



Citation: Boschi, C., & Gramigna, A. (2025). A history of educational modernity between science and politics. *Rivista di Storia dell'Educazione* 12(2): 3-10. doi: 10.36253/rse-16730

Received: October 22, 2024

Accepted: July 28, 2025

Published: December 11, 2025

© 2024 Author(s). This is an open access, peer-reviewed article published by Firenze University Press (<https://www.fupress.com>) and distributed, except where otherwise noted, under the terms of the CC BY 4.0 License for content and CC0 1.0 Universal for metadata.

Data Availability Statement: All relevant data are within the paper and its Supporting Information files.

Competing Interests: The Author(s) declare(s) no conflict of interest.

Editor: Lucia Cappelli, Università Cattolica del Sacro Cuore di Milano.

The work, in its entirety, was developed by both authors. In particular, *Scientific method and educational knowledge* was written by Anita Gramigna; *Utopia of the education and cult of freedom* and *As a small conclusion* were written by Camilla Boschi.

A history of educational modernity between science and politics

Una storia della modernità educativa tra scienza e politica

CAMILLA BOSCHI, ANITA GRAMIGNA

Università degli Studi di Ferrara, Italia
bsccll@unife.it; grt@unife.it

Abstract. The course of this historical-educational reflection aims to grasp the formative effects of the so-called 'new science' and, subsequently, of political utopia between the Eighteenth and Nineteenth centuries. This is, among other things, an experiment of *history in history*, in the sense that the most significant sources of critical reference date back to the Seventies of the last century, a decade of deep significance for the consolidation in Italy of progressive democratic culture (Cambi 2003). In this perspective, we are particularly interested in the situations where science-based education and political education meet. For example, the case of the representatives of the Enlightenment, the *Society of Observers of Man in France*, as well as various scholars of Positivism (Tisato 1973); but there were famous utopians, as Saint-Simon (Pancera 1994) or Owen (1813), to express the dual interest as a sign of innovation and civil progress in European culture.

Keywords: method, innovation, education, progress, utopia.

Riassunto. Il percorso di questa riflessione storico-educativa si ripropone di cogliere gli effetti formativi della cosiddetta nuova scienza e, successivamente, dell'utopia politica tra Settecento e Ottocento. Si tratta, tra l'altro, di un esperimento di *storia nella storia*, nel senso che le fonti di riferimento critico più significative risalgono agli anni Settanta del secolo scorso, decennio di profondo significato per il consolidarsi in Italia della cultura democratica progressista (Cambi 2024). Di particolare interesse, in tale ottica, sono le situazioni in cui l'educazione su basi scientifiche e la formazione politica volta all'istruzione generalizzata trovano punti d'incontro. È il caso di esponenti dell'Illuminismo, della *Società degli osservatori dell'uomo* in Francia, così come di vari studiosi del Positivismo (Tisato 1976); ma non sono mancati famosi utopisti, o presunti tali, come Saint-Simon (Pancera 1994) o Owen (1813), a manifestare il duplice interesse come segno di innovazione e progresso civile nella cultura europea.

Parole chiave: metodo, innovazione, educazione, progresso, utopia.

SCIENTIFIC METHOD AND EDUCATIONAL KNOWLEDGE

In the future communist society «the problem of recognition of the social foundation of science is presented as an aspect of its own construction, such that philosophy must not impose it from outside, but science must find it in itself, recognizing its genesis in work» (Badaloni 1970, 89, trad. auth.). In the Marxist vision, science is traced back to a modest origin and to a historical demystifying consideration, which cannot be missed, of the progressive development of capitalism in the triumphant phase of the first and second industrial revolution. About science-work, moreover, we must refer to Simone Weil's profound key to understanding, when she asserts that an epistemology is needed that decides to investigate the *analogy* «of the processes that human thought carries out, on one side in daily life and particularly in work, on the other hand in the methodical elaboration of science» (2011, 130 trad. auth.). To escape the alienating control of a political and economic power that pays to *manufacture* a science that becomes *idolatry*, it's necessary to be animated by aesthetic charm, translating into love for the beauty of the universe, given that «Very few scientists go deep enough into science to have a soul full of beauty» (Weil 1990, 121, trad. auth.). It's an educational project and an evolutionary process of human development, of which science is one of the highest fruits but at the same time the most dangerous man's domination of man and the blind and irrational exploitation of nature according to the logic of maximum profit. Still writes Badaloni in his 1970s text: «The positivistic ideal of a domain of science is not in question, but it is assumed within science the emergence of that awareness which comes from the experimental history of the species and vice versa the descent of science into that in the form of a social (and not only individual) enjoyment of the world» (1970, 92 trad. auth.). In the following, we will try to examine the thought of some authors, in order to reflect on the connection between science, politics and education. We will be careful to focus on how the relationship between the disciplines has changed over time, in particular on how the way of understanding the construction of the educational model between Positivism and Enlightenment has changed, debating the means and the results of the educational phenomenon. A similar historical insight will then allow us to begin to dwell on the concept of utopia, therefore its role both within scientific research and in the construction of an idea of education that try to coincides with the beginning of a process of progressive humanization. Among the expected results, there is that of contributing to the scientific

debate on the subject, in the conviction that these studies can affect educational historical reflexivity.

Modern science made an invaluable contribution to the changing concept of education, starting from its own foundation of the Seventeenth century. Some concepts such as *observation*, *research*, *experimentation*, became indispensable also for the sciences of education, causing a real cultural revolution (De Giorgi, Gaudio, Pruneri 2023). If we want to give a significant example of the change, it can be useful a reference to the Baconian theory of the *Idolas*, a sort of “diseducation” and liberation from those errors that compromise a correct knowledge of the world because of prejudice. We think of the *idola tribus*, common to all the human species that impose on the intellect to deform the nature of things, with the pretension that reality is uniform to thought. Manheim (1957) highlighted how Bacon's criticism of “preconceptions” and “appearances” is related to the concept of ideology, through which the German sociologist stands as a disenchanted observer of modern society. Unlike Bacon, who believes it's necessary to question the phenomena in order to *interpret* them, Galilei considers the world of self-evident nature that has to be read through the appropriate instruments: the “sensed experiences”, first of all observation, and the “certain demonstrations” of hypothetical-demonstrative character that come to formulate laws of mathematical certainty. With such a revolutionary way of proceeding, which questions the Aristotelian model dominated by final causes, Galilei and his students seek the truth in facts and, like the famous seeker in the “fable of sounds” of *Il Saggiatore* (1977), never give for absolute and definitive knowledge acquired. Hence the consideration of Geymonat on the pedagogical value of the Galilean work, in his effort to lead the reader to understand the demonstration and validity of the proof: «And to this end, a double work of destruction and education is necessary: the destruction of prejudices and traditional mental habits and common sense; creation, in their place, of new habits, of a new attitude to reasoning» (1957, 244, trad. auth.).

In the Eighteenth century, it felt uncomfortably the delay that separates studies on man from those on nature. Voltaire hoped that the human being can be studied as any other phenomenon, therefore through an observational-experimental method «I can conceive very well, without any mystery, what man is. He comes to the world like other animals [...]» (1975, 929, trad. auth.). Sergio Moravia writes about: «The modern science of man couldn't pass through the liberation from a secular narrow anthropology, which considered the man a being completely *sui generis* of the natural order» (1970, p. 17). It's necessary, however, to wait until the end of the

century because the intolerance towards Cartesian dualism, which distinguished in man a *res cogitans* from a *res extensa*, is translated into a new research capacity involving at once doctors and philosophers, historians and geographers, united by the same enthusiastic desire to *observe* the individual. Throughout the Eighteenth century, there remained the undeniable difficulty, inherited from the thought of Seventeenth century, to redefine the “ontological status of man” and to review the relationship between this and other natural entities. Another very problematic field of investigation was the emergence of cognitive processes and feelings from a substance other than the natural-material one. The way in which Locke faced the problem is undoubtedly innovative. Firstly, because the English philosopher confronted it on a plane opposite to metaphysics, secondly because he strongly emphasized how intellectual activity and emotional life were closely linked to sensitivity, first and indispensable way to the outside world. The doctor-philosopher Cabanis opened the way to overcoming philosophy, as a privileged cultural form for the study of man, in favor of medicine. At the same time, having abandoned the traditional conception of man, he grasped it in its totality, integrating physical and moral elements: «It is the awareness of this unity that leads Cabanis to delineate the field of an original irreducible discipline, in which anatomy and physiology, psychology and morality all become components of a single knowledge that he explicitly defines *science of man*» (Moravia 1970, 61, trad. auth.).

Next to the studies of Cabanis are those of *natural history of man* of Lacépède and the courses ethno-anthropological of Jauffret: these were the basic elements for the birth of modern anthropology. What unites the different scientists who will join the *Society of Human Observers* is, on the one hand, their problematic continuity with regard to the Enlightenment and, on the other, the agreement on the need for an interdisciplinary study. Not by chance Jauffret, founder of the society (1799), asked for membership to naturalists, philosophers-psychologists, doctors, scholars of signs and language, geographers-explorers, historians-archaeologists, economists, hellenists. The scientific project conceived by Jauffret is evocative: it provides, for the *historical* members of the study of man over time and, for the *travelling* members, the study of man in space. The observers of man intend to intervene also on a topic that had great weight during the Eighteenth century: the state of nature and the natural man. Once the myth of the “good savage” fell, these men of science set out to study, on positive bases, how man is in his pre-social and pre-civil stage, in order to understand, as Rousseau hoped, how much good and bad there is in education and in civilization.

The long parable of the philosophical-scientific culture of the Eighteenth century, which has man as its center, finally realized in an educational dimension. Studying *man* in his natural, historical and civil roots implies, beyond any fanciful hypothesis, the conscious achievement of a deep conviction: man’s educability and man’s integrability in the social context. With these presuppositions we have already entered, in fact, the cultural climate of Positivism, of which Séguin was a significant representative in the medical field with his research on conditions of different abilities (Fornaca 1993). The path we followed presents a continuity that goes from the Seventeenth-century science of nature to the Eighteenth-century science of man, to reach the positivism of the Nineteenth century. In the first phase, the method is to be considered as an object of study; in the second it becomes a tool that establishes new areas of scientific knowledge; in the third, synthesis takes place: science must be the foundation of education and, at the same time, lay the foundations of a science of education, unthinkable without the overall contribution of the human sciences: «Only in the general climate created by positivism could develop also in the pedagogical field that genuinely scientific investigation necessary to the creation of the essential conditions for the activation of the educational plan proposed by contemporary civilization would fail» (Tisato 1977, 81).

Comte, in his *Course on positive philosophy* (1830), placed the educational question as fundamental and reserved itself to formulate a project of *positive* pedagogy. Unlike the Enlightenment, however, who identified the educational element as a priority for the progress of all humanity, he came to consider the organization of a pedagogical system premature. It was necessary that humanity first evolved to the positive stage in all its economic, social, political and cultural potentialities; only after this will it be possible to draw up a precise plan of generalized education. The uncertainty was evident and, moreover, the whole system of Comtian thought seemed to oscillate on a double track, completely foreign to its master Saint-Simon (Pancera 1994), where intellectualism and irrationalism, science and metaphysics, philosophy and religion took turns. Although referring to Comte, the reflections of Durkheim (2021) in the pedagogical field were much clearer and more meaningful: society played a fundamental role in educational practice, above all, in the sense that education must provide the indispensable tools for social integration and be placed as a bridge between the new generations and the previous ones, to transmit the great civic and ethical values acquired in the past. All educational models had historically had to deal with existing economic and

social structures and forms of the division of labour. In *Pedagogy and Sociology* (1903), the author insisted that education «responds to social needs», so it was to society's needs that we had to satisfy. If work was increasingly becoming more specialized, schools had to become functional to this need, since «we must limit our horizons, choose a definite task as far as the need requires» (1962, 391). The French sociologist understood that education from “art” should be transformed into “science”; but precisely as science education cannot be prepared to accept passively the requirements of the existing social order, indeed, its role could and had to move forward the contradictions of collective life and to increase in individuals the critical awareness of their relationship with the world. It seems to us appropriate to point out that the positivists were probably too closely linked to the present and its prospects of responding to human needs through science and technology, in order to consider how inhuman and misleading industrialism was. Their battle for the modernization of culture is almost always stopped on the threshold of the rationality of the method and the secular perspective of education. But the concept of secularism doesn't always seem to be developed consistently: «it must be recognized that the positivists of the late Nineteenth century often tend, (...), to identify secularism with *neutrality* in the face of various beliefs and ideologies, and to justify neutrality by a confession (...) of *incompetence*» (Tisato 1977, 88, trad. auth.). The concept of secularism has rarely seen as an awareness of commitment to social activities of great importance, which are practiced after careful verification of a demonstrable scientific support.

In Italy, perhaps more than elsewhere, the positivist focus on science translated into a strong need for revision of the institutional educational apparatus. The interest in popular education, the affirmation of the need for a revision of the school system, the propensity to didactics show how the theme of secularism could become concrete. Although within a political perspective of generally moderate orientation, the Italian positivists were able to influence the transformation of the mentality of the middle classes and worked for an original updating of the national pedagogical tradition. Aristide Gabelli, although a liberal conservative, was clearly aware of the need to raise the consciousness of the masses by educating them to “positive” ideals, precisely because these masses lacked that spirit of national unity which the Risorgimento failed to instill. The concept of “remaking the heads” indicated the need to free the Italians from that cultural, municipal and provincial ghettoization, still impregnated with rhetoric and empty of discipline, through a method based on observation and experience (Gabelli 1992).

More generally, the influence that Positivism was able to exert, and not only with negative effects, on the highest representatives of socialism should not be underestimated: «Positivism represents this radical, secular culture which extends its influence even among the intellectuals who had a leading role in the Italian labour movement. Italian Marxism itself has been configured, in its dominant vein, as a positivistic variant» (Quaranta 1971, 195, trad. auth.). Antonio Labriola had different positions, already from his approach to the herbartian philosophy (Burgio 2005). The valorization of the teaching of history in the direction of a civil education, which knew how to consider the effort of the different social groups and their political struggles, couldn't be neglected precisely by virtue of its fidelity to the original Marxism, as well as the pedagogical category of *praxis* with its transformative implications of experience.

UTOPIA OF THE EDUCATION AND CULT OF FREEDOM

We believe it's possible to identify in utopian socialism, and in the anarchist-libertarian one, a leitmotif, not always linear, which goes from the end of the Eighteenth century to the first half of the Nineteenth century, and puts at the center of its intervention strategy the industry, technology, science, work and, of course, education. In her interesting 1973 text, *Libertarian ideologies and human formation*, Tina Tomasi reconstructs the genesis of libertarian thought, so, for example, with regard to utopian socialism, we find: «Its voice was [...] stifled by the Marxist criticism which, dwelling on the negative aspects much more than on the positive ones, accused him of having confined himself to denouncing the evils of capitalist society without indicating adequately the causes and remedies, so that doubts are being expressed precisely because of the precise lack of a political programme in the supposedly revolutionary bourgeois, but in practice only prepared to make cautious reforms» (1973, 42, trad. auth.).

In sharing the criticism of certain dogmatic Marxism, which didn't understand at all how utopia plays a role that is anything but conservative, we cannot forget Engels' reflection on the evolution of socialism from utopian to scientific (1973) and, moreover, there are, in our opinion, deeply utopian elements also in the thinking of Marx and Engels. But it's interesting to note that there are two aspects which unambiguously separate libertarians and socialists: the first is inherent in the construction of future society, in libertarians “the ideal of a simple life in a world more farming than industri-

ally advanced prevails” (Tomasi 1973, 3). If this is true, Saint-Simon, Cabet and Owen are on very different positions, while there may be a certain continuity between Babeuf and Fourier leading up to Proudhon. The second point concerns the way to place oneself in relation to Rousseau: libertarians love in him “the counter-culture theorist”, who sees science as an instrument of subservience and, on the contrary, exalts individual nature as free. Rousseau argues against reason, exalts instinct and denies any principle of authority, shows the most complete distrust in forms of parliamentary government and praises direct democracy: this is the thinker in which Proudhon identifies. But, once again, let us observe: this has little to do with the approach of Owen, Cabet and Saint-Simon, who look at the industrial world and its characteristics with other eyes and recognize science as an instrument for the emancipation of man, not to be subject to the power of capital.

One fact seems indisputable: «The true origins of both authoritarian and libertarian socialist pedagogy date back to the French Revolution» (Tomasi 1973, 11, trad. auth.). Within this great innovative ferment, Babeuf is identified, with his movement that produced the *revolt of equals*, as the first supporter of the project of authentic socialism with libertarian tendencies. In babuvism not only ignorance is identified as the foundation of the perpetuation of social injustice and the persistence of prejudices, but there is also a lucid awareness that the predominance of intellectuals arises from an arbitrary consideration of work, totally unacceptable within an ethic that considers all functions to be equally necessary for society. Education must radically change its task: from a means of perpetuating an unjust and artificial separation between men, on the basis of the principle that “more it knows, the more it is valuable”, to a revolutionary symbol of the uplifting of working classes, based on the idea that it is a kind of *property* to which everyone must have a share.

In the rural world, the diffusion of culture encounters enormous difficulties, so much so that Babeuf reflects on the opportunity to simplify the spelling, followed by this questionable choice by Cabet and Fourier. Precisely the latter seems to be the most significant protagonist of the utopianism of the early Nineteenth century, so much to openly stand against industrialism, which is being established with brutal coercion of workers’ labor, and preferring the continuity of a farming and craft world. To progress, with its disturbing contours of exploitation and of exasperated competition, Fourier contrasts the healthy “natural passions”, fruit of universal harmony which, by divine law, should govern the world. For this he imagines small autonomous communities, living in the *falansterio* (a kind of joyful con-

dominium), in total freedom of work and with ample availability of free time. In them, education is innovative enough to be extravagant, even if it is brilliant: learning must aim at perfecting each individual’s ability and disposition, and for this purpose there must be a wide choice on the part of the learner, the only certain basic fact, represented by the inseparability of manual work and intellectual work. From the earliest years of life, children are welcomed in carefully designed environments with appropriate staff. Fourier is in fact wary of “maternal virtues”, which sacrifice women to the care of children even when they are not inclined to it. The aim of this early integration into public educational structures is motivated by the need for strong socialization, respecting in any case natural inclinations.

Italo Calvino sees in Fourier a radical opponent of all that is hypocritical in the flat daily life of the so-called “civilized life”. For this reason, the challenge to family education goes far beyond its role in the first years of life, excluding entrusting the education of the adolescent to his father or a “mercenary” tutor (1971). In the *fourth movement* described in his work, the French utopian, who puts bourgeois society under analysis, considers it worse than the era of barbarism. Wonder, then, Calvino: «Was Fourier mad? Or a mystifier who mocked his readers? Or a humorist who addressed himself to a savvy reader?» (1971, XIII). We don’t know if Proudhon can fall into one of the categories indicated by the writer, but he certainly refers to him and Rousseau. While sharing the spirit of rebellion of the utopian, he clearly emphasizes his own position, observing that education, having to train self-reliant and conscious workers, cannot afford the luxury of being fun and playful. To educate men in the exercise of freedom and political power means for the anarchist thinker to safeguard the interests of small producers; his model is not that of the worker of a mechanized factory, the continuing nostalgia of the independent worker, who heroically wants to resist the setbacks of a society that is inexorably determining its end. For this reason, even his interesting speech of the valorization of manual work is somewhat polluted. He speaks of creative work, a *philosophy of work* that has an eminently formative role, since it is a synthesis of manual skills and intelligence. Proudhon knows that it is certainly not the capitalist factory the place of such training, so much to theorize a “polytechnic apprenticeship” which alternates different activities, agricultural and industrial, and which allows the entire production process to be followed in order to avoid the alienating fragmentation of modernized work. The position of Marx in *Misery of philosophy. Answer to the Philosophy of Poverty by Mr Proudhon* (1847) is radically opposite: the very absence of

any specialization in modern factory creates that «need for universality» which pushes man «towards an all-lateral development»; Proudhon, on the contrary, wants to «bring us back to the worker or, at most, to the master craftsman of the Middle Ages.» (1971, 31).

With Cabet we begin to identify a specifically social position of the utopia of the early Nineteenth century. He too, like Fourier, imagines a utopian world, *Icaria*, in which education must be of primary importance. Convinced that socialism can be achieved more thanks to the work of enlightened reformers than for autonomous push from below, he theorizes a society where the “supreme central committee” of the new social order is directly promoter, after careful analysis of the old and modern educational systems, a transitional project must proceed with a balanced step by step approach. Unlike Fourier, he gives an important role to the family, which has the task of laying the foundations of education by teaching people to read and write early. From 5 to 18 years the public school will take charge of teaching, giving priority to science and drawing to the detriment of ancient and modern languages. From the age of 13, children will be called to participate actively in productive life with work placement. The education project managed from above should not be misleading: in fact, there is no compulsory text books, school rules are drawn up by students, who also choose the subjects of study. Cabet maintains a deep faith in the illuminist power of knowledge reformer but, unlike the Jacobins, he doesn't believe that man should be only a *citizen*, but also a producer, worker and architect of his own destiny. This sensitivity towards active participation in community life, with awareness of the right to feel an integral part of a civilization, is identified, about a century later, by the author emphasizing the educational *commitment*, how to see in the *riviste socialiste ferraresi* (1892-1922). The topics are grouped as follows: *Il programma minimo di istruzione popolare*; *Lotta all'analfabetismo e scuola*; *I timidi accenni all'emancipazione femminile*; *Scuola, extrascuola e diritto al voto*. (1995, 23-34). Owen also presents a precise Enlightenment matrix, matured in the Manchester environment, through which he comes to believe, as W. Godwin, J. Bentham and T. Paine, that «the primary task of philosophy is to pursue collective happiness through the adaptation of social institutions to the true nature of man» (Tomasi 1973, 45). In his essays between 1810 and 1815, the English thinker outlines his pedagogical credo based on the limitlessness of the educational principle, which originates from the very modern concept of “conditioning”. Man is the product of circumstances, determined in considerable part by the environment and certainly not by the individual will. If this is true, then it's

possible to act with mathematical precision, by arranging those circumstances that can favor the formation of character. In the so-called “new moral world”, all subjects, in individual and collective interest, should receive a *mental, ethical, physical, technical* education that harmoniously values work and study and is able to reduce to a minimum the “environmental damages”. Such human education cannot know differences of sex, but must encourage serene and open relations between males and females from an early age and find significant completion in a tolerant deism, in a *rational religion* respectful of every belief. Owen values contact with nature, learning through observation and direct experience under the guidance of professionally able and relatable immigrants. With the help of philanthropists, including Bentham, he founded *The new institution for character education* (1816); in it he was concerned to provide free education and work preparation for children from the poorest classes, between 2 and 10 years. The Institution's deepest purpose is not philanthropic, but rather to educate human beings in solidarity and cooperation. It was decided to leave Saint-Simon last even if, strictly speaking, and even more so chronologically, it was worth mentioning him perhaps first. The choice is due to the fact that he seems to us to embody the most representative point of solder between Enlightenment and Positivism and, thus, between the great movement of thought that influences the utopian socialists and the philosophy based on science which will have so much weight among the theorists of the socialist parties of the end of the Nineteenth century. Saint-Simon seemed to Marx little more than an enlightened philanthropist, to Cole everything but a socialist, to Croce a sure admirer of liberalism, according to others he isn't even a utopian. It is a fact that the French positivists owe much to him: from Comte to Taine, from Durkheim to Bernard, until Zola and his naturalism, to indicate a field which goes from philosophy to literature, from sociology to natural sciences. The character also has a variety of interests ranging from science to history, from philosophy to religion, from economics to pedagogy. Limiting the field to the latter, it must be said that it can only arise from that “social physics” with which human facts must be studied starting from experience. If history, in the light of a scientific investigation, is nothing more than an alternation between *organic and critical epochs*, it must be convinced that, thanks to industry, a great *organic epoch* is opening up which will require the reorganization of political-social, as well as spiritual. Producers will be called to manage the legislative power, but they must be animated by an ethical office based on the Christian principle of brotherhood, in order to give society a proper turn. Only then will they have the balance necessary to

administer and not to *dominate*. The producers, called by the author industrial, will have to provide the conditions and prepare the tools for a generalized education, not to be confused with general education, which arises indirectly from the same context of life. A supreme scientific body will formulate the training projects that will also function as “support of the social order”. Alongside theoretical education, since all men must work, there is also a vocational education which works to ensure that each person has the opportunity to perform functions in accordance with his or her own abilities. In conclusion, we find it stimulating to propose as an interrogative a well-known statement by Marcuse: «We must at least pursue the idea of a path to socialism that leads from science to utopia and not, as Engels believed, a path that leads from utopia to science» (1968, 10).

AS A SMALL CONCLUSION

In the light of what has emerged from the writing, we find it stimulating to propose as a question-mark a note statement by Marcuse: «We must at least pursue the idea of a path to socialism that leads from science to utopia and not, as Engels believed, a path that leads from utopia to science» (1968, 10, trad. auth.). What if we started to think that science fuels in man the utopian impulse, just as utopia opens new frontiers to scientific research?

Reflecting on the historical stages of scientific thought between the Seventeenth, the Eighteenth and Nineteenth centuries, and therefore its important implications on philosophical, social, cultural and pedagogical levels, invites us to advance new readings of the past in order to better orient ourselves on the present. The study of the history of education, as Pietro Causarano (2009, 30) points out, placed on the threshold between the history of pedagogy and the history of school, invites us to put a field an epistemological investigation useful to intercept all the aspects that concern the educational phenomenon. Education, far from identifying itself as a linear and specifically localized event, can only be understood as a dense stratified and articulated social exchange that, Over the centuries, different civilizations have more or less elaborated sophisticatedly according to the ideals of man or woman that they chose to pursue (Gramigna 1998, 17). «In other words, one can educate implicitly, by custom and custom, without having in mind any particular pedagogical intent or principle and without a specific technique, outside of any formalized structure [...]» (Causarano 2009, 30, trad. auth.).

The proposed survey attempted to describe and then deconstruct the education effects of the so-called ‘new science’, therefore that *process of civilization* which on the historical and social level has influenced collective behaviors and thus contributed to the construction of a specific idea of man and therefore education. In this sense we believe that the task of the history of education doesn’t limit itself to an examination of the pedagogical implications which have characterized an era, a period or movement, but also has the task of revealing the implicit underpinnings of the educational phenomenon in its historical, social and cultural dimensions, proposing interpretative keys that consider the complexity of the event. Therefore, the framework of the proposed work reveals its *humanistic* figure, here Freirian understood in its liberating and design potential (Freire 2022), which makes utopia the heart of the educational problem and its own vital tension (Gramigna 1998, 17).

REFERENCES

- Badaloni, Nicola. 1970. “Scienza e filosofia in Engels e Lenin”. *Critica Marxista*, Quaderni n. 4, supplemento al n. 4.
- Burgio, Alberto. 2005. *Antonio Labriola nella storia e nella cultura della nuova Italia*. Macerata: Quodlibet.
- Calvino, Italo. 1971. Prefazione a *Teoria del quattro movimenti*, di Charles Fourier. Torino: Einaudi.
- Cambi, Franco. 2003. *Manuale di storia della pedagogia*. Roma-Bari: Laterza.
- Causarano, Pietro. 2009. “La storia dell’educazione”. In *Percorsi storici della formazione*, a cura di C. Betti, G. Di Bello, F. Bacchetti, G. Bandini, U. Cattabini, P. Causarano. Milano: Apogeo.
- De Giorgi Fulvio, Gaudio Angelo e Pruneri Fabio. 2023. *Storia della scuola italiana*. Brescia: Morcelliana.
- Durkheim, Émile. 1962. *La divisione del lavoro sociale*. Milano: Edizioni di Comunità.
- Durkheim, Émile. 2021. *La sociologia dell’educazione*. Milano: Ledizioni.
- Engels, Friedrich. 1973. *L’evoluzione del socialismo dall’utopia alla scienza*. Roma: Editori Riuniti, Roma.
- Fornaca, Remo. 1993. *Storia della pedagogia*. Firenze: La Nuova Italia.
- Gabelli, Aristide. 1992. *Il metodo dell’insegnamento nelle scuole elementari d’Italia*. Scandicci (Firenze): La Nuova Italia.
- Freire, Paulo. 2022. *La pedagogia degli oppressi*. Torino: Gruppo Abele.
- Galilei, Galilei. 1977. *Il Saggiatore*. Torino: Einaudi.
- Geymonat, Ludovico. 1957. *Galileo Galilei*. Torino: Einaudi.

- Gramigna, Anita. 1995. "L'impegno educativo". In *Laboriosi istruiti, uniti. Educazione e scuola nelle riviste del socialismo ferrarese (1892-1922)*, a cura di G. Genovesi e A. Gramigna. Ferrara: Corso editore.
- Gramigna, Anita. 1998. *Storia della malaeducazione. I bambini cattivi nel secolo XIX*. Bologna: CLUEB.
- Manheim, Karl. 1957. *Ideologia e utopia*. Bologna: il Mulino.
- Marcuse, Herbert. 1968. *La fine dell'utopia*. Bari: Laterza.
- Marx, Karl. 1971. *Miseria della filosofia*. Roma: Editori Riuniti.
- Moravia, Sergio. 1970. *La scienza dell'uomo nel Settecento*. Bari: Laterza.
- Owen, Robert. 1813. *Una nuova concezione della società*. Bari: Laterza.
- Pancera, Carlo. 1994. *Una vita tra politica e pedagogia: Marc-Antoine Julien de Saint Simon*. Paris: Gallimard.
- Quaranta, Mario. 1971. *Positivismo ed hegelismo in Italia*. Milano: Garzanti.
- Tisato, Renato, cur. 1973. *Positivismo pedagogico italiano*. Torino: UTET.
- Tisato, Renato. 1977. "L'esigenza di una scuola nuova e la nascita della pedagogia scientifica". In *Storia del pensiero filosofico e scientifico*, a cura di L. Geymonat, vol. VI. Milano: Garzanti.
- Tomasi, Tina. 1973. *Ideologie libertarie e formazione umana*. Scandicci (Firenze): La Nuova Italia.
- Voltaire. 1975. "Annotazioni sui 'Pensieri' di Pascal". In *Gli illuministi*, vol. III, a cura di P. Rossi. Torino: Loescher.
- Weil, Simon. 1990. *La prima radice. Preludio ad una dichiarazione dei doveri verso l'essere umano*. Milano: Studio Editoriale.
- Weil, Simon. 2011. *Riflessioni sulle cause della libertà e dell'oppressione sociale*. Milano: Adelphi.