

Principles of Economic Misunderstanding¹

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Economists and public officials are often frustrated by the failure by the public to understand economic matters. They may be trying to push some reform through, while explaining what they are doing and why, only to be met with incomprehension. Economists typically do not realize the magnitude of the obstacle, often attributing their lack of success to the excessive use of jargon. This is because, after years of training and practicing the concepts of their trade, they come to believe that economics is simple and obvious. It isn't.

From the perspective of the public, the image is very different. For many issues that matter to them directly, members of the public believe there is a solution, an obvious one, and don't understand why the authorities fail to take a common-sensical measure. Consequently, they suspect hidden motives, and in this era where conspiracy theories flourish and spread, they will readily find good arguments to buttress such suspicions.

Examples of "obvious" steps that the authorities often resist could include price caps, minimum wages, a balanced budget, trade protectionism, and increased social services, while the public oppose pension reforms and carbon markets.

In this short paper, I will try to explain the root causes of the difficulties experienced by the general public of which economists are not aware. These come from two directions: our human cognitive limitations, and special features of economic theorizing.

Our cognitive mental equipment is adapted to functioning in our ancestral conditions. We are very good at understanding certain domains that were important (and to a great extent

¹ For a detailed treatment of the issues briefly discussed in this paper, see (Leiser & Shemesh, 2018)

are important today too). The human capacity for conceptual understanding and efficient reasoning makes extensive use of a small set of framework theories, which developed in humans in a specific evolutionary context ((Pinker)2005, 2006). Humans had to master the mechanics of their physical environment, to navigate the social world, and to negotiate the moral aspects of their social relationships. Our framework theories include Folk Psychology, that explains and predicts behavior of others in terms of their intentions and beliefs (Boyer, 2018). We are quite good at Intuitive Physics (involving objects of a size we can interact with), that relies on concepts such as trajectory, inertia, forces, collisions, and at Folk Biology (with concepts such as illness, nutrition, death, and the like).

The modern world raises difficult challenges to people equipped with such a set of conceptual tools. We must come to grips with much larger systems than before (climate, ecology), and don't have much in the way of readymade intuition. When people encounter matters for which they are not cognitively equipped, they tend to assimilate them into one of these basic cognitive domains, or to rely on general reasoning skills. The former may not be very appropriate, and the latter, cognitive psychology tells us, are limited.

Public understanding of any domain is poor (Shtulman, 2017; Sloman & Fernbach, 2017). But we will argue that economics is extra hard due to the mismatch between our cognitive endowment and the principles of economic thought.

This has consequences of various kinds. One is that the public behave according to its lights, and these are rather dim. "Economics should be expanded to include serious quantitative study of changing popular narratives." Writes (Shiller, 2017). The second is that not all political decisions makers are economically informed, and are apt to promote policies consonant with lay thinking, especially is they are authoritarian and determined to ignore the advice of their savvier advisors. Politicians are affected even when they do understand economics. As Jean-

Claude Juncker (past President of the European Commission) remarked "We all know what to do, we just don't know how to get re-elected after we've done it ". A special case is that of the populist leaders, who build their appeal on the contrast between technocratic elites and the authentic down to earth real people. They cannot risk sounding overly complex, lest they become identified with the elite and lose their legitimacy.

Let us consider the cognitive limitations of people. We will focus on two main components of our thinking equipment. When thinking deliberately ("system 2" -see (Kahneman, 2011)) we rely on *Working Memory*, a cognitive buffer responsible for the transient holding, processing, and manipulation of information. The capacity of this buffer is severely limited. The complexity of reasoning that can be handled mentally by a person is bounded by the number of items that can be kept active in working memory and the number of interrelationships between those elements. *Long Term Memory* (LTM) is a huge compendium of knowledge, but it is poorly organized (rather like the internet considered as a whole (Leiser, 2001). Access to its content tends to retrieve only directly and superficially relevant items. Relevant knowledge, when its relevance is not directly apparent, will be ignored. Taken together, those two limitations have important consequences for reasoning about the intricacies of economic decisions.

Due to the exiguity of working memory, people have great difficulties thinking through an issue. They don't trace indirect or feedback consequences, and don't encompass all relevant variables and their interactions.

A simple illustration is the ubiquitous finding that when asked about whether state spending on X should increase, decrease or stay the same, large majorities will be in favor of increasing that spending, and for just about any X: social security, health care, education, combating crime and so forth. Mentioning the possibility of increased taxes to pay for this

dramatically reduces support of that spending. People support funding of programs based on their perceived worthiness considered in isolation. More generally, opportunity costs are frequently ignored.

The economic world functions as a complex causal system, whereas people are remarkably poor at combining causal links into a system (Grotzer, 2012; Perkins & Grotzer, 2005). The *scope* of their understanding tends to be overly narrow, and they typically go for simplistic solutions to complex problems. Consider for instance the policy proposed a few weeks ago by a Parisian mayoral candidate: The State will provide 10000 euros towards buying a flat, at an estimated cost of 2 billion euros. It is not difficult to work out that the combination of a fixed supply and increased demand will lead to higher prices, a large windfall for landowners, and little relief for would be buyers. People have little trouble in following this argument; but they don't contemplate it spontaneously. The spontaneous policy idea usually consists merely in pushing in the direction opposite to the presenting symptom, without looking for alternative routes that might achieve the same goal. Other examples include raising minimum wages, or preventing cheap imports from depressing domestic wages. The obvious and direct route may or may not be a good solution, but other ones, such as better education, developing infrastructure, developing sectors with competitive advantage, or providing alternative investment opportunities never come to mind.

There are other reasons, beside the vagaries of retrieval from Long Term Memory, responsible for the paucity of solutions considered by lay people. Central amongst those is the focus of analysis. *Lay people think about the individual, while economists think about the aggregate.*

As we saw, we humans are excellent at understanding motivations and needs, beliefs and goals, and this how they we tend to interpret any causal effect. This means that, for

instance, the public will tend to judge the appropriate age for pension eligibility by focusing on the need of the person, who has worked long and hard. Much as a jury will decide on the appropriate compensation for a person who suffered injury because of malpractice, or of a faulty piece of equipment. But policy should consider whether a policy is tenable, if applied to all eligible persons. It also should consider how its appropriateness will evolve over time, since this can have devastating consequences for inter-generational fairness. Going beyond the individual to consider the demographic composition of the population and its predictable evolution in the future is outside the scope of spontaneous thinking, which of course leads many laypeople to rail against policies that do consider these (see e.g. in Italy or France).

Since economic causality functions at the aggregate level, it is basically impenetrable for people who didn't have the benefit of appropriate training. The kind of causality that links aggregate variables is the cumulative outcome of countless individual transactions that are not individually known.

Its is depressingly easy to point to more examples of limited understanding. Even the simple notion of how supply and demand affect prices is not easily grasped. To be sure, people understand readily that an individual may forgo a purchase if the price is too high. But the notion of market price relies on equilibrium between potential buyers and producers, and the alternative uses they might have for their money and is not easily grasped. This leads to the tendency to assume that certain people deliberately fix prices, doing so to their advantage.

While thinking about causality at the aggregate level does not come naturally, it is nevertheless forced upon the general public, who is constantly exposed to economic talk, involving of course inflation and unemployment, but also growth, trade balance, and such concepts as interest rate changes, currency exchange rate or budget balance.

Much of their analysis is based on a simple value calculus. Leiser and Aroch (2009) presented some twenty macroeconomic variables to participants. These included measures of aggregate economic activity (like the GNP), the rate of economic growth, corporate profits, wages, private spending, private investments on the stock market, the rate of inflation, the rate of unemployment. For every pair of variables, participants were asked to judge whether they were causally related, and if so, in what direction. For example, *If the unemployment rate increases, how will this affect the inflation rate?* Specifically, they were asked, for every pair of variables A and B: *If variable A increases, how will this affect variable B?* Possible answers were: B will increase /B will decrease/B will not be affected/"I don't know". The average rate of "Don't Know" answers was very low.

How did they decide, since they demonstrably lack any understanding of the causal links between most of those variables (Leiser & Drori, 2005) ?

An illuminating pattern is found when one plots all the variables on a line, putting them close together the more they are positively associated (A increases B), and far from one another the more they are negatively associated (A decreases B). It turns out that this ranking perfectly matches rankings of how good or bad an increase in each variable is judged to be by laypeople. Changes in economic variables are considered to be good or bad, and this provides the (dubious) ground for their answers: if both A and B belong to a same pole, (good or bad), an increase in one will raise the other; if they belong to opposite poles, a raise in one will cause the other to drop. This heuristic is called the *good-begets-good (GBG) heuristic* (Leiser & Aroch).

This neat trick is not absurd; but it can be terribly misleading. For instance, while the Phillips curve has lost much of its sheen, it is still the case that no economist expects inflation and unemployment to rise or drop in concert. Yet study after study have shown that the public

believes this to be the case, not only for unemployment and inflation, but also for interest rate and inflation (Andre, Pizzinelli, Roth, & Wohlfart, 2019; Dixon, Griffiths, & Lim, 2014).

Rather than viewing the economy as a complex mechanism that needs to be adjusted advisedly, lay people rely on an emotional valuation calculus. Things are seen as good or bad, reflecting an approach avoidance logic. The economy is perceived as an organic whole, that can be healthy or sick, strong or weak. Hence goals such as growth, low inflation and full employment, are to be pursued **jointly**. Tradeoffs are not considered, and this is a general trait.

Here are two examples of non-economist politicians who function according to this logic. For instance, President Erdogan insisted that "Turkey has to cut interest rates or the problem with high inflation will persist". When the Governor of the Turkish Central Bank demurred, he was fired. VP Mike Pence declared a few month ago: "The economy is roaring. This is exactly the time not only to not raise interest rates, but we ought to consider cutting them." To them, the right monetary policy will "get the economy back on track" .

There are other ways used by laypeople to reconcile having a view with knowing nothing about mechanisms. These include deciding according to intuition, the latter being merely an expression of personality traits. Another is the use of metaphors, an attempt to apply well-known phenomena to novel issues, often resulting in a wrongheaded or very distorted understanding, as in the notorious comparison of the State budget and that of a household. A last case is to embrace the party line, and to know what you believe based on the pronouncements of trusted exponents.

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