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Beyond Schumpeter: Toward Complex Evolving Systems? Or back to Equilibrium Economics?

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Beyond Schumpeter: Toward Complex Evolving Systems? Or back to Equilibrium Economics?

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Beyond Schumpeter: Toward Complex Evolving Systems ? Or back to Equilibrium Economics ?

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Abstract The 40th birthday of the Schumpeter Society offers an excellent chance to reflect on Schumpeter intellectual heritage , as well as its shortcomings and the subsequent developments. No doubt that reference to Schumpeter has been a precious shortcut to the rediscovery of the crucial importance of innovation for economic dynamics . However , such a rediscovery may be the harbinger of a fuller appreciation of the economy as a complex evolving system , or, on the contrary, be re-incorporated into an enlarged canonic ‘equilibrium’ paradigm. The bifurcation concerns the domains of measurement (including the appropriate statistics and econometrics) , modelling , and finally , policies . In this work we discuss such crossroads , the dangerous twists that the Schumpeter- inspired tradition has taken , together with some promising evolutionary alternatives ..

Keywords : Innovation , Schumpeter , equilibrium and disequilibrium, ‘creative destruction , development , complex evolving systems

JEL Codes : O1, O3, D5, B25, C50

1 Introduction

I am proud to have been part of the history of the Schumpeter Society since its beginning.

It has been an adventure, far from over, which began in the late 1980s. If I recall well, Horst Hanusch was the mastermind who had the intuition to try to link together, first, some of friends and direct disciples of Schumpeter himself, including Wolfgang Stolper and Moe Abramovitz (not all of them: even if we had one of the first meetings in Siena, neither Richard Goodwin nor Paolo Sylos Labini had even been asked to play a major role...); second, some main figures of the emerging field in the economics of innovation and evolutionary economics (from Nelson, Winter and Freeman to Brian Arthur...), and, third, some young mavericks, including myself, mainly from the latter camp.

A sort of glue among these quite different types, was, and in my view continues to be, the focus on change and innovation. In this respect see the brief history of the Society itself, <https://ijass.de/history/>. This is a first, enormous merit of the Society.

The Society emerged at a time in which many of us, including myself, were optimistic enough to believe that the neoclassical paradigm was in a terminal state and one had to work hard to construct the alternative. Note that this view was not shared only by young reckless revolutionaries like myself, but also by major *mâitres-a-penser* including my mentors, Chris Freeman, Dick Nelson, and Sid Winter, and even giants of the neoclassical edifice, like Ken Arrow and Bob Solow. I have fond memories of challenging conversations on the subject with Ken and Bob who shared from different angles the notion that the future was beyond the standard paradigm. Nothing to do with contemporary dwarfs who are mainly able to talk about minor technicalities without ever asking what this discipline is about.

When Lucas and Sargent (1978) wrote the obituary of Keynesian macroeconomics, many of us reacted to such a ‘revolution’ as Bob Solow once did when asked by Klammer (1984) why he did not take the ‘new Classics’ seriously:

“Suppose someone sits down where you are sitting right now and announces to me he is Napoleon Bonaparte. The last thing I want to do with him is to get involved in a technical discussion of cavalry tactics at the battle of Austerlitz. If I do that, I am tacitly drawn in the game that he is Napoleon. Now, Bob Lucas and Tom Sargent like nothing better than to get drawn in technical discussions, because then you have tacitly gone along with their fundamental assumptions; your attention is attracted away from the basic weakness of the whole story. Since I find that fundamental framework ludicrous, I respond by treating it as ludicrous — that is, by laughing at it — so as not to fall in the trap of taking it seriously and passing on matters of technique” (Solow in Klammer, 1984, p. 146)

I shared and I continue to share this view. However, we were all living in an optimistic bubble. In fact, the so-called ‘new classical economic’ – a cleansed word to say the neo-liberal pasdaran version of neoclassical economics – was quickly winning, among policy makers, in their assault to the top journals, in the colonization of the discourse even among ‘progressive’ intellectuals.

The reasons why the profession, and even worse, the world at large took these ‘Napoleons’ seriously, I think, have basically to do with a *Zeitgeist* where the hegemonic politics was that epitomized by Ronald Reagan and Margaret Thatcher, and their system of beliefs on the ‘magic of the market place’, ‘society does not exist, only individuals do’, et similia.

I think such a (counter)revolution also influenced our community.

The Schumpeter Society has been and still is a very Big Tent covering, as I already mentioned, an heterogeneous population interested in innovation and change, finding in Schumpeter a sort of catalyst. This has been a major richness but also a significant weakness.

On the plus side, it offered a major contribution to the emergence of the economics of innovation as a promising and growing sub-field of economics. When Chris Freeman wrote the first edition of his pioneering *Economics of Industrial Innovation* in 1974, he was lamenting his almost total loneliness in the enterprise. After WWII, one of the very few analyses was by Jewkes, Sawers, and Stillerman (1956): even the few economists interested in technological change were not interested in “opening the black box” of science and technology, to use the felicitous expression of Nate Rosenberg. He could only refer back to Schumpeter (in particular Schumpeter, 1939). Over the last 50 years things have dramatically changed. There are plenty of new journals partly or fully dedicated to innovation – including *Research Policy*, founded by Chris himself, *Industrial and Corporate Change*, initiated by David Teece, Franco Malerba, and myself, among others, and of course the

Journal of Evolutionary Economics, emanation of the Schumpeter Society - . The economics of innovation has become a respectable discipline, attracting an increasing number of applied industrial economists. And even a Nobel Prize has been attributed in 2025 to scholars addressing the economics of innovation.

2. Schumpeter , Innovation and Disequilibrium

Granted all that, let me propose two provocative hypotheses. I want to argue here that, first, Schumpeter was a sort of *reluctant evolutionary*, and that, second, a significant part of the recent advancements in the economics of innovation, at least those most recognized in the profession, have refined in these *non-evolutionary* Schumpeterian steps.

Chris Freeman in his Introduction to our *Technical Change and Economic Theory* (Dosi et al, 1988) summarizes with remarkable clarity our evolutionary view of the relations between technical change and economic dynamics:

- (a) Technical change is a fundamental force in shaping the patterns of transformation of the economy.
- (b) There are some mechanisms of dynamic adjustment which are radically different in nature from those allocative mechanisms postulated by traditional theory.
- (c) These mechanisms have to do both with technical change and institutional change or lack of it. As regards the former, we suggest it is both disequilibrating and a source of order for the directions of change and the ‘dynamic adjustment processes’, as new technologies diffuse through the national and international economies. Paradoxically, despite its fluctuations and crises the world is more stable and better ordered than could be deduced from prevailing economic theory.
- (d) The socio-institutional framework always influences and may sometimes facilitate and sometimes retard processes of technical and structural change, coordination and dynamic adjustment. Such acceleration and retardation effects relate not simply to market ‘imperfections’, but to the nature of the market themselves, and to the behaviour of the agents (that is, institutions are inseparable part of the ways markets work). (Freeman, in Dosi et al, 1988, p.3)

Chris generously attributes these ideas also to Schumpeter. And certainly one can find many references to this effect in Schumpeter works. However, Schumpeter never fully abandoned his recurrent attraction to equilibrium as a sort of reference point. Citing again Freeman,

[...] it is hard to reconcile Schumpeter’s view of innovation, economic dynamism, and partial monopolistic appropriation of technological advances with his other view that equilibrium could still be defined in Walrasian terms. In this respect the task of analysis the relationship between the dynamic forces of the economic system (i.e. what makes it change) and its equilibrating mechanisms (what keeps it together) is still largely unfulfilled” (Freeman , in Dosi et al , 1988, p.6)

There is a statistical counterpart to this.

3.Schumpeter and the miscarriage of modern econometrics

It is very hard to capture innovative phenomena with the idea that innovation is simply a “shock” after which the economy is bound to return to some kind of new equilibrium. And the latter is indeed the turn which became dominant in the discipline, to which Schumpeter was unwilling and/or unable to respond. This is indeed the *non-evolutionary Schumpeter*. The discussions between Schumpeter and younger econometricians and mathematical economists including Frisch, Koopmans and Marshak, among others, insightfully discussed by Louca (2001) and (2014), fully reveals this tension .

Schumpeter was indeed *privately* convinced that innovation was an essential *endogenous* feature of capitalist economies but was dramatically unable to propose an alternative to the approach proposed by his fellow members of the Econometric Society, of which he was one of the founders. That approach, which has become the standard canon since, is postulated on the notion that the system *is* in equilibrium, unless *shocked by an impulse from outside* (which in econometric jargon is often called an “innovation”), which then *propagates* through the system until it reaches a new equilibrium position. The entire contemporary econometric machine is postulated on the assumption of exogenous shocks, hampering any genuine accounting of endogenous regime shifts and tipping points. Indeed, the current econometric tools are largely unable to account for endogenous changes. Non exhaustive examples are “impulse response functions” for “dynamic” analyses, and , more recently, “diff-in-diff” methods to assess the impact of differentiated “shocks” upon parts of otherwise identical populations.

It happens that a good deal of contemporary advancements in applied analyses of innovation come under the latter art-form. For sure . an enormous progress has been genuinely made in terms of data collection on innovation (recall the SPRU data base and the even older SAPHO Project) and their conceptualization (See Dosi, 2023). However , all this has occurred with decreasing degrees of interaction with what has become the accepted subdiscipline called the ‘economics of innovation’ , which has increasingly become a tolerated niche, or even a welcomed one as a source of insights for a newly normalised paradigmatic panorama. In some

impressionistic analogy, I see that as a sort of equivalent to the Council of Trent, by which the Catholic Church sought to answer the Reformation.¹ In our case, innovation is there in so far as it can be measured – typically in terms of number of patents – and the analysis addresses relatively trivial ‘research questions’ – indeed only those which can be handled by the technical instruments at hand.

Moreover, in all domains, micro and macro, there is an almost obsessive quest for ‘causality’, and, together with this, an almost exclusive focus on whatever is measurable even if not relevant, at the cost of neglecting what is relevant but not measurable (to paraphrase a remark of Einstein’s...). However, in *complex evolving systems*, it is just futile to look for ‘ultimate causes’, as complementarities and emergent phenomena are ubiquitous.

Co-evolution and even simpler *dynamically coupled processes* imply an intrinsic ‘bi-directional causation’ which is impossible to get rid of. As I keep repeating provocatively again and again, go and ask biologists whether it is the gazelles which ‘cause’ the lions, or the lions which ‘cause’ the gazelles. They will simply reply that you must be drunk!

Of course, one may fruitfully try to parametrise the predator–prey dynamics (i.e. some form of Lotka–Volterra system), but no biologist in the right state of mind would rationalize the issue in terms of ‘supply and demand curves’ for lions and gazelles, trying to disentangle the dynamics by distinguishing between movements *along* the curves and movements *of* the curves – recall that the attempt to ‘identify’ a causal effect by finding the appropriate ‘instruments’ boils down to that. (The lions–gazelles question is insightfully discussed from an econometric perspective in Coad, 2026)

There are many analogues in economics: a simple one is the so-called cobweb dynamics of price and quantities of e.g. corn and pigs fed with corn. A straightforward way to account for this is to write a relatively simple dynamical system, and also estimate it econometrically, without any need for imaginary supply and demand curves and identification requirements (A more detailed argument is in Dosi, 2023, and 2024).

But why, then, such a widespread obsession with the latter?

The answer is pathetically simple. Because, for the majority of our profession, it is very hard to get rid of the ideas that, first, observations at times 1, 2, ..., t are *equilibrium observations*, and, second, that behind them, at least in principle, there is a ‘*structural model*’ of *equally imaginary agents who maximise something*, yielding the foregoing imaginary curves. Of course, if this were the case, and if something changed from time 1 to time 2, it must have been due to a ‘shock’ somewhere. And here come the efforts of the brightest students to find the most far-fetched ‘instruments’, which correlate with changes in lions and not in the gazelles, or vice versa. Needless to say, again, it is not surprising that more conventional applied economists would follow this methodology: but the drama is that also quite a few of the young scholars that *we* train follow it unquestioningly. It is humanly understandable, even if not ethically commendable, that they should follow this path, as it makes publications much easier. But it is a major sin of omission that *we* – those with a certain measure of age and supposed wisdom – do not warn them enough, or, better, try to vaccinate them against it.

4 Understanding Complex Evolutionary Worlds

What is the alternative ?

I am not an econometrician, but neither do I think that all the answers should be econometric ones.

In my view, there is no single approach to analysing complex evolving systems.

First, precious insight can be garnered through what Nelson and Winter (1982) call *appreciative theorising*, that is, detailed theory-informed qualitative analyses, often based on just a few case studies. At the opposite extreme, an entire and indeed quite insightful theory of the firm in modern American Capitalism (Chandler, 1962 and 1993) has been built mainly on *two* observations – I repeat: two! – namely Dupont and General Motors. Indeed, in all our history-grounded disciplines, intelligent analyses must be prepared to *learn from samples of one or fewer*, paraphrasing March, Sproull and Tamuz (1991).

A *litmus test*: AI might be able to do sophisticated econometric analyses but is so far totally unable to do humanly intelligent appreciative theorizing and daring non-statistical inferences, or not?

Second, the development of taxonomies also helps crucially in meaningfully handling heterogeneities of different sorts. Inevitably, one is bound to develop *categories* and *taxonomies*: a famous and highly fruitful one is Pavitt’s (1984) on the sectoral patterns of innovation. In all of this, the empirical evidence and its treatment can also differ a great deal.

In some cases, such as Costa et al. (2023), taxonomies are built on the basis of hundreds of dimensions regarding hundreds of thousands of firms. So, they identify by means of cluster analysis different ‘types’ of

¹ The Council (1545-1563), as known, was a powerful effort by the Catholic Church to safeguard its tradition and authority, by making some concessions to ‘reformist ideas’, while incorporating them in the otherwise orthodox *corpus*.

firms embodying different organisational capabilities as revealed by distinctly different combinations of organisational processes and routines.

In other cases, the number of observations are bound to be few, such as, at the macro level, in exercises like those on the ‘variety of capitalisms’ and ‘regimes of regulation’.

Let us turn again to the biological example: Darwin’s *Origin of the Species* could not even have been conceived without Linneus’ species, families, taxa, etc. Imagine, on the contrary, Darwin as a modern statistician: skillful, but unaware of all the discrete morphologies. He might have run some estimates over ‘all animals’, from worms to birds to fishes to mammals – bunching together Achilles and the tortoise – with some measure of performance on the left-hand side and, on the right, variables like intake of food, weight, length, number of legs, etc. together with a series of dummies (does it have hair? feathers? a tail? etc.), and obviously ‘fixed effects’. Does it sound familiar?

In this ‘night in which all cows are black’, the capital methodological errors are to suppose that entities (i) *do not structurally differ*; (ii) are basically nested in the *same generating stochastic process*, no matter how complex; (iii) are to be assessed using the typical associated assumptions on normality of distributions, stationarity in first moments or log differences, asymptotic properties of the estimators, - even if these latter assumptions can be somehow relaxed- , etc. This obviously cannot apply to biology, but does not even apply to the medicine of humans in general, because even among humans the heterogeneity is too high (see the germane discussions on ‘randomised control trials’ and their striking limits in Deaton, 2020, and Deaton and Cartwright, 2018).

Rather , in a world with ubiquitous structural heterogeneities , the first order task ought to be finding *robust and relatively invariant correlations* , *before any attempt to identify the marginal effects of the variations* of some variables on some other ones .

Third, from the more methodological point of view, I am convinced that a lot of efforts should be put into the development of econometric models alternative to the Frisch/Tinbergen/Koopmans/Slutsky/Haavelmo apparatus, allowing for the interaction between *endogenously generated non-linear dynamics* and exogenous shocks. As discussed by Louca (2001), and (2014), this was precisely the challenge that Schumpeter was unable to articulate in his discussions with Frisch and the young Turks of *Econometrica*. Some important developments have occurred since - see a few contributions in Day and Chen (1993), Chen (2010) and Chen, Elsner and Pyka (2024) . However, there is still a long way to go .

Fourth, and finally, a lot of insights may be drawn from the statistical exploration of ABM models, but I shall come back to them below.

5. The innovative engine and the demand generation engine of economic dynamics

Similar hurdles, in my view, are facing the *macro* heritage of Schumpeter. Again, I think that their origin rests in the lack of any explicit acknowledgment by Schumpeter himself that so-called Say’s does *not* apply in modern economies. This refusal leads him to deny the crucial importance of aggregate demand, holding constant the innovation rates, and thus of the ensuing multiple equilibria, associated with the coordination at different *quantity* levels among multiple agents.

A good deal of macro models trying to capture innovative phenomena have found an inspirational reference in Schumpeter. The literature spurring from the seminal Nelson and Winter (1982) has been impressively blossoming. However, as a contributor to that stream, I easily admit that most evolutionary theorists (although not myself!) have tended to be far too “Schumpeterian”, in their neglect of any Keynesian coordination hurdle in both the short- and the long-run.

Certainly, here there is no betrayal of Schumpeter: his book review of Keynes’ *General Theory* (Schumpeter, 1936) sounds, more often than not, as a note by a grudging, solid but not-too-insightful, Chicago-style Ph.D student. So, after suggesting that Keynes’ *General Theory* “expresses forcefully the attitude of a decaying civilization” and “invites sociological interpretation in the Marxian sense” (p. 792), he shows no understanding at all of involuntary unemployment, whose notion is considered by Schumpeter equivalent to “artificial definitions which [...] produce paradoxical-looking tautologies” and, relatedly, of the relation between demand for labour and aggregate demand:

“The definition of involuntary unemployment, page 15, may serve as an example. Taken literally (which of course would be unfair to do) it would mean that there is no practically conceivable case in which workmen are not partially unemployed by definition. For if prices of wage good rise a little, other things being equal, it is clear that both the demand for, and the supply of, labor will increase under competitive conditions, the latter at least as long as the flexibility of the marginal utility of income to the workmen is what present statistics lead us to believe. [sic] [Schumpeter, 1936, footnote 1, p. 792]

Indeed, well in tune with the later “neo-Schumpeterian” perspective, he handwaves us “the most powerful propeller of investment, the financing of changes in that production functions” ridiculing demand-based multiplier and investment accelerators, as “having no greater practical importance than a proof that motor cars cannot run in the absence of fuel” (p. 793). [Maybe he never happened to be stranded with his car in the middle of nowhere because he forgot to refuel the car !?]

Two outstanding exceptions, focusing on the crucial interactions between coordination-demand generation, on the one hand, and innovative dynamics, on the other, have been Chris Freeman on the one side of the Atlantic, and Joe Stiglitz on the other, despite different but quite complementary interpretative lenses (Dosi and Virgillito, 2018). However, Chris never wrote a model and is mostly remembered only for his seminal contributions on technological change. Conversely, the contributions of the “Schumpeterian Stiglitz” and the “Keynesian Stiglitz” (Dosi and Virgillito, 2018) can be fully grasped only by distilling out of the multiple contributions of a scholar who has been a “subversive from within the mainstream” - paraphrasing Ha-Joon Chang - , and who has often been understood just as an analyst of the economic impact of the properties of information².

On the contrary , the last thirty years have seen the emergence of New Growth and related Neo-Schumpeterian theories (see e.g. Romer, 1990; Aghion & Howitt, 1992, and 2007). *Prima facie*, they appear to offer a significant advancement in growth theory as they attempt the endogenize technological change , either a learning externality (earlier) or as the outcome of purposeful expensive efforts by profit-maximizing agents (the neo-Schumpeterian version), which, under proper simplifications on the innovation space, are meant to yield the formalization of the dynamic of the Schumpeterian ‘creative destruction’. However, such endogenization comes at what I consider some major costs (although many colleagues would deem them as major achievements).

First, it reduces innovative activities to the equilibrium outcome of optimal intertemporal allocation of resources by some mythical representative agent within some sort of enlarged production function covering also innovative search.

Second and relatedly, one ought to assume that there are rational technological expectations. Frankly, I think that ‘rational’ expectations are fundamentally wrong (More on all this in Dosi et al, 2020). But rational technological expectations are just crazy. It is the very nature of innovation to be subject to genuine “Knightian” uncertainty: if you can fully know what it is, the probability of its arrival, its expected cost, it is not an innovation!

By making these assumptions, one also loses the genuine Schumpeterian notion of innovation as a disequilibrium phenomenon (at least as a transient!).

At the very least, Samuelson – himself a student of Schumpeter – , acknowledging the latter, proposed the famous ‘correspondence principle’. Roughly, if one start at some equilibrium at time zero , characterized by a vector of ‘fundamentals’ $V(0)$, and ends up at a new equilibrium with fundamentals $V(1)$, at time 1, ‘let me – the economist – calculate the equilibrium dynamics, happily leaving to you – the economic historian – the narrative of what happens in between’. It was a sort of compromise, on the supply side, between ‘short-term’ and ‘long-term’, whatever that meant, symmetric to a similar to the one, on the demand side, between a ‘Keynesian’ ‘short-term’ and a ‘Solowian’ long-term.

More explicitly , on the supply side , Neo-Schumpeterian models , in a symmetry with Real Business Cycle (RBC), abolished that distinction and with it any possibility of disequilibrium, even as a transient phenomenon: one assumes *equilibrium creative destruction* !

Here comes *another litmus test*: neither Schumpeter nor, even less so, Neo-Schumpeterians allow for persistent involuntary unemployment as a possible structural feature of contemporary capitalist economies. Together, Neo-Schumpeterian are even unable to contemplate deep crises, unless one would assume that agents find intertemporally optimal to *regress* technologically!

The fundamental point is that, on the contrary, there are persistent interactions between coordination/demand generation, on the one hand, and innovative dynamics, on the other.

In Dosi and Virgillito (2018) we discuss the pioneering emphasis of the contribution by Stiglitz to the World Conference of the International Schumpeter Society in Kyoto (Stiglitz, 1994). His point counters any rough Schumpeterianism: there are positive feedbacks between levels of aggregate activities and innovative search. To reinforce the point, Chris Freeman would have added that there are also powerful interactions between aggregate demand and diffusion of innovations.

Indeed, neither Schumpeter nor Keynes, alone, are enough (see also Freeman and Soete, 1994). Whenever one abandons the unfortunate idea that the macro economic system is held up to some mysteriously stable, unique equilibrium path, it could well be that negative demand shocks exert persistent effects, because less aggregate demand entails less innovative search, which in turn entails less innovation stemming from

² See however two of his most insightful contributions on the subject, Atkinson and Stiglitz (1969), and Stiglitz (1994).

technological shocks, and, conversely, innovation alone might well exert depressive effects on aggregate demand via their labour saving effects and the ensuing reduction of the aggregate wage bill.

The full alternative that I propose, not surprising, are Agent-Based Models (ABMs), incorporating a *Schumpeterian engine of innovation* and a *Keynesian engine of demand generation*.

ABMs in general, can naturally account for multiple interacting heterogeneous agents, and thus deal, in principle, with quantity-based coordination issues. However, the *Schumpeter meeting Keynes* (K + S) family of models, as the name suggests, which we developed, are explicitly meant to account for the interactions between innovation processes and demand dynamics under different institutional set-ups. We discuss the general perspective, the models and the results in Dosi, Fagiolo and Roventini (2010), Dosi and Virgillito (2021) and Dosi and Roventini (2025)³.

6. Which policies ?

There is yet another fundamental domain, the *policy* one, wherein, in my view, one has to go *beyond Schumpeter and also beyond Keynes*.

It comes straightforward from the foregoing discussion that demand management policies are often necessary, notwithstanding Schumpeter and the Neo-Schumpeterians. However, such policies ought to go well beyond ‘digging holes and filling them up’.

An essential part ought to be made by *industrial policies*. But such policies do not primarily aim at ‘freeing the hands of the creative, if destructive, entrepreneur’. Rather, they refer to the ensemble of deliberate public actions through which the State shapes, steers and coordinates the patterns of technological and organizational change of an economy. It encompasses the institutions, incentives and organizational arrangements that influence the sectoral composition of production, the accumulation of technological and organizational capabilities, and the direction of learning and innovation over time (Cimoli, Dosi and Stiglitz, 2009 and Cimoli et al, 2009). Far from being a narrow catalogue of subsidies and incentives, it involves the governance of complementarities, the creation of industries (well ahead of missing markets), and the provision of public goods that private actors cannot or do not want to generate on their own. More fundamentally, industrial policies mark the space where societies decide which activities to nurture, which technological trajectories to promote, and how to build and constantly renew the institutional foundations that make structural transformation feasible and socially equitable. Industrial policies unfold within societies which are affected by their effects on the distribution of income, power, opportunities and rents across social groups. And, in turn, the fundamental social orientations influence any policy.

This takes us back to the original Nelson (1977) *moon vs ghetto* question: why policies, and the institutions involved in their attainment, have been successful in sending humans to the moon, but not at solving societal problems, *in primis* social injustice, showing a persistent lack of capabilities able to address the ghetto problem? As Nelson (2011) puts it: “If we can land a man on the moon, why can’t we solve the problems of the ghetto?” The question obviously is a metaphor standing for a variety of drawbacks of the uneven performance of the American political economy in meeting different classes of needs⁴.

“In an economy with such vast resources and powerful technologies why can’t we: educate ghetto kids, provide medical care at reasonable cost to all that need it, keep the streets, air, and water clean, keep down crime, provide decent and low cost mass transport, halt the rise in housing and services costs, have reliable television and automobile repair service.” (Nelson, 2011) pp. 376

Even more broadly, industrial policies have to address *global commons* including the integrity of ecosystems, the functioning of health systems, the circulation of knowledge, as well as a decent degree of fairness and equity in income distribution.

7. Some conclusions

I have begun by praising the Broad Tent which the Schumpeter Society has offered throughout. However, the overall orientation of the tent has been somewhat biased, in favor of the non-evolutionary parts of Schumpeter’s heritage, further emphasized by Neo-Schumpeterian developments. For a few of us the reference to Schumpeter has been a precious sort of short-cut to focus on innovation and technological change, after the long silence which followed the Classics – Smith, Ricardo, Marx... - . However, one should have become aware also of the orthodox strictures of Schumpeter’s contribution. On the contrary, it seems that, for many, the *regress* to orthodoxy has come with no antibodies, or even praised as a welcome development.

³ It is impossible to acknowledge all the contributors to the growing K+S community. Let me just mention, with apologies to the many others, Andrea Roventini, Marica Virgillito, Mauro Napoletano, Giorgio Fagiolo, Marcelo Pereira and Tania Trebich.

⁴ We discuss the issue at length in Dosi et al (2025).

My simple urge to the community is to quickly expand the tent also in the other direction, at all levels – statistical, theoretical, normative –.

The world is near an abyss, in terms of environmental crisis, income inequalities and social degradation. It would be pathetic to look the other way and just indulge into discussions of neo-austrian recipes for the miraculous properties of free markets and ‘creative’ entrepreneurs.

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