1.9. Emotional Design and Cognitive Psychology Basics

Introduction:

- Imagine you are hungry and want to order food. You open the **Swiggy** app.
- Within a few seconds, you decide what to eat, place the order, track the delivery, and receive your food without any confusion.
- Why is this experience so smooth and enjoyable?

It is because the app is designed using two important UI/UX concepts:

1. **Emotional Design** – Makes users feel happy, excited, confident, and satisfied.
2. **Cognitive Psychology** – Helps users think less, understand quickly, remember easily, and make better decisions.

A successful application should satisfy both the **heart (emotions)** and the **brain (thinking process)**.

Scenario: Ordering Food Using Swiggy

Let's understand the complete UI/UX process. Suppose **Anita** wants to order a pizza. She performs the following steps:

1. Opens Swiggy.
2. Searches for Pizza.
3. Selects a restaurant.
4. Reads ratings and reviews.
5. Adds pizza to the cart.
6. Pays online.
7. Tracks the delivery.
8. Receives the food.

During every step, Emotional Design and Cognitive Psychology work together.

Emotional Design

Definition: Emotional Design is the process of creating products that generate positive emotions while users interact with them.

Instead of making users think, **"This app works."**

Emotional Design makes users think, **"I love using this app!"**

The purpose is to create emotional attachment between users and the application.

Why Emotional Design is Important?

- People do not always remember every feature of an application.

- They remember **how the application made them feel.**
- For example, suppose two food delivery apps provide exactly the same restaurants.

App A

- Plain interface
- Small food images
- Confusing buttons
- No delivery animation
- Boring colors

Users feel:

- Confused
- Frustrated
- Uninterested

App B

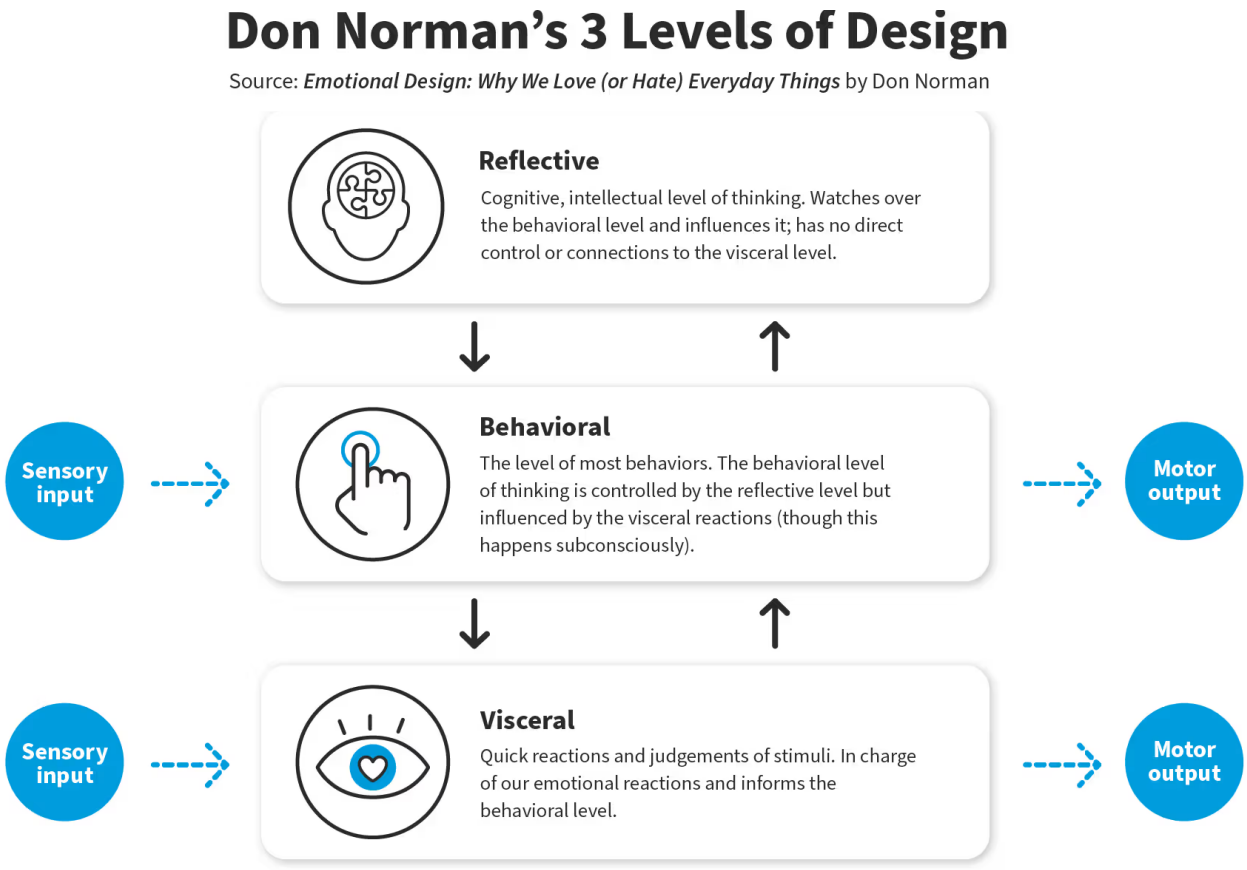
- Attractive food photos
- Bright colors
- Easy navigation
- Animated delivery tracking
- Friendly messages

Users feel:

- Happy
- Excited
- Comfortable
- Confident

Most people will continue using **App B**, even if both apps offer the same food. This is the power of Emotional Design.

Don Norman's Three Levels of Emotional Design:



- One of the most popular theories of Emotional Design was proposed by **Don Norman**.
- He explained that emotions occur at **three different levels**.

1. Visceral Design

- ✓ Visceral Design is the **first emotional reaction** when users see the application.
- ✓ Before users click anything, they immediately judge the app.

Questions users ask subconsciously:

- Is this beautiful?
- Does it look modern?
- Does it look trustworthy?
- Do I feel excited?

Swiggy Example: When Anita opens Swiggy, she notices:

✓ Bright orange theme
✓ Modern icons
✓ Large food images
✓ Clean layout
✓ Attractive restaurant cards

- Immediately she feels, **"Wow! This app looks amazing."**
- This feeling happens within **2–3 seconds**.

UI Elements Responsible

✓ Colors	✓ Images	✓ Icons
✓ Typography	✓ White space	✓ Layout

Diagram

User Opens App
↓
Beautiful Home Screen
↓
Positive First Impression
↓
User Wants to Explore More

2. Behavioral Design:

- ✓ Behavioral Design focuses on **how well the application works.**
- ✓ Even if an application looks beautiful, **users will stop using it if it is difficult to operate**.

Questions users ask:

- Is it easy?
- Is it fast?
- Can I finish my task quickly?

Swiggy Example: Anita wants pizza.

She simply:

Searches → Pizza

↓

Restaurant list appears

↓

Adds pizza to cart

↓

Pays

↓

Order Confirmed

- Everything takes less than two minutes.

  She feels, **"Ordering food is so easy."**

- That feeling comes from Behavioral Design.

Good Behavioral Design Includes

- Fast loading
- Easy search
- Simple menus
- Large buttons
- Clear navigation
- Helpful error messages

Diagram

Search Food

↓

Choose Restaurant

↓

Add to Cart

↓

Pay

↓

Track Delivery

Easy User Experience

3. Reflective Design:

- ✓ Reflective Design focuses on long-term emotional satisfaction.
- ✓ After using the application, users think about their experience.

Questions users ask:

- Was this a good experience?
- Will I use it again?
- Will I recommend it?

Swiggy Example:

After **delivery**, the app says, 🎉 **"Enjoy your meal!"**

It also gives:

⭐ Reward Points ⭐ Favorite Orders

⭐ Coupons ⭐ Personalized Recommendations

- ➢ Now Anita thinks, **"Next time I'll use Swiggy again."**
- ➢ This is Reflective Design.

Complete Emotional Design Flow

Open App

↓

Visceral

(App Looks Beautiful)

↓

Behavioral

(App Works Smoothly)

↓

Reflective

(User Loves the Experience)

↓

User Returns Again

Emotional Design Elements:

1. Colors: Colors influence human emotions.

Example: Orange is used throughout Swiggy.

Orange creates:

- Energy

- Hunger
- Excitement

Therefore, the **Order Now** button is orange.

2. Typography:

- ✓ Fonts should be easy to read.
- ✓ Restaurant names use bold fonts.
- ✓ Prices use smaller fonts.
- ✓ Offers use larger colorful fonts.
- ✓ This improves readability.

3. Images:

- ✓ Humans process pictures faster than text.
- ✓ Instead of writing **"Crispy Cheese Pizza"** Swiggy shows a **delicious pizza image**.
- ✓ Immediately users become hungry.

4. Animation: Animations make the app feel alive.

Examples:

Delivery bike moving

↓

Food preparation animation

↓

Payment success animation

↓

Confetti celebration

Users feel excited.

5. Microinteractions: Small responses after user actions.

Examples:

❤ Heart animation.

✓ Cart shakes slightly.

✓ Green tick after payment.

✓ Vibration after order confirmation.

These tiny details improve user satisfaction.

Cognitive Psychology:

Cognitive Psychology studies how humans

- ✓ think
- ✓ remember
- ✓ solve problems
- ✓ learn
- ✓ understand
- ✓ make decisions

UX designers use this knowledge to reduce users' mental effort.

Example: Imagine Anita opens a confusing app.

She cannot find:

- Search
- Cart
- Payment

- ✓ She becomes frustrated.
- ✓ This is poor cognitive design.
- ✓ Now imagine Swiggy.
- ✓ Everything is where users expect.
- ✓ This is Cognitive Psychology applied.

Cognitive Process 1 – Perception: Perception means recognizing information.

- ✓ When Anita sees 🛒, she immediately knows, **"Cart"**
- ✓ No explanation is needed.
- ✓ Good UI uses familiar icons.

Cognitive Process 2 – Attention:

- ✓ Humans cannot focus on everything.
- ✓ Therefore important information must stand out.
- ✓ Swiggy highlights 🔥 Today's Offer

using

- bright colors
- larger fonts
- banners

Users notice it immediately.

Cognitive Process 3 – Memory:

- ✓ People forget information easily.
- ✓ Good UI should reduce memory load.
- ✓ Instead of asking Anita to type Address, Phone Number, UPI every time, Swiggy **saves them**. **Users don't need to remember**.

Cognitive Process 4 – Learning:

- ✓ People learn by repetition.
- ✓ Every restaurant page follows the same layout.

Picture

↓

Menu

↓

Ratings

↓

Add to Cart

Users quickly learn the interface.

Cognitive Process 5 – Decision Making:

- ✓ Too many options confuse users.
- ✓ Instead of showing 500 restaurants, Swiggy organizes them into

- Nearby
- Fast Delivery
- Top Rated
- Budget Meals

Now decisions become easier.

Cognitive Process 6 – Problem Solving:

- ✓ Mistakes happen.
- ✓ Suppose payment fails.
- ✓ Instead of ✕ Error, Swiggy says, **"Payment Failed. Please Try Again."** Or **"Choose Another Payment Method."**

Users recover easily.

Cognitive Load:

- ✓ Cognitive Load means **the amount of mental effort required to complete a task.**
- ✓ **High Cognitive Load**

Imagine:

- 100 buttons
- Tiny text
- No search
- Difficult checkout

Users become confused.

Low Cognitive Load: Swiggy reduces effort by

- ✓ Search bar
- ✓ Filters
- ✓ Saved addresses
- ✓ Previous orders
- ✓ One-click reorder

Users think less.

Important Cognitive Laws:

Hick's Law:

More choices

↓

More thinking

↓

Slower decisions

Swiggy first shows **Top Picks instead of every restaurant**.

Fitts' Law:

Large buttons

↓

Easy clicking

Example: Large **Place Order** button.

Miller's Law:

- ✓ People remember only a limited amount of information at one time.
- ✓ Therefore checkout is divided into

Step 1

Address

↓

Step 2

Payment

↓

Step 3

Confirmation

instead of showing everything together.

Jakob's Law:

Users expect familiar layouts.

Swiggy places

- Search
- Cart
- Profile

where users normally expect them. Users learn instantly.

Relationship Between Emotional Design and Cognitive Psychology:

Emotional Design (Heart)	Cognitive Psychology (Brain)	Swiggy Example
Creates excitement	Reduces mental effort	Attractive food images with simple navigation
Uses colors and animations	Uses perception and memory	Orange buttons and familiar icons
Builds trust	Improves decision making	Secure payment with categorized menus
Encourages loyalty	Makes the app easy to learn	Rewards, order history, and one-click reorder