NOVA SCHOOL OF SCIENCE & TECHNOLOGY

Interação Pessoa-Máquina

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Interface Design Analysis

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Good Interface

Hand turning water tap

Objective of the Interface:
The tap's objective is to allow users to control the flow of water, providing access to either a continuous stream or a specific amount as needed.

Good Aspects:

- **Immediate Control**: The turn mechanism gives users precise control over water flow, allowing easy adjustment from a gentle trickle to a full stream.
- **Feedback**: The tactile response from turning the handle provides instant feedback, so users know immediately if water flow is increasing or decreasing.
- **Intuitive Design**: The turning mechanism is simple and familiar, with users understanding intuitively that turning one way increases flow and the other decreases it.

Bad Aspects:

- **Ugly**: Nowadays we tend to enjoy simpler designs that don't disturb their environments, which this design fails, but since that's not a main component of its interface, that doesn't make up a massive issue.
- **Microbes:** this type of tap is not suitable for public restrooms and the likes, due to the potential of transmitting germs due to contact with unwashed hands.

Why It's Good:
The simplicity of a hand-turning tap minimizes confusion and maximizes ease of use. The user has immediate control and feedback, making it suitable for users of all ages and abilities. Everyone loves this type of tap, rarely showing frustration with it, and has been loved for literal centuries. A tried and true good interface

Bad Interface

Automated Faucet Sensor

Objective of the Interface:
The sensor-activated faucet is designed to allow users to wash their hands without touching the faucet, aiming to reduce germ transmission and conserve water in public spaces.

Good Aspects:

- **Hygienic**: The hands-free design reduces the spread of germs, which is especially beneficial in public restrooms.
- **Aesthetic Appeal**: Sensor faucets often have a sleek, modern appearance that enhances the look of public restrooms.
- **Water Conservation**: Limited water flow duration helps conserve water, aligning with sustainability goals.

Bad Aspects:

- **Inconsistent Activation**: Sensors frequently fail to activate on the first attempt, requiring users to move their hands around to trigger water flow, which can be frustrating.
- **Limited Detection Range**: Narrow detection range makes it challenging for users to find the exact position that activates water flow.
- **Interrupted Flow**: Short bursts of water often don't provide enough time for a full hand wash, leading to repeated activations that disrupt the washing process.

Why It's Bad:
While designed for hygiene and water conservation, the inconsistent activation, limited range, and frequent interruptions in water flow reduce usability and can frustrate users. Unlike traditional taps, users lack precise control, making the experience inefficient. Some of the choices taken make sense, given its objectives, but if it's to the point where the users get frustrated, and would rather not use the interface, preferring the older one, there clearly was a design failure.

Suggested Improvements:

- **Expand Sensor Range**: Increase the detection range for easier activation.
- **Adjust Flow Duration**: Extend water flow by a few seconds to support a complete hand wash without significant water waste.
- **Provide Feedback**: Add a light or small sound to confirm sensor activation, reassuring users that water will flow without further adjustment, helping with user frustration (We've all been there).