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Re-discovering Aurelio Peccei's contribution to Futures Studies

Carolina Facioni¹ and Roberto Paura^{2*}

Abstract

This work aims to enhance the contribution of Aurelio Peccei to Futures Studies and its unaltered relevance in the light of the world's current scientific issues. Peccei's contribution in Futures Studies is often identified with his propulsive role in the birth of the Club of Rome (1968) and in the promotion of the report "The Limits to Growth" (1972). Although this would be enough to make him a central figure in the history of Futures Studies, his whole intellectual journey is worth emphasizing. This work focuses on the "epistemic impact" of Peccei in the field research on possible futures. Peccei not only argued the fundamental need to translate complexity into a forecasting model: as an *ante litteram* anticipator, he dedicated his life to seek a development model respecting both the human tendency towards constant evolution and biosphere. A theoretical impact that allowed many fundamental UN initiatives—from the 1987 Report of the World Commission on Environment and Development to the 2015 Report on Sustainable Development Goals (SDGs)—and also helped the development of a forward-looking social research.

Keywords: Aurelio Peccei, Club of Rome, Anticipation, Sustainable Development Goals, Complexity

Background and life of a "hopeless generalist"

This work aims to underline the modernity of Aurelio Peccei's contribution, highlighting its influence on the development of contemporary Futures Studies¹. It is not easy to define Aurelio Peccei, who defined himself a "hopeless generalist" in his autobiography, which is also his spiritual testimony [39]. Indeed, he was not a scientist. Peccei was born in Turin in 1908, in a middle class and socialist-minded family. He completed his training in Turin, graduating in Economics, in a period where both the city of Turin and Piedmont in general were

experiencing an amazing cultural effervescence². His biographical path was indeed very unusual. After graduating in Economics in Turin, Peccei completed his studies in Paris at the Sorbonne, which financed him an educational trip to Russia (then USSR). His subsequent activity as a manager at Fiat³ allowed him to continue working around the world, as he wished. He himself asked to work in China. After the Chinese period, he was in South

¹ This work is conceived as the result of the overall work of the two authors. However, the chapters 1 and 2 are to be attributed to Carolina Facioni, while the chapter 3 is to be attributed to Roberto Paura. In this paper, Carolina Facioni's ideas not necessarily reflect the position of her home institution, the Italian National Institute of Statistics (ISTAT).

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² In that same period (and for about thirty years), some of the greatest Italian innovative talents were born, or trained, or worked in Turin. To name but a few, the Nobel laureates Rita Levi Montalcini and Renato Dulbecco; the philosopher Norberto Bobbio and his pupil Renato Treves; the philosopher Nicola Abbagnano, who at the University of Turin formulated the Italian Neo-Illuminism thesis, and the idea of Positive Existentialism. Expanding our focus to the whole Piedmont in the same period, we note some other protagonists of the future socio-cultural context. For example, Adriano Olivetti—the man who will define a real revolution in the world of work—in Ivrea; the poet and writer Cesare Pavese (born in Santo Stefano Belbo) who, together with Elio Vittorini, introduced Anglo-American literature to Italy (despite its prohibition during Fascism). Last but not least, Franco Ferrarotti (born in Palazzolo Vercelesse), who in 1961 will hold the first chair of Sociology in Italy, graduated in Turin, and collaborated with Adriano Olivetti in the 1950s.

³ Acronym for: Fabbrica Italiana Automobili Torino (Italian Automobile Factory Turin).

America. His long stays abroad allowed him to establish a network of relationships (and of cultural exchange) at a planetary level—an aspect of extreme importance to understand Peccei's intellectual contribution. In the years of World War II, he took part in the Resistance, within the liberal-socialist political movement “Giustizia e Libertà”. For this reason, he experienced imprisonment and torture. At the end of World War II, he was a protagonist of the Italian economic recovery. Appointed by CLN (the National Liberation Committee) as a commissioner for Fiat, he managed the post-war transition; then he chose to resume his usual job and managed the company's activities in Latin America. He was one of the founders of Alitalia, ADELA (Atlantic Development of Latin America), and Italconsult (of which he was later honorary president). His contribution was also fundamental for the birth of the IIASA (International Institute for Applied Systems Analysis), a research centre based in Vienna, one of the first institutes to connect the East and the West of the world during the 1970s.

Regarding his contribution to Futures Studies, three persons were fundamental in Peccei's intellectual and life path: Julian Huxley, Alexander King, and Eleonora Barbieri Masini. Julian Huxley founded WWF and contributed to forming Peccei's sensitivity towards environmental problems⁴. The creation of the Club of Rome in 1968 was due to Peccei's meeting with the Scottish scientist Alexander King⁵. Peccei and the sociologist Eleonora Barbieri Masini first met in Stockholm, in 1971, on a conference of the European Council for Culture, where they were the only two Italian attendees. Realizing they shared the same intellectual vision, they began to collaborate. Peccei invited Masini—one the most important theorists who built the foundations of Futures Studies [1, 2, 5, 13, 14, 42]—to join the Club of Rome in 1975, the same year she was elected general secretary of the World Futures Studies Federation. Peccei, together with the international network of experts he helped to create, devoted his tireless activity to the future until his death in 1984. *The Club of Rome: Agenda for the End of the Century* was his very last work: Peccei dictated the text (without the time to revise it) to his secretary, a few hours before his death. Eleonora Barbieri Masini focused on the importance

of this last text during the 2004 edition of Aurelio Peccei Lecture in Rome. During the lecture, she reminded that Senator Pell had inserted Peccei's Agenda—where he takes stock of the necessary actions at a global level in view of the 21st century—in the documents of the US Congress, on June 28, 1984.

The contribution of Aurelio Peccei to Futures Studies

To summarize Peccei's contribution to Futures Studies in a few key concepts, we certainly have to mention complexity, anticipation, and a new humanism. He was certainly not the first to speak about complexity, or rather about the interaction between different systems [16], but he was perhaps the one who best focused the interactive link between population growth, misuse of technology, pollution, and environmental disasters. This is very clear in this excerpt from one of his most famous books, *The chasm ahead*:

Since man has opened the Pandora's box of new technologies, which escaped out of his hands, any change anywhere affects almost everywhere. Dynamics speed, effort, and complexity of our artificial world have orders of magnitude without comparison in the past, and the same applies to our problems. These, today, are at the same time psychological, social, economic, political and technical, and can not therefore be dealt with and resolved one at a time, because they interfere and interact with one another, each having roots and ramifications intricate in all others [39].

Peccei's emphasis on the increasing speed of any process, especially in the most developed countries, and on the possible consequences of it, is crucial. In a lecture he gave at the National Military College of Buenos Aires (on September 27, 1965), titled *The challenge of 1970s for the world of today*, he focused on how the different speeds in technological evolution were creating new social inequalities between the world's countries:

...In the history of humanity, it is possible to identify long phases of slow evolution broken by periods of intense change, which can be compared to the mutations in the life of the species. When the discovery of the new technical methods made a community stronger, it invariably conquered and eliminated more backward neighbouring communities or races. Each one of these stages in progress, often separated one from another by thousands of years, has necessarily brought about a corresponding change in the social order. The latest change was provoked by the industrial revolution, which had its beginnings two

⁴ Peccei was also an authoritative member of the WWF. The awareness of the risks the Earth was running led him first to give a series of lectures in South America between the 50s and 60s, and then to spend the rest of his life sensitizing the world both on the possible disaster, and on the need to find solutions as soon as possible.

⁵ The first meeting between King and Peccei occurred at Bellagio, Italy, in 1967, at a conference devoted to strategic foresight. King knew about Peccei through Dzherman Gvishiani, then vice-president of the Soviet Committee on Science and Technology, who sent to King a copy of Peccei's talk held in Argentina [39].

centuries ago in Britain and then spread to a certain number of other countries, which are referred today as “industrialized”. The overwhelming factor, which marked the advent of the modern era, was the invention of powerful machines destined to multiply man’s capacity for work. The consequence of this technological transformation can be measured by remarking how those countries not touched by the industrial miracle, the underdeveloped countries, have remained backward in every way: social structure, political system, economic standard and, above all, capacity for further progress... [36]

The need to translate his hypotheses into data made Peccei look for an answer in the scientific research context. His interest in the developments of forecasting studies is evident in a paper [41] published on the Italian journal “Futuribili”. The paper described the mathematical model developed by MIT in Boston on which the first Club of Rome report *The Limits to Growth* is based [32]. The Report, strongly desired by both Peccei and the Club of Rome, was perhaps the most controversial scientific report in history [3]⁶ and aroused a still open debate in the scientific community, but it represents a milestone in Futures Studies history as well [10–12]. The report was based on the dynamics of five dimensions (population, capital, food, non-renewable resources, pollution), and the interactions of the cause-effect relationships between them. The MIT computer simulation, World3, was based on the hypothesis that the interactions between the variables functioned as feedback loops, considering the period between 1900 and 2100. The results did not reveal encouraging news for humanity. The Earth being a closed system, there were objective limits to an infinite growth. Unless the development model was radically changed, collapse would have been unavoidable. A possible solution to the disaster was to seek a new global balance of the system. The Report considered population growth among the world’s priority problems. Birth control—with the consequent decrease of both natural resource exploitation and pollution—was the keystone of this new balance. The Report underlined the need to plan birth control worldwide. The consequence was to upset many opinion groups—not only religious leaders [34]. However, this was not the only element around

which the debate revolved. In fact, there was also some methodological criticisms, aimed at the very conception of the simulation model. For example, Sam Cole and his team from the University of Sussex believed that human adaptability was not sufficiently considered, as well as the institutional and technological aspects [17, 18].

In his essays, Peccei underlined how the human species is extremely recent, in the history of the life on Earth [38]. He emphasized how, bringing the whole planet’s history back to 24 hours, human presence (and in particular the technological civilization phase) occupies only a negligible, almost non-existent time space. Nevertheless, the human race, the last arrived on Earth, operate devastating changes on the entire ecosystem. Today the human role in the ongoing environmental changes is clearer, so much so that in recent years the international organizations of geologists are considering the adoption of the term Anthropocene⁷ [19] to indicate the geological era from which humanity began to leave a decisive imprint on the environment. This is particularly true about climate changes, although there are still critical voices [9]. Contrariwise, Peccei’s message seemed revolutionary to his contemporaries, and its implicit consequences were fully understood by the ecologists only, especially in Italy [4, 6, 7]. It was revolutionary saying that humans were not the only owners of the environment that housed them, and that they had to learn to respect it, before it was too late [40]. Reminding the human species to behave as the newcomer in an already existing context—and to relate to it in a humble and respectful way—means to ask for the advent of a new humanism, a paradigm shift, a new way of humans to consider their place in the world.

Thus, the reflections of Peccei represented the starting point for many of the hottest debates in the contemporary world: the climate change, the demographic criticalities, the risks due to pollution, the erosion of the planetary resources. At a macro level, Peccei began a serious reflection on how to save the Earth (and the human species) from the destruction caused by humans themselves. He dedicated most of his life to raising awareness of humanity in this regard, urging actions to avoid the disaster. Peccei’s commitment to this goal should not had been considered (as in part, unfortunately, it was) as the dream of a utopian, but as the work of a manager used to solving problems. In his professional life, Peccei used to manage resources at the highest level: but he made a

⁶ The quote refers to Futuribili, 3 (1997). This fundamental issue, edited by Eleonora Barbieri Masini and Giorgio Nebbia, represents a global overview of *The Limits to Growth*, from its premises to the debate following its publication. Here we find contributions by Magda Cordell McHale, Jim Dator, Wendell Bell, Antonio Golini, Sam Cole, and others. In this context, Giorgio Nebbia describes all the discussion and criticism made to the report in the aftermath of its publication. *Futures*, 33 (2001) re-published many of the papers in a monographic number dedicated to *The Limits to Growth*.

⁷ However, the intuition to emphasize the strength of the human footprint on the environment and its changes, by giving a name to the current geological era, was by the geologist and palaeontologist Antonio Stoppani, who in 1873 coined the concept of “Anthropozoic Era”.

qualitative leap. He brought his managerial ability to analyse facts to achieve goals also to an ethical level: i.e., the responsibility towards future generations—that kind of responsibility the Hungarian philosopher Agnes Heller defines *enormous* in her work on ethics [21]. As the mathematician Bruno de Finetti said, Peccei was able to see the chasm toward which a “pinchbeck progress”⁸ was leading [20]. This necessarily leads to conclude that one cannot talk about Peccei without talking about that fundamental element of Futures Studies which is anticipation [43].

Indeed, he did not limit himself to expressing his idea of what was about to happen to the world—from this point of view, Peccei was also one of the first theorists of the risk society [8]. Peccei provided ideas, the agenda, the necessary actions aimed to change the world and avoid a catastrophe. A change that needed adequate policies—and therefore to get in touch with policy makers. However, the historical context in which Peccei worked was extremely complex, especially at the level of international politics. According to Peccei, it was necessary to establish a dialogue between the developed countries, especially between the West and the East of the world: an extremely difficult mission in Cold War times. Nevertheless, he was sure that developed countries had to take charge of the less developed ones, whose situation they were in some way responsible for. So, Peccei argued for a real need to reshape the world order. The third report of the Club of Rome [44], the RIO Project (Reshaping the International Order), reflected Peccei’s (and the Club of Rome’s) idea to create a sort of supranational institution. According to RIO Project, it had to be shaped on the UN model, but characterized by a stronger normative dimension respect to UN. This, in order to have a decision-making apparatus more adequate to a faster resolution of the problems of the Planet. Far from criticism of his intellectual contribution (from the accusations of neo-Malthusianism, for example) Peccei considered the problems facing humanity as consequences of an uncontrolled population growth, in the absence of a qualitative leap in humanity: a leap that he believed should be possible only through a common awareness [39]. Certainly, he was aware that the institutions had to bear the change. However—and this is an important aspect of his vision—the institutions also had to renew themselves, leaving the narrow sphere of national interests. Without this leap in quality, according to Peccei, the change could only have a negative direction, and not from the environmental perspective only. A much broader range of cultural problems was implicit in

the change: not surprisingly, Peccei spoke of it in terms of *human quality*.

The heritage of Peccei in the contemporary context

More than fifty years after the founding of the Club of Rome [47], undoubtedly the most famous of his enterprises, Peccei’s message is still very much alive for anyone who thinks that building futures is a concrete work of research in the field, and not a mere exercise in utopia without a construct. In the present time, when the damage of global warming is under everyone’s eyes, perhaps we can say that Peccei had to be listened to more, and before. Surely, it would be useful to make know the relevance of Peccei, of his personality and thought even outside the context of the specialists, because it can inspire everyone to make the world a better place. Of course, some of his ideas were misunderstood⁹, as sometimes happens to personalities in some ways ahead of their own time. But Aurelio Peccei’s reflection did not go without listening [7]. There is Peccei’s thinking, and his concern for the future of humanity, behind the works that led to the Report Our Common Future [45], or in the reflection that, more recently, led to defining the United Nations’ Sustainable Development Goals [46]. From another point of view, at a level we can define as micro, because it is more oriented towards specific territorial realities, Peccei’s thinking inspired, for example, the research and analysis of the Italian indicators of the Equitable and Sustainable Well-being [22–29]. A further surprising aspect of Peccei’s contribution to social studies—and in particular to the quality-of-life studies—is precisely his ability to move easily both in the macro context of world dynamics and in more contained territorial contexts. Therefore, he also gave a huge boost to the “Turin Project”, which included seven research works in different disciplinary fields, carried out between the end of the 70s and the early 80s, on social issues relating to the city of Turin. Between them, there was one of the very first works on time use in Italy [15].

We can certainly affirm that there is a bit of Aurelio Peccei’s thought every time we talk about goals linked to well-being, both at planetary and local levels. The leap in quality is important: we cannot speak of well-being if we consider only human beings. Well-being is something comprehensive, holistic, and concerns human beings and everything around them. Concerning specifically the seventeen UN SDGs, a possible risk is, if anything, not looking at goals with Peccei’s eyes: pursuing each goal individually carries the risk of losing sight of

⁸ Pinchbeck is an alloy of copper, zinc, and tin, very similar to gold. It is used in place of gold to obtain embroidery threads and laminations.

⁹ The accusations of neo-Malthusianism at the release of the first report of the Club of Rome are well known. However, to understand how controversial still the figure of Peccei is, it just takes to do some research on the web.

the overall objective envisaged for 2030. There remains the need to analyse the goals also in their dynamic interaction. It is not obvious that a step forward in a single goal direction necessarily corresponds to a step forward for all the others. For example, the technological innovation (goal 9) has often a labour-saving effect—that can be negative on goal one (poverty), goal five (gender inequalities), goal 8 (decent work), and goal 10 (inequalities). Looking at the interaction to prevent the possible negative effects, to understand where and how to act, means looking through Peccei's eyes. Moreover, it means thinking in terms of anticipation—which means looking at possible problems and finding strategies in advance to avoid them.

It is important to remember his effort to seek a development model that could respect the human tendency towards constant evolution, without falling into the modern concept of degrowth [30]. All the scientific community should follow the example of Peccei's attention to the rights of future generations, and his respect for the biosphere. The scientific community must bear in mind his lesson of criticism of what is now called “technological solutionism” [33] and his distrust of computer-driven forecasts, despite the role of the World3 model and its subsequent developments. As he said, computers are not but tools, whose application depends on human judgements and values [39]. His long career and international experiences allowed him to take an overall view of the world system that was lacking in most of the political and industrial establishment of the time. He understood how complex and multifaceted the notion of “development” was, quite different from that of mere economic growth. For an industrialist, there was nothing simpler than planning a company's economic growth over the long term: it was enough to find a way to increase productivity through savings and investments. However, how to define the development of a society? Peccei's institution was to use foresight techniques, contributing to define the scope of Futures Studies [31].

In *The Chasm Ahead* Peccei presented the “Project 1969”, “a multinationally sponsored feasibility study on systematic, long-term planning of world scope” [37]. Forecasting techniques were to be put at the service of major global problems, identifying trends, scenarios, projections, alternatives, and solutions. Peccei cited systems analysis, operations research, and cybernetic methodologies that he had learned about at RAND and the OECD through Alexander King, stating that it was time to employ those new techniques for civilian purposes. He knew that in Futures Studies there were two different schools, the European one more focused on the social and humanistic reflection on the future, and the American one, characterized by a quantitative approach, and focused on the technological side [37]. Both of them

should have offered their contribution to Peccei's visionary project just integrating these two visions with a third one: the *normative* dimension [35]. It was not just a matter of predicting trends and emerging structures in terms of probability. Indeed, it was a matter of defining preferable futures in order to create a new system of the world, which should not result in a mere extrapolation of the present, but as the result of an effort of imagination and invention of alternative possibilities to the present. This intuition certainly represents the greatest contribution of Aurelio Peccei to the modern perspectives of Futures Studies—and we cannot forget it.

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