the arrow. A rod "telescopes" out. Then you can move the rod forward or backward like a lever to lower or raise the front of the seat. I had to play around with it for a while to figure out how to work it. It is physically hard to move the lever forward unless you are sitting in the seat because your weight is used to lower the seat. On the other hand, it is hard to figure out how to work the control unless you are outside the car looking at the control. It is kind of a paradox. You can't easily use the control unless you are sitting down and you can't easily see the control unless you are standing up.

### **Design suggestion**

When you design a control, make sure you can figure out how to use it from the position you will be in when you use it.

# Water faucet



We recently were camping in Zion National Park in southern Utah. There are water faucets in various locations throughout the campground. On each water faucet a lever, which looks like an "old fashioned" pump handle, is used to turn the water on and off. The photo at left shows a faucet with the lever in the down or OFF position.

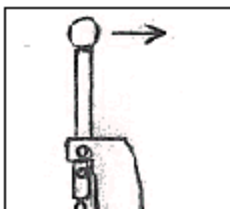


To turn the water on, you simply raise the lever up to the ON position. As long as the lever remains in the ON position, the water flows continuously. The photo at left shows the lever in the up or ON position.



I saw several people who had obviously never used a faucet like this and who didn't know how to operate it. They pumped the lever rapidly up and down as if it were the handle of an "old fashioned" water pump. At the top of each stroke, the water would turn on and enough would come out to make them think they were operating the faucet correctly. Needless to say, it required a lot of time and energy to fill their water container. Even though the faucet looked like a hand-operated pump, it didn't work like one. The animation on the left shows the lever being pumped rapidly up and down.

## Design suggestion



It is confusing to people when a faucet lever is designed to look like a pump handle but operates in a different way.

It would be less confusing to design the faucet with the lever pointing straight up in the OFF position. On the left is a sketch of the faucet with an upward-pointing lever resembling a gear shift lever in a car. Moving the lever FORWARD in the direction of the arrow would turn the water on.



## Floppy disk drive

This is the most recent computer with Intel Celeron 2400+ processor, 512 MB RAM, CD & DVD RW, modem, Ethernet card etc.

Problem with this computer is that if you want to take floppy disk out of the drive you have to have either extremely thin and long fingers or to make a special tool to take it out.

Problem with bad design appeared because lack of communication between members of the design team for computer housing. One group designed FDD holder while the other designed plastic cover and outer part of the housing.

## Design Suggestion

To move FDD forward and redesign the front cover or only to redesign the front panel so that fingers can reach floppy disk. The possible solution is shown in the figure below.

