Economics

Module 0

The Constraints of Personhood

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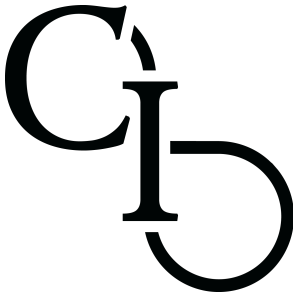

CONJECTURE UNIVERSITY

The Constraints of Personhood

Economics is not primarily about public policy, or incentives, or property, or money, or finance. To be sure, economics bears on all of them: it informs public policy debates, underlies any incentive-based model of human behavior, allows us to compare various norms and structures pertaining to property, and explains the emergence and role that money plays. But these are all downstream of something more fundamental. No matter their school of thought, virtually all economists agree that the field of economics tells us something about people. Therefore, our understanding of personhood places deep and illustrative constraints on economics itself.

For one thing, people are *fallible*—all of their ideas contain errors, gaps, and ambiguities, their aims could be wrong, and their actions either fail to bring about their aims or else can be infinitely improved upon.

Secondly, people are *creative*, not mechanistic. Fallibility and creativity together imply that, for example, economics cannot fundamentally consist of deterministic equations that predict prices for some good or service, since supply and demand curves can change as people revise their preference scales (their subjective ranking of priorities). To be sure, the relationship between supply, demand, and prices *is* very real and comprehensible, and a sound economic theory should be able to explain it—despite the fallibility and creativity of man..

Even the most 'obvious' economic predictions cannot hold true as downstream from some fundamental law. For example, one may predict that the price of water bottles should fall as more entrepreneurs enter the market and increase the supply of water bottles. But if people's ideas change simultaneously—say, a new fad sweeps over society about the necessity of drinking dramatically more water per day—then the price of water bottles may *increase* even as the supply increases. Does this rule out the laws of supply and demand? No—they were never prediction machines in the first place.

Third, people are capable of creating and maintaining any suite of institutions that do not violate the laws of Nature. Therefore, any theory of economics that insists on the necessity of money, property rights, a State, or any other particular institution is mistaken in that respect. Granted, such a parochial theory may still contain many

hardwon truths, but it can never be a *universal* theory of economics any more than a theory of mammals can ever be a universal theory of biological evolution. On the contrary, any parochial theory of mammals or reptiles must be *constrained* and informed by universal evolutionary principles. Any parochial theory of money or a State must similarly be constrained and informed by universal economic principles.

Fourth, people are capable of arbitrarily extreme rationality or irrationality. A fully universal theory of economics, therefore, cannot be solely about 'rational actors' (how rational until the theory breaks down?). Some models may rely on such an assumption, but they can never be a full explanation of how and why economies operate—after all, irrational people are also economic actors.

Not only must economic principles extend to economic actors of arbitrary rationality, but they must not be confined to *humans*, either. A fundamental economic theory should just as well apply to aliens and artificial general intelligence, provided that they, like humans, are universal explainers (entities capable of creating any possible explanation). So, again, the theory we are after cannot refer to the particular institutions that humans have created nor the historical problems that humans have faced. It may refer to things like *language*, *money*, and *property*, but it cannot refer to Chinese, silver, or British common law. The economic principles that explain and constrain all three of these general social technologies will apply to those developed by humans, aliens, and artificial intelligence alike.

Fifth, people's lives consist of *choices*—actions that could have been otherwise. Indeed, many economic phenomena do not make sense except in light of people's ability to choose otherwise. For example, the benefits of the institutions of rule of law can outweigh the cost of maintaining them, *even if* no one ever violates any law—had the laws never been implemented, people may have chosen to act . And entrepreneurs choose to invest in the improvement of their own product, even if there is currently no competition—the *possibility* of an emerging competitor may be enough to cause him to choose to invest further into his own company.

Sixth, it is the *individual*, not the collective, who has the capacity to explain the world, experience suffering and happiness, and make choices. It is therefore the individual that is the elementary unit of economic analysis, not any collective. Aggregate statistics can be informative in specific circumstances, but they often obscure the reality that an

economy consists of the choices of individuals. To be sure, economics helps us to explain the dynamics of multiparty institutions, such as firms, governments, and families, but the existence of those institutions always depends on coordination between individuals.

In epistemology (the theory of knowledge—what it consists of, how and why it grows), error is to be expected, while knowledge is that which requires explanation. Mankind was born into utter ignorance, and the little inborn knowledge we had came from our genetic code (for example, instinctual knowledge about breathing, eating, and mating). It is no mystery that we came into the world without robust theories of the stars, or the atom, or light. Once one accounts for the scant inborn ideas mankind inherited from billions of years of genetic evolution, then humanity's absence of knowledge is no more mysterious than the absence of knowledge in inanimate objects like clouds or clocks. What *does* require explanation is how we ever acquired knowledge well beyond our genetic endowment—from scientific theories to artistic creations to technological recipes.

Similarly, *poverty* does not require economic explanation. As with ignorance, humanity was born into merciless poverty, roughly on par with any great apes living in the wild. Our ancestors were equipped with precisely as much wealth as biological evolution had given them, which did *not* include easily available food, defense against most diseases, shelter, or any of the other goods and services that dominate contemporary Western life (or, indeed, those of the Middle Ages). Contrary to common misconceptions, poverty is not caused by a conspiracy of tightpocketed rich folk, nefarious politicians, the latest wave of immigrants, or any other familiar scapegoat. Poverty is caused by *nothing*—it is the state of Nature into which humanity was born. Meanwhile, wealth is not some mana from the sky delivered by fiat or by Nature but rather must be *created* by man. Like knowledge in contrast with ignorance, it is *wealth*, not poverty, that demands explanation.

Fundamentally, economics is about explaining the conditions under which people (not animals) can, either in solitude or in coordination with other people, create *wealth*, which is the set of transformations that a physical system (in this context, a person or people) can achieve. In economics, 'conditions' includes not just a person or people's physical environment—that is, the raw materials of the universe out of which one may construct consumer goods—but also manmade *institutions*. Economics gives us a way of comparing institutions with respect to their ability to foster wealth creation (and

resource allocation) and explain the constraints underlying institutions with specific attributes.

In this course, we will investigate more granular questions about the economy, always with an eye towards the concept of wealth creation: What are the differences between capital goods and consumer goods? What role do property rights play in resource allocation and wealth creation? How do prices emerge in the first place, and what causes them to change? How are relative rates of savings, consumption, and investment related, if at all? Which institutions are fundamental bottlenecks to civilization's growth of wealth, and which are merely historical contingencies?

Economics is often conflated with, or confused as, morality. But economics is an *ontological* field (see People, Reason, and Reality: Part I, Module 4)—it is about how certain aspects of the physical world work. In this respect, it is no different from Einstein's theory of general relativity, which explains how matter, energy, and spacetime work, or quantum information theory, which explains how information-processing tasks can be performed using quantum systems. Just as neither general relativity nor quantum information theory tells us what we should and should not do (that is, they do not grant us moral instruction), so too a universal economic theory does not contain explicit moral content. Quantum information theory tells us that, for example, it is impossible to create a perfect copy of an unknown quantum state, but it does not tell us whether or not we *should* try to do it. Special relativity tells us that it is impossible to engineer a spaceship that travels faster than the speed of light, but it offers no moral dictums about whether we *should* try to build one. Economics is similarly a descriptive, not normative, science—it may tell us that one set of institutions fosters wealth creation and allows for more efficient resource allocation than another, but it does not tell us which set of institutions we *should* select (moreover, it is rare for such options to be so cleanly available for the choosing, but that is another story).

To be sure, economics *does* stand in contrast with the physical sciences in many ways. I had hinted earlier that such central economic relationships such as that between supply, demand, and price still holds even if it would *seem* to contradict the facts on the ground. Is it really 'fair' that, in light of the price of water bottles rising alongside increasing supply, I can 'just' posit a disproportionate rise in demand? Isn't this the opposite of good science? It is not, for it is perfectly plausible for both supply and demand for a given good

to rise simultaneously. It is also possible for one to rise as the other falls, or for both to fall. A sound economic theory can and should account for this flexibility.

Could *any* data refute the law of supply and demand, or any other economic theorem? As always in science, the outcome of an experiment only refutes a theory when there is a rival theory available (see People, Reason, and Reality: Part I, Module 2). And, as we have seen, our understanding of personhood *already* rules out whole swathes of economic thinking as candidates for a universal theory of economics. This demonstrates that economic theories are *criticizable*, even if testability is either practically infeasible or physically impossible. Any economic theory that violates the facts of personhood—creativity, individuality, choice, fallibility—are ruled out from the start. The same goes for any economic theory that takes wealth for granted, or insists on the necessity of particular institutions.

To be sure, it is plausible that a future theory integrates our best current theory of economics into physics proper, placing economics on even footing with our theories of uncreative matter, motion, spacetime, and information (see our Constructor Theory Course). Such a theory would express the regularities of an economy in the same formal language as it expresses the language of standard physics (this language would be more general than algebra and more precise than verbally expressed theorems), and it would, I expect, offer a precise account of when laboratory-type experimentation is appropriate, and when it is *in*appropriate.

As things currently stand, our best account of economics is expressible in words, rather than precise mathematics. But then, so is that of epistemology, memetics, and history. Lack of mathematical formalism need not be a barrier to understanding a regularity or solving problems in our worldview.

In explaining the regularities of an economy, of the conditions under which wealth can and cannot grow, we may begin with the fact that man acts purposefully—that is, he employs some scarce *means* to achieve some desired *ends*. This is typically called the *action axiom*, but I prefer to call it the *action conjecture*. As with many apparently simple principles in science and philosophy, the action conjecture and its logical consequences will take us very far in our journey to explain how wealth is created, how resources are allocated, and how individuals coordinate their idiosyncratic means and ends between each other and with their future selves.

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