



Editorial: Building bridges

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In Memory of Calestous Juma

The 16th biannual conference in Montreal from July 6th to July 8th 2016 has been the third conference of the International Joseph A. Schumpeter Society taking place in North America. And with 293 speakers and delegates from 34 different countries it was so far the largest event in North America with the highest international outreach.

The conference's topic "Building Bridges" manifests the outstanding intellectual achievement of research in economics inspired by the work of Joseph A. Schumpeter. After 32 years the International Joseph A. Schumpeter Society (ISS) has become the forum for researchers interested in economic dynamics and structural change triggered by creative agents introducing all kind of novelties in a *restless capitalism*, a notion coined by Stan Metcalfe, the President of the ISS in 2000.

Only consequently, Jorge Niosi, the President in 2016 and the Organizer of the ISS-conference in Montreal suggested with the conference topic to deepen and strengthen the relations with other areas in economics, which also address the multi-faceted phenomena of economic growth, economic development and economic complexity.

The relevance of the conference topic was emphasized in the outstanding keynotes. The explanatory power of Schumpeterian and Evolutionary economics concerning long term economic development was highlighted in Joel Mokyr's keynote "A culture of growth: The origins of the modern economy". And in Richard Nelson's keynote "The scope and orientation of evolutionary economics" the shape of modern evolutionary economics was outlined (Nelson et al. 2018). Both keynote speakers illustrate the intellectual power of modern evolutionary economics to explain the course of economic development driven by the emergence of technological, social and institutional novelties and their interplay.

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Calestous Juma delivered a very important keynote on innovation and their role for African development during this conference. Very sadly it turned out that it was his last. We are dedicating this special issue to Calestous Juma, the great economist of sustainable development and African economics who passed away on December 15th 2017. We will keep him, his intellectual creativity and his outstanding social engagement always in memory.

The local organizing team did a splendid job in contacting several hundred scholars, requesting and receiving their papers, and assessing the papers, and organizing the local arrangements. The local team was formed by Maria Vara, MPM and PMP, and included Catherine Beaudry, Professeure titulaire, Département de mathématiques et de génie industriel, École Polytechnique de Montréal, and Patrick Cohendet, Professeur titulaire, HEC Montreal, and of course, Jorge Niosi.

This special issue includes seven papers, which originally were presented during the conference in Montreal and were selected in the review process of the *Journal of Evolutionary Economics*. All papers take the conference topic “Building Bridges” central and link the intellectual heritage of Joseph A. Schumpeter with recent developments in economics.

The first paper authored by Richard Lipsey, Clifford Bekar and Kenneth Carlaw entitled *General Purpose Technologies in Theory, Applications and Controversy: A Review* gives an overview on the discussion of General Purpose Technologies (GPTs), which might be considered as the most powerful type of innovation impacting the whole economic system. The first decades of the twenty-first century, definitely will and also has to experience these encompassing changes when new GPTs like digitalization, robotics, artificial intelligence and the bioeconomy will broadly diffuse and support the transformation of economic systems towards sustainability.

The emphasis on innovation competition is responsible for the particular route modern evolutionary economics has chosen. However, this also has led to a growing distance with respect to other areas in economics where prices are considered as the target of economic analysis. Harry Bloch combines in *Neo-Schumpeterian Price Theory with Sraffian and Post-Keynesian Elements*, parts of Sraffian and post-Keynesian price theory with elements drawn from Schumpeter’s own theory of prices and builds a bridge between innovation driven capitalistic development – the disruptive part - and allocation theories – the equilibrating part – in economic development.

The next bridge spans over the gap between innovation economics and management theories: Nihad Bassis constructs this bridge with his contribution *Systems of Innovation and Innovation Ecosystems: a literature review in search of complementarities* highlighting the commonalities and common roots of these two strong literatures. He furthermore sees the complementarities between both approaches offering potentials for cross-fertilization in this important area addressing the emergence and functioning of new industrial domains.

Jorge Niosi and Maureen McKelvey have the same phenomena in the focus of their contribution *Relating Business Model Innovation and Innovation Cascades: The Case of Biotechnology* and address a specific technological domain. Most new technologies today, in particular those who are characterized in the first paper of this special issue as GPTs, do impact not only technologies but also trigger new business models which eventually disrupt economic development and increase the speed of change. Innovation cascades, as a combination of mutually supporting scientific and technological

advances, are unfolding avalanches of transformations, restructuring whole industrial sectors. The massive changes caused by biopharmaceuticals in the pharmaceutical industries are a vivid example.

The next paper by Michael Schlaile, Johannes Zemann und Matthias Mueller entitled *It's a match! Simulating compatibility-based learning in a network of networks* exploits the prolific connection between evolutionary economics addressing knowledge development and diffusion, and complexity economics. In their agent based model they investigate relationships between network structures and knowledge diffusion thereby elegantly disentangling the underlying complexity of the phenomenon.

JinHyo Joseph Yun, Kyung Bae Park and Dong Kyu Won address cyclical macro-economic developments in their paper *Entrepreneurial cyclical dynamics of open innovation*. This contribution investigates the combination of Schumpeterian entrepreneurship, Schumpeterian routinized innovation and social innovation. In a system dynamics framework, the authors find conditions characteristic for different development paths, which they empirically detect in Japan and South Korea.

Schumpeter emphasized the important relationship between the entrepreneur and the banker in his theory of economic development (Schumpeter 1911). This bridge between innovation and finance got out of sight in postwar economics and was not rediscovered in the early years of evolutionary economics, which almost exclusively focused on real economics without considering the mutual relationship to the monetary realm. Beniamino Callegari in his paper *The finance/innovation nexus in Schumpeterian analysis: theory and application to the case of U.S. trustified capitalism* approaches again this important bridge from an innovation economics perspective.

In conclusion, the Montreal conference of the ISS of 2016 and the contributions to this special issue show the large potential of modern evolutionary economics to connect with other domains of economics addressing the phenomena of change, development and complexity. Obviously, although triggered by important technological innovation, major transformations of economic systems require an interplay of the institutional frameworks and the social organizations with technological development in order to unfold their potential beneficial impacts on economies. The co-evolutionary nature of these processes requires to cross borders and to build bridges to the broad intellectual communities addressing these phenomena.

References

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