Lab assignment 2

Hick-Hyman law

Hick's law is a psychological principle that states that the more options are available to a person, the longer it will take for him or her to make a decision about which option is best.

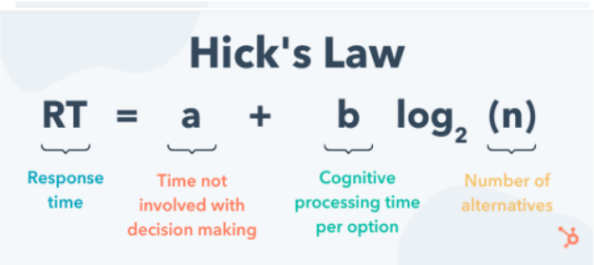
Hick's law is also sometimes referred to as the Hick-Hyman law. Hick's Law is a simple idea that says that the more choices you present your users with, the longer it will take them to reach a decision.

It's common sense but often neglected in the rush to cram too much functionality into a site or application. As a designer, you will use Hick's Law to examine how many functions you should offer at any part of your website and how this will affect your users' overall approach to decision-making.

The more options, the better, right? The Hick-Hyman Law, also commonly referred to as Hick's Law says the more options, the longer it takes to make a decision. The Hick-Hyman Law predicts that the time it takes a user to make a decision is increased by the number of choices that the user has. In other words, the more options you have, the longer it will take you to make a decision.

PRINCIPLE OF LEAST EFFORT

- This is a simple principle, but also a very valuable one.
- The principle states that when there are several ways to achieve the same goal, we will choose the course that requires the least amount of effort.
- As UX practitioners, we should take this into consideration when designing interfaces. Our goal on every website is to allow the user to accomplish their task in the easiest way possible.



Let's break this equation down:

RT = reaction time

a = the time that is not involved with decision making

b = an empirically derived constant based on the time it takes to cognitively process each option (approximately 0.155 seconds for humans)

log2 = logarithm function

👎 = the number of equally probable alternatives

Hick's Law Example

Hick's Law applies best to situations in which response time is critical and decision-making is simple.

So say your phone starts playing a sound.

It takes three seconds to detect that the sound is an alarm you set. So a = 3.

Because you're a person! b = 0.155 sec. You have four buttons to turn off the alarm: Snooze, Stop, the home button, and the power button. So n = 4. Let's plug these numbers into the equation to solve for response time.

The time to respond would be RT = (3 sec) + (0.155 sec)(log2 (4)) = 3.31 sec. Now consider if there were eight buttons to turn off the alarm instead of four. Then the time to respond would be 4.31 sec. Now consider if there were 12, 20, or 40 buttons. The time to respond would continue to increase logarithmically. This makes sense when you consider information overload. Information overload occurs when a person has too much information or options to consider, which makes it more difficult to make a decision

Assignment:

Design a menu structure for ordering household items from a nearby mall directly to your home through a mobile phone interface. Categorize the items in menus and sub-menus. Design 3 alternative screens or menus for effectively ordering items from listed categories, making use of Hicks Law.

Compare your designs by actually measuring the reaction

time for various test cases and also using Hick's Law expression.

Consider the following test cases while designing the Menus

1. To use a more deep menu with more initial choices

2. To use a hierarchy of multi-level shallow menus

3. User's prior knowledge and experience about the domain and interface.