

# ENTREPRENEURS OF CHAOS? | 19.-20.05.2025

## FROM DISRUPTIVE INNOVATION TO NEGENTROPIC ENTREPRENEURSHIP

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Research conference, 19-20 May 2025, Leuphana University Lüneburg, Germany  
Organized by Igor Galligo, with Elke Schüßler, Matthias Wenzel and Erich Hörl

### THE GENERAL ARGUMENT

'Disruptive innovation' and 'impact innovation' are two expressions that have become central to the rhetoric of contemporary entrepreneurship, expressing a desire to transform the world of innovation, and with it the world itself<sup>1</sup>. In basic terms, innovation can be defined as the introduction of a product, process, service or business model that is new or significantly improved. An innovation is *disruptive* if it breaks and replaces established technologies, institutions, or practices in ecological, economic, social, and cultural fields. This quality is reinforced by the term *impact*, which expresses the forcefulness or even violence by which these transformations are brought about.

At the same time, it has become undeniable that innovation, when it generates a successful impact, also disrupts the balance of the natural, artificial and social ecosystems that precede it, without necessarily rebuilding them afterward. But isn't that the very goal of any impact? 'Impact' is also used in military language to describe the explosion produced by a projectile weapon (bomb, missile) targeting human structures. Can we infer from this terminology that innovation sees ecological, economic, social and cultural fields as territories to be destroyed in order to conquer them, as part of an economic war? If this is the case, then we must acknowledge that the entrepreneurial ideology of disruption inherently links innovation with destruction<sup>2</sup>. It draws not only from the economic thought of Joseph Schumpeter<sup>3</sup> through his concept of *Creative Destruction*, but also that of the conservative economist Milton Friedman and the Chicago School, whose *Shock Doctrine* Naomi Klein sees as a driver of 'disaster capitalism' in her book of the same name<sup>4</sup>: This is now the preferred method for helping private

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<sup>1</sup> Arun Kumaraswamy, Raghu Garud, & Shaz Ansari. *Perspectives on disruptive innovation*. Journal of Management Studies, 55(7), 1025-1042, 2018.

<sup>2</sup> Howard E. Aldrich & Martin Ruef, *Unicorns, gazelles, and other distractions on the way to understanding real entrepreneurship in the United States*. Academy of Management Perspectives, 32(4), 458-472, 2018

<sup>3</sup> Joseph Schumpeter, *Capitalism, Socialism and Democracy*, Routledge, 1994

<sup>4</sup> Naomi Klein, *The Shock Doctrine, the rise of disaster capitalism*, Knopf Canada, 2007

enterprise to achieve its objectives [summarizes Naomi Klein]: taking advantage of collective trauma to implement major economic and social reforms'.<sup>5</sup>

This ideological legacy is now, according to Stiegler, being reformulated and extended through a *strategy of technological shock*: "It is much more widely technology that has been used, particularly since the conservative revolution of which Milton Friedman was the main ideologue, to create shock and destruction, psychological as well as social and economic."<sup>6</sup> This entrepreneurial strategy - whose technological model is crystallizing in particular today in Silicon Valley, under the libertarian influence promoted by Peter Thiel<sup>7</sup> - is reminiscent of the incantations to sow chaos in modern societies espoused by the Daesh<sup>8</sup> terrorist doctrine, with which Stiegler dares a polemical analogy, presenting the celebration of disruption as '*a new form of barbarism*'<sup>9</sup>. From this perspective, the ideology of disruptive innovation does less to upset the history of design than it does to explode the various balances, articulations and ecosystems of a society and/or the Earth system. The result is a general increase in entropy rates as a measure of disorder, as well as economic and social violence – as demonstrated by the economist Nicholas Georgescu Roegen<sup>10</sup>, and illustrated by Giuliano da Empoli in his book 'The Engineers of Chaos'<sup>11</sup> – through a techno-political analysis of the development of Italian digital populism from the 2010s.

Against this background, disruption results from the fact that the speed at which innovation is spreading throughout our societies and our planet at a frantic pace is far greater than the speed at which the social and natural systems they are designed to evolve. Disruption thus extends to all natural and artificial systems, from the family to natural regeneration processes, including businesses, languages, law, economic rules, taxation and so on. The misalignment between the evolution of the technical system and the evolution of social and natural systems

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<sup>5</sup> Naomi Klein, *La stratégie du choc. La montée d'un capitalisme du désastre*, Actes Sud, 2008, p.17 (The translation is from us)

<sup>6</sup> Bernard Stiegler, *États de choc, Bêtise et savoir au 21<sup>ème</sup> siècle*, Mille et une nuit, 2012, p. 69 (The translation is from us).

<sup>7</sup> Charles Tyson, *Les réactionnaires investissent in Au-delà de l'idéologie de la Silicon Valley*, Audimat Editions, dir. and trans. Loup Cellard, Guillaume Heuguet, 2024, Paris, p. 51

<sup>8</sup> Abu Bakr al-Naji, *L'administration de la sauvagerie : l'étape la plus critique à franchir par la Oumma*, 2004, quoted by Ignace Leverrier, ex-diplomate, in its blog (<https://www.lemonde.fr/blog/syrie/2015/03/04/letat-islamique-un-etat-a-part-entiere-23/>)

<sup>9</sup> Bernard Stiegler, *Dans la disruption, comment ne pas devenir fous ?*, Les Liens qui libèrent, 2016, chap. 1, p. 15 (The translation is from us)

<sup>10</sup> Nicholas Georgescu-Roegen, *The entropy law and the economic problem*, in *Valuing the Earth: Economics, Ecology, Ethics*, Cambridge, MA, MIT Press, 1993, p.75-88

<sup>11</sup> Giuliano da Empoli, *Les ingénieurs du chaos*, JC Lattes, 2019. Demonstrating the causal relationships between the political rise of the '5 Star' movement in Italy in the early 2010s and the spread of a digital populism made possible by the development and use of new information and digital communication technologies, Da Empoli shows how digital innovation in the Italian political field disrupted the democratic balances and powers of Italian society in the early 2010s.

is nothing new, dating back to the first industrial revolution. However, today these technical transformations are so rapid, so massive and so pervasive that they are outpacing the political, social and ecological spheres, with the result that no new model of development that is viable in the long term can be reconstituted. Regulation, legislation and knowledge always arrive too late in their attempts to assimilate innovation: the resulting constant extension of legal and theoretical vacuums is without historical precedent.

In addition, the disruptive impact destroys not only Western societies, environments, and minds, but also societies and minds of the Global South, when innovation is exported by Big-tech to extra-Western markets. There is therefore a double impact, both historical on previous models, circuits and standards, and cultural, as a form of colonizing. When projects disrupt the techno-diversity<sup>12</sup> developed over decades, even centuries, by local cultures to replace them with technologies implementing Western cultures, disruptive innovation is part of a fierce globalization, under the guise of modernization and design<sup>13</sup>. This is the case, with the cultural upheavals brought about by the American dating industry in large Indian megacities, which in 15 years has wiped out centuries of Indian cultures on encounters, among the middle and wealthy classes<sup>14</sup>. The reaction of some is to want to duplicate the Californian model of Silicon Valley in other regions of the world. In India for example, where some dream of seeing Bangalore as the technological capital and spearhead of an *Indian Silicon Valley*<sup>15</sup>. But not only do the applied entrepreneurial processes remain the same, but also the designs remain largely inspired by Western fashion. Disruption has not only become a global entrepreneurial model, but also a lifestyle brought by and for Western modernity<sup>16</sup>.

The aim of this symposium is to develop a critique of the ideology of disruption and to formulate new entrepreneurial principles and procedures that will enable each invention to be re-articulated with the reconstruction of new psychosomatic, socio-technical and socio-cultural,

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<sup>12</sup> Yuk Hui, *The Question Concerning Technology in China: An Essay in Cosmotechnics, Urbanomic*, 2016 ; *Art and Cosmotechnics*, University of Minnesota Press, 2021; <https://courier.unesco.org/en/articles/rethinking-technodiversity>

<sup>13</sup> Ruha Benjamin, *Le design est complice* in *Au-delà de l'idéologie de la Silicon Valley*, Audimat Editions, dir. and trans. Loup Cellard, Guillaume Heuguet, 2024, Paris, p. 89

<sup>14</sup> Kavita Datani, *Data-bility: Endogamous social intimacies on dating apps in Mumbai*, transactions of the Institute of British Geographers, May, 2024 (<https://doi.org/10.1111/tran.12687>)

<sup>15</sup> *A new Silicon Valley ?, Bengaluru can't be replaced, but ground is shifting*, The Economic Times, October 01, 2024 "A recent comment by Union Commerce & Industries Minister Piyush Goyal on Bengaluru, India's IT capital, has triggered a controversy. Goyal said at an event in Delhi, "We should aspire to go beyond. We should aspire to have our own Silicon Valley... I know Bengaluru is the Silicon Valley of India, but it's time we started thinking about tying up with NICDC and creating a whole new township dedicated to entrepreneurs, startups, innovators, and disruptors"(<https://economictimes.indiatimes.com/news/india/a-new-silicon-valley-bengaluru-cant-be-replaced-but-ground-is-shifting/articleshow/113855885.cms?from=mdr>)

<sup>16</sup> *Bengaluru: India's Silicon Valley and Startup Capital*, Deutsche Vertretungen in Indien, 06.10.2024, <https://india.diplo.de/in-de/ueber-uns/bangalore/-/2676314>)

as well as ecosystemic balances. To do this, we propose to replace the entrepreneurial strategy and ideology of disruption. But how could a different, an essentially negentropic entrepreneurial model look like? We propose, as a first hint, to think about Stiegler's notions of *bifurcation* and *transindividuation* .

In physics and biology, negentropy (or negative entropy) refers to a measure of order and organization in a system or organism. It is thus opposed to entropy. Negentropy represents the useful and structured energy available in a system to carry out work and in an organism to ensure its survival. It is used to describe the capacity of an organism to maintain its internal order in the face of the increasing entropy of the universe, which dissipates vital energy. Thus, if a living organism produces entropy by transforming energy [into resources for its survival], it maintains its anti-entropy by constantly creating and renewing its organization, and it produces anti-entropy by generating organizational novelties.'<sup>17</sup>

Bifurcation – a term that originally comes from the theory of non-linear equations, catastrophe theory and systems theory, is used here to denote something like forking paths, but also the uncertain and open character of evolution – refers to an operation: a systemic change in the collective choices made, more rapidly and more radically than transition (because it is opposed to progressive or gradual change), but less violently than disruption (which advocates a total break with previously established socio-economic and/or ecological orders). In this sense, bifurcation does not imply a rupture, but a radical reorientation in the evolution of the structures of an organization or organism.

In the social sphere, and extending Bertrand Gille's intuitions, Stiegler proposes thinking about the production of negentropy through the formation of circuits of transindividuation: 'Bertrand Gille held a different point of view from that of the new barbarians: if innovation does indeed disrupt an 'established order', it is only successful if it establishes a new order or another metastability<sup>18</sup> – i.e. new circuits of trans individualization – and not a state of shock and permanent chaos reflected in a "chronically unfrozen" system or organization<sup>19</sup> manipulated to their advantage by strategists advocating permanent and unlimited innovation.'<sup>20</sup>

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<sup>17</sup> Maël Montevil, Bernard Stiegler, Giuseppe Longo, Ana Soto, Carlos Sonnenschein, *Anthropocène, exosomatization et néguentropie*, in *Bifurquer, Il n'y a pas d'alternative*, dir. Bernard Stiegler, chap. 1, Les Liens qui Libèrent, 2020, p. 73, 74

<sup>18</sup> Metastability is a weak form of stability. A metastable state is stable to small changes, but unstable to larger changes. Metastability is a condition of equilibrium that does not correspond to an absolute minimum of energy that characterises a stable system.

<sup>19</sup> Georg Schreyögg & Jörg Sydow. *Organizing for fluidity? Dilemmas of new organizational forms* . Organization Science, 21, 1251-1262, 2010.

<sup>20</sup> Bernard Stiegler, *Dans la Disruption, comment ne pas devenir fou ?*, Les Liens qui Libèrent, 2016, p.69 ((The translation is from us)

For Stiegler, the transindividual is what, through the co-individuation of *I*'s, generates the transindividuation of a *WE*. This process of transindividuation takes place under the conditions of metastabilization made possible by what the philosopher Gilbert Simondon calls the pre-individual milieu<sup>21</sup>, which is assumed by all individuation processes and shared by all individuals. For us today, however, this pre-individual milieu is intrinsically *technological*<sup>22</sup>. Technology is thus the 'third strand' of individuation, which in turn constitutes transindividuation. Transindividuation is what is achieved through the circuits of transindividuation, that is, through the relations that weave society through the intermediary of individuals and the artificial media of mediation that all technology constitutes. While transindividuation is essentially a social process, we also need to think about it in association with natural milieux and ecosystems, and in this sense move towards a broader and more comprehensive conception of negentropy.

How can entrepreneurship appropriate the concepts of bifurcation and transindividuation circuits to develop and promote a model of negentropic entrepreneurship? What principles can entrepreneurship research formulate on the basis of these concepts? How can entrepreneurial innovation and success be re-considered as negentropic processes that must be part of an articulated and creative understanding and configuration of economic and technological fields, as well as social, economic, cultural and ecological fields? And what processes can it implement? Our two-day event aims to provide a symposium for generating and discussing answers to these critical as well as prescriptive questions.

The first day, open to the public, will be devoted to a series of lectures and discussions designed to clarify and define the scientific concepts and issues at stake. The second day, which will be closed to the public, will consist of collective workshops divided into six groups with the aim of formulating positive proposals aimed at defining not only the principles, but also the criteria and production processes of this negentropic entrepreneurship.

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<sup>21</sup> David Scott, *Gilbert Simondon's Psychic and Collective Individuation*, Edinburg University Press, Edinburg, 2014

<sup>22</sup> Diane E. Bailey, Samer Faraj, Pamela J. Hinds, Paul M. Leonardi, & Georg von Krogh. *We are all theorists of technology now: A relational perspective on emerging technology and organizing*. *Organization Science*, 33(1), 1-18, 2022.