**Introduction to Interaction Design**

**Introduction: -**

Norman’s Design Principles

1. **Affordance: -** It means that an object should be able to perform the function that it is intended to do. If it does, then the object is said to afford the function.
2. **Constraints: -** This principle helps to limit the number of actions or avoid invalid actions on an object. The different types of constraints are – Logical, Physical and Cultural constraints.
3. **Mapping: -** This principle describes the relation between an object and its uses.
4. **Consistency: -** This means that similar controls should be used to perform similar functions by an object or button.
5. **Feedback: -** This principle helps to provide the user with information about the status of an action or if the action is executed at all.
6. **Cultural Assumption: -** Colors and symbols have different meanings in different countries.

**Exercise 1**

Speaker

* + This violates the principle of constraints. One button is used to increase volume as well as for fast forwarding.

Light switchboard

* + This violates the principle of mapping. Usually the light is turned on by pushing the switch downwards but on my switchboard the switch must be pushed upwards to turn on the light.

**Exercise 2**

Things

Which way does the door open?

* + This is a good example because the door does not have an instruction saying whether to push or pull the door. This design violates the principle of constraints.

Displays

Labels that look like pushbuttons

* + This violates the principle of mapping. The person pushes the label thinking the label is the button but fails to achieve the intended cause in the elevator.

Controls

Ejection seat

* + This design violates the principle of affordance. The lever in a car seat should not be able to eject a seat but rather be able to reposition the seat.

Signs

Where do you plug in the mouse?

* + This design violates the principle of mapping. The computer does not specify which port is used to connect the mouse and keyboard. It confuses people due to the similarity between both the ports.

**Exercise 3**

**Summary**

Don Norman visits the department stores of other countries when visiting those countries to experience the wide cultural variations in things like cookware and tools. But nowadays he doesn’t do this because every department store looks the same to him. Products which he could find only in Europe were available in his hometown. Today, country of design and manufacture doesn’t impact the sale of a product.

He finds a lack of diversity that extends to the training of designers. He notices a similarity between the curricula and methods of different design schools in the world. He also states that there is more diversity within a country than between 2 or 3 countries.

He uses the example of mobile phones to strengthen his point of view. He says that traditional phones vary in size and appearance but the function of the phones is very similar. He uses this to emphasize his stand that design is independent of culture.

He differentiates the olden and modern cultural differences stating that olden cultural differences were fundamental and exciting while modern cultural differences primarily exist in governing social interaction, food and style. Traditional activities are determined by culture but modern activities are hugely dominated by technology used to achieve them. He believes that once technology determines the activity, cultural influence starts to disappear.

He says that designers talk about Human-centered design which is important to reach the needs of people but Norman believes that it doesn’t work when the goal is millions of people worldwide. Norman argues for Activity-Centered design, where the goal is for activity to determine the design.

Norman believes that technology dictates activity and activity dictates design. He claims that when the design is appropriate for the technology, people accept regardless of cultural backgrounds. He states the example of the violin, which is hard to learn due to its injury-prone stance and hand configuration, but people still learn it because the design looks appropriate to the technology and therefore, the activity.

Norman states that regional, stylistic and behavioral differences might exist but there are no fundamental differences.

Some sets of critiques pointed out that even if products looked similar, there were variations tuned to cultural activities. Norman addresses them by stating if he observed how the products were being used, he would find great variations in the products usage and modifications made to adjust the product for their needs.

He concludes by submitting his argument for lack of cultural diversity can lead to two different interpretations.

The traditional Western, technological view of the role of technology is that standardization of many aspects of life in the world is valuable. The second interpretation is that homogenization is disturbing. It reduces the richness of life and the importance of culture and custom.

He also states that it is important to distinguish mass-produced, industrial design from handmade crafts. This is because handmade crafts reflect the needs and culture of the people for whom they are crafted whereas mass produced designs are produced for millions of people without any regard to culture.

**My Views**

I agree with Don Norman’s views. Products must be designed based on the activity that the product is used for rather than for stylistic preferences.

I also agree that these principles can be used to design software for computers and mobiles as well because these products are used worldwide by millions of people. Using Norman’s principles of design will help break cultural barriers between countries. It will also help increase the compatibility of applications and software across the world and boost communications and technological advancements.