Rationality in Economics

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Even before we begin to understand the nuances of assumptions made in the field of Economics, it is important to understand what Economics is. Going back to the early 18th century, we find physiocrats like David Hume and Adam Smith discussing ideas of laws which need to be discovered, that govern the complex set of interactions that produce and distribute consumption goods and the resources required to produce them. This would also entail establishing causal links between various "economic" phenomena, say between change in prices and change in economic activity.

Thus, Economics is less of a social science, and more like the natural sciences. Once economics takes the shape of a scientific study, we need to look at it through the same lens which science uses. In his anthology, *Philosophy of Economics*, **Daniel Hausman** lists four central points which need to be addressed: goals of theorising, nature of causal explanation, relevance as theory, law or model, and ways to (de)confirm theories. The rise of techniques of modelling have paved the way for model-based theories, wherein data is used to predict output using some pipeline of hypothesising and assumptions. One pertinent question that we face then, is that in as long as we are getting close to good results and predictions for the given input, should we really care for the realism of assumptions and hypothesising that has led to these predictions? That is, should we at all care for the blackbox (the "pipeline"), and look under the hood? Hausman gives a fervent support to critically looking at assumptions, such as the assumptions of rationality and causality, in his paper titled "Why look under the hood?" He says that this would lead to discovery of a wealth of information, because incomplete knowledge necessitates breakdown of generalisations. Also, **Vernon Smith** in his paper on *Economics in the Laboratory* looks at why economists conduct experiments and essentially highlights the important role it plays as many of the fundamental claims of modern mainstream economics are refuted by economic experimentation.

But what are these assumptions which make us not look under the hood? One of the primary and foundational assumptions of economics is that regarding the behaviour of individuals. The first principle of Economics says that "every agent is actuate only by self-interest". However, as **Amartya Sen** argues in his seminal paper *Rational Fools: A Critique of the Behavioural Foundations of Economic Theory*, this assumption completely pushes out any moral, sympathetic or social norm considerations, which is barely the case in real-life economic situations. For instance, it is easy to categorise financial gain and likes into the positive end of the balance, and financial loss and dislikes into the negative

end. But where do we put commonplace human decision-drivers such as sanity, sympathy, ambitions, greed, justice and love? He also establishes through the Liberal Paradox that the idea of Pareto Efficiency, which every microeconomic theory strives to achieve, does not require equitable wealth distribution. Thus, the idea of social welfare is also not captured when a theory is based on such an egoistic assumption about the individual. The Theory of Revealed Preferences further adds that "it is possible to define a person's interests in such a way that no matter what he does, he can be seen to be furthering his own interests in every isolated act of choice." This might ensure "consistency" of preferences, but like Hausman argues, we need to look under this hood of consistencies, and investigate the egoistic nature of these preferences. Sen argues for incorporation of "sympathy" and "commitment" to current economic models. He goes on to suggest an idea of metarankings: a ranking of preference rankings to express moral considerations. He, like Hausman, urges for not just act evaluation, but rule evaluation.

Taking Sen's considerations forward, **Albert Hirschman**, in his paper *Against Parsimony*, more categorically talks about an individual's choice being of two kinds: wanton choices, in which individuals are unreflective in their grip of whims and passions, and the non-wanton choices, which involve the individual reflecting and modifying his preferences. While economics already takes care of wanton changes, under the modelling variable "change of tastes" which have a goal utility, the non-wanton changes are not incorporated since they are a change in value, and have a process utility. In fact, humans as economic agents do so many non-routine activities (in the pursuit of truth, freedom, love, friendship, etc.) that we must find ways to include them as well. Under the question of "What do Economists economise?", if one talks about love (morality/civic spirit), it is neither a scarce resource, nor an augmentable talent. So we need to go back to the drawing board and think about it differently, perhaps from scratch.

In their paper *Beware of Economists Bearing Advice*, Hausman and **Michael McPherson** point at another weakness of current economic counsel. That it relies on theory whose only normative concern is welfare and its distribution, but that is mistakenly identified with the egoist objective-function of satisfaction preferences! They take the example of in-cash versus in-kind benefits, to argue that well-being and satisfaction of preferences are not the same. That sometimes the basis of a preference could be a false belief, and that sometimes people care of more than just their own well-being, they could over/underestimate their benefits, and sometimes must be coerced for their own good (paternalism). And a lot of times, welfare benefits are more a matter of justice than benevolence. Providing benefits in kind could strengthen people's political freedom, at the cost of their market freedom.

Also, can we even validly assume preferences to be endogenous? And if we do, how do we account for the external influence on our preferences? **Samuel Bowles**, in his paper *Endogenous Preferences* recognises the cultural effects of economic institutions that can foster a unified approach to behavioural sciences and suggests a reconsideration of some aspects of normative economics. By studying the cultural consequences of markets and other economic institutions on our preferences, he could summarise it into 5 primary influences – Framing and situational construal (which considers the social psychological sense), intrinsic and extrinsic motivations (which incorporates individual feelings like self-

determination), effects on the evolution of norms (which considers the influence on social interaction structure), task performance effects (which considers the capacity and psychological functioning at work) and effects on the process of cultural transmission (which considers the influence of the learning process on our values and desires). Bowles asserts that preferences are strongly cognitively mediated and are acquired through genetic inheritance and learning.

A key insight, to build a bridge from theoretical to pragmatic economics, can be gained by looking at **Uri Gneezy** and **Aldo Rustichini**'s study, in their paper *A Fine is a Price*. The deterrence hypothesis predicts that everything else remaining unchanged, introduction of a penalty will reduce the occurrence of behaviour subject to a fine. Their experiments, however, seem to reduce the power of this hypothesis. In their study where they imposed a penalty on parents for coming late to pick up their kids at day-care centres, they observed that the number of defaulters had actually increased. What's the reason for this aberration? Clearly, some assumption has been defied here, and in this case it is the assumption of ceteris paribus. A common assumption in Economics to make modelling convenient, the assumption of "everything else unchanged" is barely observed in real-economic scenarios. In this example, there is an introduction of information to the parents that "the fine is the worst that can happen". This change on information causes a change in the equilibrium in this "market". Gneezy and Rustichini provide a sequential game to model this situation, but even this model is not rid of certain assumptions (like perfect selfishness) about the individuals (the teacher and parents). Thus, they establish a model of social norms. They introduce norms like "a fine [under certain conditions] is a price" and "once a commodity, always a commodity" to explain the rise and eventual constancy in the number of defaulters (even after the fine is retracted).

Can this idea of social norms be incorporated in more economic phenomena? In their paper called *Laws and Norms*, **Roland Benabou** and **Jean Tirole** try to establish three key shapers of public policies: values (which capture the old economic idea of preferences), laws (which capture material and other incentives) and norms (social sanctions and rewards) to various economic models. The paper introduces the essential role played by law in expressing and shaping society values, which in turn becomes critical for setting the law and a means of imposing material incentives. They also rightly point at the possibility of crowding out of any positive effect of a material incentive. This certainly helps us in providing a better explanation to the example of kids at day-care centres as stated earlier. They have further elaborated and substantiated their ideas with a comprehensive mathematical model and included social norms and extrinsic incentives along with intrinsic motivation as different parts of the equation to represent the preferences of an individual.

The idea of social norms clearly needs to take the centre stage in more debates surrounding economics and public policies made by governments. Like Sen argues, Pareto Efficiency could not assure equitable wealth, and thus social welfare. For instance, in his paper titled *Why Surfers Should be Fed*, **Philippe Van Parjis** argues for a substantial unconditional basic income through a defensible liberal theory of justice. On the basis of Rawlsian difference principle, he asserts that surfers should be fed as it demands maximinning the real freedom to pursue the realisation of ones conception of good life (which is highly subjective). In the view of Jon Elster, the idea goes against the widely accepted

notion of justice since it is unfair for abled-bodied to live off the labour of others. The clever-dumb example cited in the paper raises questions on the subjectivity of the simplest of definitions such as "what is counted as work?" and proves that providing excessive incentives to work conflicts with the efficiency in the weak sense of Pareto-Optimality. He also takes the example of two identically talented individuals and using Rawlsian indexing method tries to analyse the various facets of the idea. Further, the paper takes into account Dworkin analysis, which suggests replacing income with wealth as an index of primary goods and in the case of non-Walarasian world, which inspires us to look at job as an endowment.

In summary, to quote back from Sen, there's a need to reshape the idea of rationality. The economic man must move from being a rational fool, to, well, a less of a fool. Suggestions of incorporating commitment and sympathy, social norms and external influences into preferences, and providing empirical support to current economic theories are necessary for a closer-to-reality modelling and achieving of economic goals. Also, there is a need to reverse engineer the way we look at economics. Given that the sources of information in an economic agent are dynamic and are not all knowable, we must look to extract these sources of information as features of an economic model, by looking at the public reaction to a policy change and then feeding this back to the theory's premise. This is akin to a data analytics approach to economic studies. Generating a feedback would slowly eliminate the need to begin with certain assumptions in the first place: they are needed only to begin bootstrapping this cyclic system of $Theory \rightarrow Policy \rightarrow Reaction \rightarrow Theory$ (see figure below). After which their requirement is eliminated, and we would have succeeded in bridging the gap between the theoretical and the pragmatic, by delivering a more direct backing of economists to public policy makers.

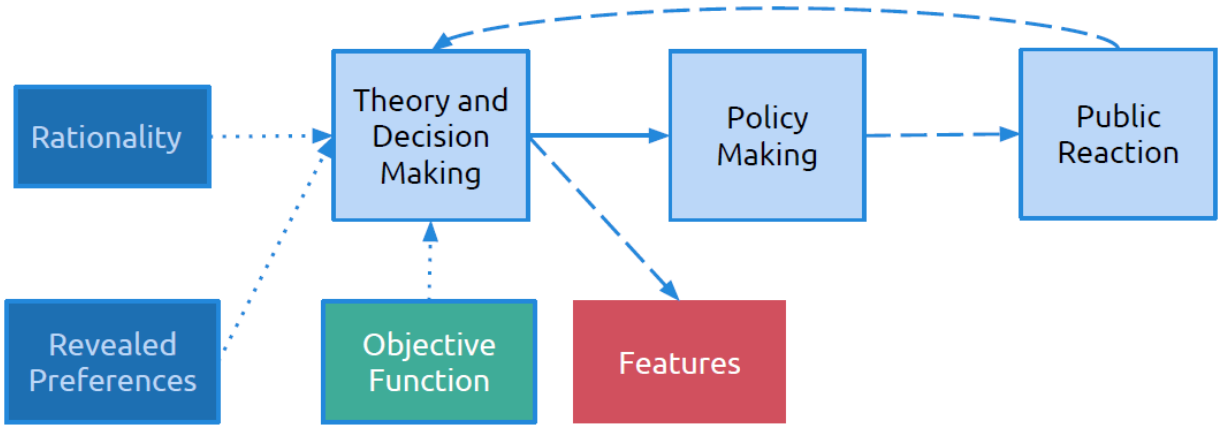

Figure 1: Taking a reverse-engineering approach to Economic Theory development