FROM CRISIS, BUILD STABILITY "COOPERATION FOR BUILDING A MORE INCLUSIVE WORLD" ISTANBUL, 21-22 FEBRUARY 2024 EXPECTATIONS MECHANISMS OF ECONOMICS UNDER THE UNCERTAINTIES RELATED TO AN UNSETTLING NEW WORLD ORDER AND CLIMATE CHANGE

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Abstract

Some people say that expectation is an illusion, based on a betrayal mechanism. Yet the psychology of human behaviour shows that the concept of expectation is a very central one for the explanation of real-life behavioural phenomena. The expectations concept plays a major role in the field of economic psychology. The operational aspects of measuring expectations and of using them in behavioural forecasts and control are of primary concern. For Keynes an emphasis on expectations meant an emphasis on the uncertainty of decision making, the frequency of mistakes, the need for time in which to adjust to unanticipated events, and the disorder of economic systems.

Keywords: *economics, climate change, cooperation*.

1. ON THE CONCEPT OF HUMAN EXPECTATIONS

The value of expectations data was demonstrated, for instance, in Health and Retirement Surveys in the USA. The participants' expectations of living until specific ages were found to predict how long they ended up living (Hurd, M.D. & McGarry, K., 2002). Also, in the study of the impact of labour market information on students' beliefs about the returns to education and on their college major choices (Bleemer, Z. & Zafar, B., 2018).

The problem is how expectations respond to new information. We need to understand economic choice behaviour, especially the relationship between expectations of future returns and choice behaviour. Continually changing conditions have a certain impact on investors. Their uncertain expectations have the result that investment expenditures are either accelerated or postponed. Obviously, one of the main problems is to establish causality. We need to know how information affects expectations. I am proposing the concept of the *expectation's mechanism* and I see it as an innate as well as educated human impulse for the containment of chaos. It has a dramatic quality. We do perceive the gap between the sentiment and what we might have expected from the macroeconomic numbers. Also, the gap between sentiment and reality. To fill these gaps innovation is crucial. Innovation is to find everyday a better way. Then we have a real chance of meeting people's expectations. Under acute uncertainty, unbelievable skills and incredible luck are needed. Thus, it requires a meeting of rigorous science and imagination.

Looking at social media, it seems that polarized thinking and misinformation have never been more common. Even users we once admired now use dubious evidence to support their beliefs. Let's recall that some beliefs – mainly those regarding politics and religion – and the habit of having all the time expectations – are so central to our identity that any challenge can trigger an existential crisis, as if our whole world view and meaning in life are under threat. As a result, we become more entrenched in our opinions and look for any way to protect them.

The future is getting more uncertain and we are uniquely ill-equipped by evolution to handle uncertainty. The paradox is, planning for the end of the world just hastens its arrival.

2. ON THE NEW ECONOMICS

At times, people in general tend to act as they did before, and knowing how people acted in the past may yield the best clue at such times concerning how they act in the future. But there are times when people change their behaviour – sometimes very rapidly – and then information on intervening variables, motives, attitudes, etc., must be relied upon to supplement behavioural data for the purposes of prediction, already advanced in 1946 by George Katona, a founder of behavioural economics, who believed that understanding economic behaviour through careful observation is a good foundation on which to base the advances in economic theory.

The global economy, like the climate, is less stable than we expect – and that should also represent a source of opportunity. Part of the problem is that we've thought about policy on climate change using old economic ideas, such as the equilibrium. This means that the economy is balanced because supply and demand in the market are equal to each other.

The idea of equilibrium was brought into economics in the 1870s for a strange reason. It was because some economists wanted economics to look like a science. They thought that meant it should be described with math equations, but to make any of the equations solvable, the system had to be in equilibrium.

If you think about the economy, it's almost impossible to think of a situation of stable equilibrium. When we make this false assumption, it creates a massive bias against doing anything to change the economy.

This is a concern with forecasting or prediction. Successful predictions have long been viewed as the primary goal of respectable scientists, and economists are keen to be seen as scientists. "Theory is judged by its predictive power," said Milton Friedman in 1999. Yet, we know that modern mainstream economics was not and isn't successful at providing reliable predictions. Mainstream economists continue the tendency to believe that we are in charge of the future, and most pervasively that we can predict what is going to happen. Such a tendency involves the construction of fantasies. Akerlof's original 1970 Market of lemon model was developed by adjusting certain parameters to better represent the real-world market. Both the American Economic Review and the Review of Economic Studies rejected the paper for "triviality," while the reviewers for Journal of Political Economy rejected it as incorrect, arguing that, if this paper were correct, then no goods could be traded. Only on the fourth attempt did the paper get published in the Quarterly Journal of Economics. Today, the paper is one of the most-cited papers in modern economic theory and the most downloaded economic journal paper of all time (more than 40.000 citations in academic papers as of January 2024). It has profoundly influenced virtually every field of economics, from industrial organization and public finance to macroeconomics and contract theory. The psychological explanation of the divergence the between economic prediction and reality is to be considered strongly, as I sketched before.

Do we need a new kind of economics? Yes, we do There's a new approach called complexity economics or evolutionary economics. It models the economy as an evolutionary system which is dynamic and constantly changing. Economic behaviour is determined by both individuals and the society as a whole. That gives whole new ways to simulate change and understand how to make interventions that are going to be successful. In other words, never abandon the reality of the present for the fiction of the future. Today, climate change (terrible unprecedented droughts, the water crisis combined with floods of unprecedented magnitude) and tectonic shifts in geopolitics are redefining the world economy. We should be bold about the convergence of strategic thinking and planning. It's not simple or even affordable.

The first sentence of Anna Karenina by Tolstoy reads the following: "Happy families are all alike, every unhappy family is unhappy in its own way." Tolstoy is saying that it takes many different things for a marriage to be happy – financial stability, love chemistry, shared values, healthy children. However, it only takes one of these aspects to not be present for a family to be unhappy. This has been popularized as the *Anna Karenina principle* – "a deficiency in anyone of a

number of factors dooms an endeavour to failure," as defined by Gordon Moore in 2001.

3. NOBODY WANTS THE CURRENT WORLD ORDER

"How All the Major Powers – Even the United States – Became Revisionists" is the title of an essay by Shivshankar Menon in Foreign Affairs in August 2022. "A kind of anarchy is creeping into the international relations – not anarchy in the strict sense of the term, but rather the absence of a central organizing principle or hegemon" says the author. No single power can dictate the terms of the current order, and the major powers do not subscribe to a clear set of principles and norms; it's hard to establish the rules of the road when so many countries are on their own paths. In both word and deed, China and Russia today question the major aspects of the Western liberal order, particularly its norms relating to universal human rights and the obligations of states. They invoke the principle of state sovereignty as a shield to operate as they wish while seeking to set new rules in fields such as cyberspace and new technologies. "The world seems to be becoming more dangerous, with many local cold wars turning hot, suggesting that we may be witnessing the end of the Pax Americana" says Paul Krugman, a columnist for the New York Times. In fact, the truth is that changes in the world economy have given the United States new ways of exercising economic power and the U.S. dollar seems to be more central to the world economy than ever.

Nevertheless, like everyone else, the Americans remain hostages to fortune. Meaning that they continue to focus on their stable future and sticking to their habits. But they can miscalculate the speed of some obvious transitions.

The components of the world order are constantly moving and transforming, with a lot of information encoded in the collective mentality, in psychology, in perception, especially related to national identity and religion. Some clear examples are the civil war in former Yugoslavia, the war in Ukraine and the war in Gaza in our time.

We are in search of our own stability under these powerful uncertainties. But we need to acknowledge that this search can trigger unstable dynamics or even the emergence of a critical threshold. Beyond it lies a world off the reins. The outcome could be an unexpected tragedy or a happy end or something in between? For sure we can expect that there is a hidden cost of everything. Perhaps a great rebalancing in the world as we knew it. But this new kind of competition does not yet offer an alternative, or one that is sufficiently attractive to others. Instead, geopolitics grows more fractured and less cohesive. A world of revisionists is one in which each country goes its own way. And plausible deniability is more often than not a deliberate strategy of many national leaders. The rapidly shifting balance of power is not likely to provide the basis for a stable order for some time.

4. CLIMATE CHANGE AND ITS AMBIVALENT CONSEQUENCES

There are a lot of factors conspiring to make it a strong event. Both strong events at once could reinforce or cancel out each other's influence on the global climate in complex ways. It might be good news in one place, it might be bad news somewhere else.

Scientists specialized in weather predictions, for example, have shown that a number of catastrophic events could have been foreseen with the data available at the time. They were not unpredictable but were not taken into consideration and became de facto unpredictable. Noson S. Yanofsky explained that "Kolmogorov's complexity theory teaches us that, at the deepest level, there is no certain way of determining the best pattern. We will simply never know if the pattern that we have found is the best one".

One specific example refers to the pollutants that form minute aerosol droplets in the atmosphere. They have horrendously complex effects. How much radiation is reflected by sulphur dioxide aerosols varies according to the size of the droplets, their height in the atmosphere, whether it is night or day, what season it is and several other factors. These complexities mean there is still a great deal of

uncertainty regarding the magnitude of the overall cooling from pollutants such as SO2. But if aerosol cooling is larger than generally assumed, the planet will warm more rapidly than predicted as soon as the aerosol levels fall. Now we think firmly that the uncertainties are narrowed down if less CO_2 is emitted. But, if aerosol cooling is on the higher side, there will be more warming because fossil fuels tend more and more to be phased out, and as a result aerosol pollution falls. (Le Page, 2011)

5. COOPERATION AS CREATIVE FORCE

Cooperation represents the essential creative force in any coexistence in order to build conviviality. In it lies mainly the possibility of building a stronger resilience of any system.

Let's admit that uncertainty is like a wild animal. Its taming seems to me to be well explained by the reply from a movie of a famous rider about his no less famous horse Hidalgo, a wild mustang from the American West of the Indians, winning the highest award of desert crossing in Saudi Arabia, to the question about the horse: "You found it and tamed it?", "No, I didn't domesticate him. We are good together." Indeed, at the end of the film the horse returns to the herd of wild horses. It's a beautiful illustration of a consented cooperation.

Concerned in terms of the effects of climate change, we must remember that every action in a global system depends for its success on a cooperative behaviour. Cooperation is not a solution: it is the only solution. The historian's perspective brought by Anthony Grafton, author of the excellent work entitled "Worlds made by words" is: "The knowledge that underlies our world of things.... has been discovered over the centuries by trial and error, two steps forward and one step back. They were produced and improved through collaboration: the work of talented, largely anonymous groups, generation after generation, rather than identifiable individuals."

The goal of cooperation these days should be also to create a set of interlinked and mutually reinforcing technical, cultural, legal, and political mechanisms for maintaining societal control of AI. It is about checking AI and addressing its consequences. This is a not containment in the geopolitical sense. But the containing technology is seeking a balance of power not between competing actors but between humans and their tools. What it seeks is not to stop the technology but keep it safe and controlled. Containment is the only answer – however difficult – to how humanity should manage the fastest rollout of the most powerful new technology in history. Containment in this sense encompasses regulation, better technical safety, new governance and ownership models, and new modes of accountability and transparency combined with ethical values.

Moreover, I believe that the cooperative attitude is part of our innate prudence in the face of the unexpected. Prudence creates a reserve of action. For example, there are still dramatic gaps between the reality of unpredictable climate dynamics and people's expectations and confidence. Thomas Kuhn, in his famous book "The Structure of the Scientific Revolutions," concludes that "the significance of crises is the indication they give that an opportunity has arrived for the reformation and renewal of tools." And I would add a less obvious aspect, namely the fact that cooperation includes negotiation. The difference is that cooperation always represents the basis of success. Negotiation does not. Both, however, they are carried out under the roof of interest. Cooperation under the roof of the common interest, negotiation to find a common interest.

Because we cannot control the timing of a crisis, we risk going over the edge of chaos when we stop organizing ourselves as humanity as a whole, but unconsciously "run away" with the "runs" of nature and forget the implacable necessity of global human cooperation. Behavioural strategies should ignore hype and histrionics and focus instead on hypothesis testing and sound science. Finally, if we reach a consensus, it is not uncritical.

We condition benefit on truth, not truth on benefit. Indeed, truth, i.e. order, is the source of the useful. Error, that is, disturbance, is not.

6. CHAOS AND COMPLEXITY

Chaos and complexity certainly put limits on what we can know. High complexity, asymmetry and/or non-linearity are themselves universal types of imprecision. The things we want to study are sometimes composed of many objects that mutually affect each other. Therefore, we are impacted by the interference of various types of imprecision. They accumulate and give rise to a process of escalating imprecision, with effects that are difficult to predict. They can appear in any kind of systems: physical, biological and social, the formal and axiological logical-mathematical, and in mathematics itself. The variety of words that express it is vast: unpredictability, risk, uncertainty, randomness, possible, vague, fractal, then: incompleteness and undecidability, ambiguity, paradox, antinomy as well as entropy and variability. But also doubt, confusion, ignorance or hesitation. Finally, the believable, the credible, the plausible. The semantic aspect provides to the greatest extent coherence in the system. Uncertainty, indeterminacy, randomness, and contradictions appear, not as non-essential substances of debate to be eliminated by explanation, but as everlasting ingredients of our conception of reality. Literary prowess seems to me sometimes more capable than philosophers to express (not necessarily to grasp)imprecision. Here, for example, Joseph Conrad: "The most obstinate ghost of man's creation" is "the ghost of doubt", "that doubt which is the inseparable part of our knowledge" and Peter Ustinov: "Remember only that mankind is united by its doubts, divided by its convictions.

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