

A Theory of Micro Economic Behavior

“The first draft of anything is shit.”

February 11, 2023

0.1 Context

The pretext of this document is as follows. Human behavior as well as economics is difficult to predict due to factors such as scale, human variability in physical terms as well as the subjective nature of each individual. However at scale a model that can predict behavior of the average individual is sufficient to use. The goal being that this could be used to understand and optimize one's own situation as well as attempt to forecast the short term future.

0.2 Assertions

The theory rests on the bases if these assertions;

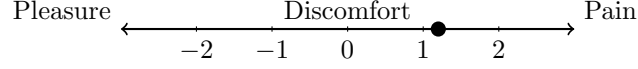
1. *That effort can be defined in this context as the the total integration of pain/pleasure that the subject experiences over a duration of time.*
2. *That when a subject is presented with an opportunity of voluntary exchange that they will choose the option that minimizes their own net effort.*

However since each person has different predispositions to what activities they like or don't like the amount of effort that should be attributed to that activity differs person to person. Since subjects are all unique it would be inappropriate make value proportional to simply the net effort associated with a good or service, as tempting as *that* may be. Instead metrics of effort can only be used for comparing the same subject. Also since some people have higher ambition, willing to expend more effort in the pursuit of return of effort, subjects have variability along this dimension.

Using these assumptions a basic model can be constructed from low level ideas. For instance; say two people living in a house both must do dishes and vacuum clean the carpet at some some point. Perhaps they roster this so that each person dose these jobs or do pitch in when necessary. If subject one dose not enjoy one of these jobs more than the other and, as it happens subject two, may also dislike the other job more, it this case there may be mutual benefit in each person doing all of one of the jobs. So long as from each person's perspective the trade is wanted, the amount of discomfort that each person experiences is reduced in comparison to the alternative over the duration of time. In this case there exists mutual benefit both parties that can be understood by the reduction of both parties 'effort'. A more rigid definition and explanation of effort will be addressed in a latter chapter. It is also worth pointing out that there may be an inequality in the effort saved for the parties.

0.3 Definition of effort

Conceptually, *effort* can be defined for use in this document as the ***total integration of discomfort over time***. Where discomfort can be both a positive or negative value on a number line.



A scale of attributed pleasure value ρ integrated over the time of an activity can be defined as the sum of the integrated change in pleasure with respect to that activity:

$$\varphi = \int \Delta \rho \, dt \quad (1)$$

0.4 Individual trade-off

An individual will (generally) opt to choose the option at any time that is has the most φ , such as doing option a or not doing option a . When ignoring time delay factors a trade for a can be expressed as:

$$\varphi_{option} > \varphi_{alternative} \quad (2)$$

However when time difference is relevant, the pleasure and pain become subject to the expected or anticipated φ . Notice that the factors subject to time also has an effect in relation to the decision to make a trade.

$$\varphi_{anticipated} + \varphi_{timeSubdugation} > \varphi_{alternative} \quad (3)$$

0.5 Exchanges

The first assumption that must be made here is that the individual scaling of ρ remain independent from both parties exchanging any form of effort. If person one ($p1$) and person two ($p2$) each *perceive* the exchange as being the higher φ it in therefore deemed in each of their own individual interests.

$$(\varphi_{p1,trade} > \varphi_{p1,noTrade}) \cup (\varphi_{p2,trade} > \varphi_{p2,noTrade}) \quad (4)$$

when given options of trades people will choose the option that has the highest increment of φ

$$rows \quad (5)$$

0.6 Methodology of Analysis

0.7 Trade and Exchange

0.8 Time Dependent Problems

0.9 Probability Dependent Problems

0.10 Examples in Business

0.11 Examples in Marketing

In order for there to be mutual benefit in marketing the exchange hinges on the amount of effort that the customer would have to expend in order to make an informed choice. Even if the information rendered is incorrect it is still a starting point where the customer could more easily confirm or debunk the information. As well as this there are too many options or 'deals' for one person to sort through. You could imagine how high the stack would be if they were all printed out. The effort that would be needed to sort through this pile and evaluate each one with respect to how beneficial it would be while considering the probability of a false claim, not to mention the effort required to self educate in order to interpret the value of a deal so well that they could spot what is not in a deal as well.

With this perspective in mind the value to the customer that an advertisement has as well as sales people's time can be evaluated in terms of the effort saved by the customer. The effort saved is not relative to the customer doing all the research instead to the next best option that is available to the customer.

0.12 Governance and Involuntary Trading

This section attempts to discuss the effects that non consensual trade (in the context of this paper) that is implicit in the role of government.

0.13 Ethics

Perhaps it is appropriate to include a section on the ethics of the types of dynamics at play discusses in these chapters. This is subject to the perspective of the reader as it is not uncommon for people to perceive situations in entirely different terms particularly when terms such as involuntary. However the perspective that this document seeks to put forward can shed some light on ethical conundrums.

A criticism often levelled at ideologies that favour free trade or in more general terms larger degrees of purely voluntary exchange, is that advertising has a negative effect on the