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The « **Internation/Geneva 2020** » collective.

Paris, …

Mr. António Guterres
Secretary-General
United Nations

Dear Secretary-General,

As you have repeatedly pointed out, international efforts to commit to a greenhouse gas reduction strategy compatible with the objectives set by the Paris Agreement have largely been inadequate, despite the forecasts documented by the IPCC and various other groups, organizations and teams of scientists.

Often, the gap between what is needed and what is actually occurring is expressed in terms of a lack of (political or collective) will and the rise of (political or collective) apathy. This situation, where we witness a collective incapacity to change course, worries everybody: investors, populations, and particularly the younger generations, who wonder what kind of world they will inherit.

Given this state of emergency, the transdisciplinary collective Internation/Geneva2020 was formed at the Serpentine Galleries in London on 22 September 2018, on the initiative of Hans Ulrich Obrist and Bernard Stiegler. It comprises fifty-two personalities from around the world, including scientists, mathematicians, legal scholars, economists, philosophers, anthropologists, sociologists, doctors, artists, engineers, business leaders, activists and designers.

Our argument is that the overall lack of will is a symptom of a profound disorientation concerning the challenges at stake in our contemporary era, frequently referred to as the Anthropocene. Beyond the contradictions between collectively formulated objectives and the reality of particular interests, what greatly hinders actions that would truly make it

possible to avoid runaway climate change is an inadequate understanding of such challenges.

In order to scientifically investigate these problems and to invent consensual solutions, we believe new research methods are required, that we call *contributory researches*. Inspired by what you have named "*inclusive multilateralism*", such research methods should be capable of tightly linking populations, economic actors, politicians, institutions and international research organizations engaged in a transdisciplinary approach. Their aim would be to lead local societies, through rapid transfer processes and networks of experimentation, to develop reproducible recommendations.

Adopting such a territorialized approach could be the occasion to reread the reflections by the anthropologist Marcel Mauss published under the title *La nation*. In 1920, Mauss recommended that the development of internationalism should not be on the cost of the territorial and cultural specificity. From this perspective, he outlined the concept of *internation*, a dynamic according to which nations could be called upon to cooperate without erasing their local dimensions.

A century after the establishment of the League of Nations, it is with reference to this work that we believe such an internation should be set up as the institutional framework of a new inclusive multilateralism. Its function would be to encourage, launch, support and evaluate experimental operations. This could be initiated with a call for tenders inviting actors from candidate territories to collectively engage, via networks, in contributory research approaches.

In order to establish a set of specifications for such territorial laboratory initiatives, the Internation/Geneva 2020 Collective has defined the fundamental principles and thematic axes that would structure this approach.

Some of this work will be discussed in general terms next December at the Centre Pompidou (Paris), for which representatives of *Youth For Climate*, the movement started by Greta Thunberg, will be invited.

We will circulate this work in English on the internation.world website. It will also be published in the form of a book which will be printed in English, French, Spanish and Italian, with an *e*-version available in open access.

We would like to present this work to your staff, and to make it public in Geneva, if possible during a press conference gathering different stakeholders (such as UN staff, political & business leaders, civil movements and academics). Given the dramatic importance of these issues and in the hope of launching an international debate, we would be grateful to hold this event on the historic grounds of Palais des Nations around the centenary of the foundation of the League of Nations, which will be celebrated on January 10th, 2020.

In thanking you for your action and for the attention brought to this initiative, we ask that you believe, Mr Secretary-General, in our very respectful devotion.

For the Internation/Geneva 2020 Collective.

Hans Ulrich Obrist, Director of the Serpentine Galleries (London)

Bernard Stiegler, President of the Institut de recherche et d'innovation (Paris)

APPENDIX

1. Presentation of the scientific analysis of the situation

- **The Anthropocene as Entropocene: thermodynamic entropy, biological entropy, informational and psycho-social entropy**

The term Anthropocene – despite the debates it has provoked – is now well-established. However, in our view it suffers from a misconception that prevents understanding what is fundamentally involved in the degradation of the biosphere and living things (plants, animals and humans).

We argue that the Anthropocene can be described as an Entropocene, insofar as the contemporary period is characterized above all by a process of the massive increase of entropy in all its forms:

- increased physical or thermodynamic entropy production (irreversible dissipation of energy) due to the exploitation of fossil fuels and climate change (to a large extent linked to the combustion of these same fossil fuels);

- increased biological entropy production (entropy of living things), whose effects include the loss of biodiversity and the extinction of many species;

- increased entropy production at the informational and psycho-social level, of which the 'post-truth' phenomenon and public distrust of international institutions and organizations are symptoms.

Many of the problems raised by the IPCC's analysis of climate change, or by the IPBES's analysis of the destruction of biodiversity, can thus be translated into the terms of entropy and negentropy, in different ways depending on the domain: thermodynamic entropy (climate change, energy waste) and biological entropy (destruction of biodiversity). More broadly still, we believe that the degradation of our political and social systems can also be translated in entropic terms. Here we refer to informational entropy, which concerns the psycho-social field, that is completely structured by information technologies nowadays. Social networks and digital technologies can cause the disintegration of individual motivations and social relations (increase in the rate of entropy at the psycho-social level), although they are at the same time capable of constituting supports for psychological investments and new social relations, thereby promoting the production of new knowledge and new collective aims (reduction of the rate of psycho-social entropy).

These entropic processes are systemically linked: the ecological catastrophes result from an economic system based on employment and consumption, in turn based on addictive and consumerist behaviour stimulated by the data economy, leading to a massive waste of natural resources.

In our view, this economic system is based on an obsolete epistemological model.

The mathematician and economist Nicholas Georgescu-Roegen [1], who was Joseph Schumpeter's assistant, showed that the industrial economy is based on mechanistic physical models, arising from a Newtonian conception of rationality. Yet, these models do not take account of the second law of thermodynamics and the associated theory of entropy, or of the definition of life [2] as organized matter struggling against entropy, or of the process of exosomatization described by Alfred Lotka. Lotka [3] shows that human beings – equipped with 'exosomatic' organs (which are artificial but indispensable), and not just 'endosomatic' organs (within their body) – organize inert matter in such a way that, if they are not careful, can lead rates of entropy to increase instead of limiting them. The question raised by Lotka in 1945, then by Georgescu-Roegen in 1971, is therefore a macroeconomic one: it indicates that the systems for calculating and distributing value must be transformed in order to systemically value low entropy and to penalize increases of entropy.

In addition, the work of the economist Amartya Sen [4] has brought to light the role of capabilities and the practice of knowledge in maintaining the resilience of regions and populations, for example by showing that the life expectancy of the male population in Bangladesh in 1972 was higher than that of the male population of Harlem. According to such an approach, the practice of knowledge (knowledge of how to do and how to live, as well as theoretical knowledge), understood as an ability to defer the increase of entropy, must be placed at the center of economics.

These approaches also involve a systemic revaluation of local microeconomic and mesoeconomic organizations, given that organizations struggling against entropy are necessarily local (the life of the organism is always attached to more or less extensive local conditions, as is the practice of knowledge in human life too – the most extensive locality being the biosphere itself, as a whole and within the solar system).

- **The question of locality: inscribing local processes of the struggle against entropy into economics**

Nevertheless, in the context of what has come to be called globalization, this question of locality has not truly been taken into account. Rather, it has been marginalized, confined to the field of what, for example, was initially called – at the instigation of France, and within the framework of the 1994 GATT agreements – the 'cultural exception', or else relegated to epiphenomenal particularisms in the dynamic of the planetary development of humanity.

This reductive conception of locality has led to a marginalization of territorial dynamics (despite the geography and economics of so-called clusters), even though the various attempts in different parts of the world to find practical solutions, for example as 'territories in transition', have all been characterized by their local roots. But besides being generally limited to food and energy production, they rarely address the crucial question of the shift from the microeconomic level to that of new mesoeconomic rules (in terms of sectors) and macroeconomic rules (at the national and international levels).

Scientific ecology and then political ecology have certainly highlighted the need to protect the metastable equilibria of ecosystems, whether virgin or anthropized. As far as production is concerned, however, these considerations have only allowed the emergence of new agricultural practices, without transforming industrial practices. More generally, the question of how to inscribe all this into economics through the qualification and quantification of local processes of the struggle against entropy – and against its human and anthropic form of production – has never been asked or investigated.

It is therefore necessary to rethink locality on the basis of entropy and negentropy, in particular so as to struggle against regressive and populist appropriations of this concept.

From this perspective, and a century after the establishment of the League of Nations, it is useful to reread the reflections recorded by the anthropologist Marcel Mauss in various manuscripts published under the title *La nation* [5]. In 1920, Mauss recommended that the territorial and cultural specificity of nations should not be erased from the international dynamic.. From this perspective, he outlined the concept of *internation*, a dynamic according to which nations could be called upon to cooperate without erasing their local dimensions.

Mauss was not, however, familiar with the theory of negative entropy (or negentropy), and he did not refer to the thermodynamic question. But if we interpret his reflections from this standpoint, we can give them new life. It is with reference to these works that we believe such an internation could be set up in order to encourage, launch, support and evaluate experimental operations This could be initiated with a call for tenders inviting actors from candidate territories to collectively engage, via network, in contributory research approaches.

2. Presentation of the contributory research approach

We believe that *territorialized* scientific, economic, legal, political and technological cooperation, through territories in transition networked in all areas of production, including agriculture, industry and services, would contribute to changing this state of affairs through territorial laboratories engaged in experimental approaches that are simultaneously scientific, entrepreneurial, social, technological, cultural and artistic.

One territorial experiment currently underway was started two years ago in the northern suburbs of Paris. The Contributory Learning Territory of the Plaine Commune Public Territorial Establishment and the City of Saint-Denis has brought residents, institutions, associations, universities, foundations and businesses together by involving them in programs dedicated to a contributory economy, that is, an economy that systemically values the production of negentropy at the thermodynamic, biological and psycho-social levels. This economy is based:

- on an accounting system itself based on the definition of local criteria for the struggle against entropy;
- on a contributory income for work outside of employment, making it possible to cultivate local knowledge in the struggle against the increase of entropy, but where this is conditional upon the regular securing of intermittent employment;
- on mechanisms for shifting scales between the microeconomic, mesoeconomic and macroeconomic levels.

We believe that this territorialized approach, combined with other approaches (currently being developed) and with a global policy, constitutes a preferred way of responding to questions tied to development in the so-called countries of the global south, and of taking account of the difficult migration issues to which the current upheavals have given rise.

In order to establish a set of specifications for such territorial laboratory initiatives and their networks, the Internation/Geneva 2020 Collective has defined fundamental

principles and thematic axes structuring their approach, grouped under the following headings:

- *Anthropocene, exosomatic evolution and negentropy* – where it is a matter of establishing precisely the terms of the analysis, in particular by introducing into the economic field the concept of anti-entropy as it has been formalized by the physicist Francis Bailly and the mathematician Giuseppe Longo.

- *Carbon and silicon in contemporary political economy* – which analyses the fundamental transformation of the industrial economy by silicon technologies combined with carbon technologies, and the consequences it implies from the standpoint of an economy that would struggle against entropy.

- *Infrasomatization, infrastructures, really smart cities and urban metabolisms* – examining new urban dynamics that can be sparked as open urban localities founded on the appropriation by inhabitants of digital technologies for planning, construction and urban management.

- *Contributory research and 'social self-sculpture': knowledge, arts and technologies* – expounding the function of knowledge and arts in digital societies, presenting new research methods and practices involving local stakeholders and communities to contribute actively to the transformation of their social organisations and technical milieu, through territorial laboratories and deliberative technologies.

- *Contributory economy, commons and accounting* – which specifies and exemplifies through case studies some economic exchanges based on the revaluation of work, functionally distinguished from employment and characterized as the process of transforming bio-physical and socio-technical systems thanks to a collective mobilization of knowledge and capabilities ; using the tools and methods of the management institutes of the contributory economy, within which microeconomic, mesoeconomic and macroeconomic levels are articulated together via new accounting instruments.

- *Ethos and technologies* – where the ethical issues raised by technological development are functionally related to questions of territorial organization, epistemology, and the development and sharing of knowledge.

- *Intoxication, addiction and the ecology of the dopaminergic system* – where the mental and psychological entropy to which addiction amounts is analysed on the basis of an

anthropological and historical approach to the relationships between the nervous system and the evolution of its socio-technical environment.

- *Design, technology and conception of contributory networking platforms* – where both the function and the practice of artistic and industrial design are reconsidered on the basis of a critique of the current conception of the functionalities of digital platforms, and in particular insofar as they involve the elimination of all deliberative functions.

- *Governing the transition: the institutions of the internation* – where we propose taking up the concept of internation outlined by Marcel Mauss from the perspective of the creation of territorial laboratories in relation to which the internation would be the institutional reference.

Bibliographical Notes

[1] Nicholas Georgescu-Roegen, *The Entropy Law and the Economic Process* (Cambridge, Massachusetts and London: Harvard University Press, 1971); Nicholas Georgescu-Roegen, 'Energy and Economic Myths', *Southern Economic Journal* 3 (1975), pp. 347–81.

[2] Erwin Schrödinger, *What is Life? Mind and Matter* (Cambridge: Cambridge University Press, 1992).

[3] Alfred J. Lotka, 'The Law of Evolution as a Maximal Principle', *Human Biology* 17 (1945), pp. 167–94.

[4] Amartya Sen, *Inequality Re-Examined* (Cambridge, Massachusetts: Harvard University Press, 1992). Sen cites the work of Colin McCord and Harold P. Freeman, 'Excess Mortality in Harlem', *New England Journal of Medicine* 322 (1990), pp. 173–77.

[5] Marcel Mauss, *La nation*, in *Oeuvres, tome 3. Cohésion sociale et division de la sociologie* (Paris: Minuit, 1969), pp. 573–625.

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