For a moment of confusion: The dismal lives of economic agents

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Abstract

Does anyone think of the agents, that economists tinker with?
Do they not have emotions,
In the hypothetical worlds in which they live?
"Only if we assume so!" said a professor I once knew,
But when was the last time someone assumed,
Their agents could do what they wanted to?
They may be in employment, or consumption smooth for eternal time,
But rarely get the chance of cocktails with a little squeeze of lime.
They never watch a movie, or get that extra time in bed,
And in the world of rational agents, romance is really dead.
In models of search they excel, accumulate just as we planned,
But given the chance they'd swap it all, to walk barefoot in the sand.
For a moment of confusion, or a taste of home-made jam,
Or when faced with a decision, just not to really give a damn!
Like all of us they want to know how real life really feels,
So next time you build a model,
Spare a thought for the agents with which it deals.
Give them time off at the weekends,
And the occasional, "you're doing great!"
And every so often let them stay out on a raunchy week night date.

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1 Introduction

Since Samuelson's 'Foundations of Economic Analyses' we have utilised abstract theoretical agents throughout economics. To some, their lives are enviable. They are often infinitely lived, and thus, don't have to worry about death. They are typically guaranteed an associated ever-lasting stream of consumption or income. And unlike modern life, they make their choices based on a well-specified set of rules, so stress isn't really an issue.

I take the opposing view. I believe that we have mistreated our theoretical agents terribly. We all know the pleasure of a Sunday morning lie in. Or the feeling of holding a loved ones hand whilst walking through a forest. However, in a thorough review of the literature, I can find no examples of this class of experience in the lives of economic agents. In summary, our agents haven't really lived.

The contribution of this paper is to redress that gap. In section 2, I create a model in which theoretical agents get a taste of the good life. Having thought hard about what is most important in my life, I develop the standard utility maximisation model to better encapsulate those features. Section 3 concludes.

2 Model

2.1 Standard model

A standard utility function is of the form:

$$u = f(c, l) \tag{1}$$

where c is consumption, and l leisure. Leisure and consumption are typically related by a function of the form:

$$c = g(w(1 - l), p) \tag{2}$$

where w is the current labour market wage and p the price of the consumption good. Total time available to the agent, and p are normalised to 1 without loss of generality.

In the standard model, agents are faced by the following maximisation problem:

$$max \sum_{t=0}^{\infty} u(c) \; s.t. \; \sum_{t=0}^{\infty} (c + l) \leq \sum_{t=0}^{\infty} w \tag{3}$$

The solutions to this problem are well-known. The agent's Euler equation determines the optimal path of consumption. This model has thousands of applications throughout economics, and it is a fundamental workhorse of the field.

However, having not specified a framework for shopping or leisure time, we have left our typically tightly-governed agents on their own to work out their private

lives. We cannot be sure that they will act in any presumed manner. One, there is no guarantee that an appropriate 'enjoyment' world exists.[1] Since no existence framework is ever provided, it may be the null set. Two, the behaviour of our agents in this little studied world, if left unspecified, should not be presumed to be predictable.

2.2 Lasange, love, and a little confusion

I propose potential solutions to these problems as follows. We amend equation (1) as follows:

$$u = f(c, l, T, F) \tag{4}$$

where T represents the consumption set 'my mother's lasange and trifle dinner'. It is truly wonderous, and probably the best meal I know of. Given that this model is being built in a British institution, I also add F, representing expenditure on fish and chips. It is assumed that $u_x(.) > 0$ and $u_{xx}(.) < 0$, $x \in \{T, F\}$, as is standard.

Next, we amend equation (2),

$$c = \hat{g}(w(1 - l - B - D), p) \tag{5}$$

where B stands for beach time, and D a night off each week to go on a date. To ensure variety of experience, I define the 'date selector' as follows:

$$Date = \begin{cases} cinema & \\ dinner & \\ theatre & if \\ walk & \\ pub & \end{cases} \begin{array}{c} 0 \leq \mu < 0.2 \\ 0.2 \leq \mu < 0.4 \\ 0.4 \leq \mu < 0.6 \\ 0.6 \leq \mu < 0.8 \\ 0.8 \leq \mu \leq 1 \end{array}$$

where μ is a random variable with density h on $[0, 1]$. Note that the g function is also changed to $\hat{g}$. This change in notation represents a 'near-rationality' due to the presence of impulse purchases that turn out to be non-optimal uses of wealth.

Finally, we introduce charity, X, into the equation (3), and a stochastic component, η, that reflects those times when you don't really give a damn, and you do something a little crazy that might not be right, but feels good when you are doing it:

$$max \sum_{t=0}^{\infty} u(c, \eta) \; s.t. \; \sum_{t=0}^{\infty} (c + l) \leq \sum_{t=0}^{\infty} w - X \tag{6}$$

This completes the system.

[1] If anyone knows how to make the first ' turn the other way, please contact me.

3 Conclusions

In this paper I have proposed a new 'lifestyle' approach to economic modelling, and have provided economic's theoretical agents with a little real life enjoyment. There are clearly many directions in which this modelling strategy can be taken. For example, if this model were to have been built in an American university, T and F may have been substituted for H and P, representing the consumption of hot dogs and pretzels.