

# School, Hygienic care and education. The contribution of Achille Sclavo

GIAMBATTISTA BUFALINO

Assegnista di ricerca – Università degli Studi di Catania

Corresponding author: bufalino.giambattista@unict.it

**Abstract.** In the late nineteenth and early decades of the twentieth century, a firm alliance between hygiene and education has been promoted as an important means of developing health in childhood. Hygienists, social reformers and educators were the main impetus for the development of a hygienic awareness while the school was at the center of the so-called *pedagogisation of the body*, that is a systematic educational action aimed at educating the body. Within this context, this article centers on the pedagogical efforts of Achille Sclavo (1861-1930), an internationally renowned hygienist, with the aims of reconstructing his pedagogy and educational work, thus discussing his views on hygienic education which were indicative of attitudes, beliefs, and ideas of his time. This is an attempt to shed light on an unknown aspect of his life and to offer an original perspective from which to explore the link between hygienic education and educational innovation.

**Keywords.** Hygienic Education - Educational Innovation - Achille Sclavo - Childhood - Health

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## 1. Introduction

This article attempts to explore the link between hygiene and education by emphasizing the fundamental collaboration among hygienists, doctors, and teachers to protect the pupils' health and to promote their wellbeing. More particularly, this work seeks to highlight overlooked dimensions in the relationship education-hygiene between the late nineteenth and early twentieth centuries. At that time, the precarious sanitary conditions in Italy urged the awakening of greater sensitivity in favor of the spread of hygiene and the development of a hygienic conscience among the people, in particular, the young generations. Medicine became a pedagogical “tool” for the protection of health as well as an ambitious educational project which was considered to be achievable through a wide re-education of the entire population. School hygiene was considered a branch of the health sciences (“hygiene”) aimed at improving the health of pupils<sup>1</sup>. Also, hygiene and physical education were the fields in which the pedagogical implications became more significant, because of their direct applications on the poorer classes of the population<sup>2</sup>.

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<sup>1</sup> See Fletcher B. Dresslar, *School Hygiene*, New York, Macmillan, 1913.

<sup>2</sup> About the link between education and hygienical-medical science see F. Cambi, *I medici igienisti e l'in-*

Within this context, there was the development of an educational movement to ensure the appropriate action to promote healthy environments for children. Medico-scientific investigations made possible a broader discourse of school hygiene elaborated in the school hygiene manuals<sup>3</sup> and journals<sup>4</sup> that proliferated in the nineteenth and twentieth centuries. For example, treatises on school hygiene and technical brochure were designed for use by school authorities, teacher education facilities and teachers and were the primary means of disseminating the knowledge for a wide array of objects related to the materialities of the classroom, such as heating and ventilation, desks and chalkboards<sup>5</sup>. School hygiene emerged, in part, as a response to a perception that the “cram” system of schooling led to fatigue and the “degeneracy” of schoolchildren and teachers. In fact, the hygienic conditions of the Italian schools were disheartening: the lack of classroom facilities, the bad conditions of the buildings, the lack of school assistance, to name a few. Also, infectious diseases (including tuberculosis) were the main cause of death among the school-aged population. In this sense, school hygiene covered both environmental hygiene – which concerned the physical conditions of the buildings, furniture, and teaching materials – and student hygiene, which included aspects relevant to student health, personal cleanliness, distribution of time and type of work, and student health education<sup>6</sup>.

In this context, the work of hygienists was crucial for several reasons: they became a moral *guide* for conducting a healthy lifestyle; they promoted a firm collaboration with teachers to advance the development of the hygiene science; they were an important resource for understanding the real conditions and the critical issues faced by schools, such as the crumbling conditions of many school buildings. «If the school – Montessori stated – wants to become a space for observing human life, it must show the beauty»<sup>7</sup>.

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*fanzia: controllo del corpo e ideologia borghese*, in F. Cambi, S. Olivieri, (Eds.), *Storia dell'infanzia nell'Italia liberale, Firenze*, La Nuova Italia, 1988, pp. 53-80; G. Armenise, *La pedagogia igienica di Paolo Mantegazza*, Lecce, Pensa multimedia, 2003; L. Bellatalla, P. Russo, *La storiografia dell'educazione: Metodi, fonti, modelli e contenuti*, Milano, Franco Angeli, 2005; A. Magnanini, *Il corpo tra ginnastica e igiene. Aspetti dell'educazione popolare nell'Italia di fine Ottocento*, Roma, Aracne, 2005; L. Todaro, *Tra istanze igieniche e poesia dell'infanzia: conquista degli spazi aperti e motivi del rinnovamento educativo in Italia tra Otto e Novecento*, in M. Tomarchio, L. Todaro, *Spazi formativi, modelli e pratiche di educazione all'aperto nel primo Novecento*, Santarcangelo di Romagna, Maggioli Editore, 2017; R. Cea, *Il governo della salute nell'Italia liberale. Stato, igiene e politiche sanitarie*, Milano, Franco Angeli, 2019.

<sup>3</sup> For example, see R. Guaita, *Compendio di igiene scolastica, per uso delle scuole normali, dei pediatri, dei Maestri, direttrici d'asilo, ispettori scolastici*, Milano, L. Omodei Zorini Editori, 1894; V. Giaxa, *Igiene della scuola, malattie della scuola, edificio scolastico, arredi della scuola, igiene pedagogica, sorveglianza igienica delle scuole*, Milano, Hoepli.

<sup>4</sup> For example, «Giornale della Reale Società italiana d'igiene», «Archives internationales d'hygiène scolaire» in which several Italian articles were published, «Il movimento sanitario: giornale di politica sanitaria medicina ed igiene sociale», «Rivista di medicina sociale: organo di propaganda igienica popolare», «Tecnica sanitaria», «Almanacco igienico popolare», «Giornale della Società Italiana d'Igiene», «Igea. Giornale d'igiene e medicina preventiva», «La Salute. Giornale d'igiene popolare», «L'igiene infantile», «La Vita. Periodico pubblicato dalla Società Bresciana d'igiene», «Rivista di igiene e sanità pubblica, «Igiene dell'infanzia e medicina preventiva», «Igiene e Scuola» and «L'igienista».

<sup>5</sup> P. Milewski, *Medico-science and school hygiene: a contribution to a history of the senses in schooling*, in «*Paedagogica Historica*», 50, 2014, pp. 285-300.

<sup>6</sup> See P. L. Moreno Martínez, *The hygienist movement and the modernization of education in Spain*, in «*Paedagogica Historica*», 42(6), 2006, pp. 793-815.

<sup>7</sup> M. Montessori, *L'autoeducazione nelle scuole elementari*, Milano, Garzanti, 1992, p.129.

As a consequence, special attention has been paid to school furnishing because it had to address precise anatomical and psychological requirements. In fact, it was clear that the environment in which the child spent many hours of the day could influence, facilitate, or hinder school learning.

Follow with that, Brunelli and Meda<sup>8</sup>, drawn on Gaetano Bonetta's research<sup>9</sup>, argued that the school was at the center of the so-called *pedagogisation of the body*, that is a systematic intervention aimed at educating the body to create a physical and moral regeneration of the population, which was intended as the basis for building a modern Nation<sup>10</sup>. This action was particularly significant in elementary education, and the role of hygienic education was fundamental promoting good hygienic behaviors as well as creating favorable conditions to prevent the diffusion of diseases among the population.

Within this new context, hygienists, social reformers, educators were the main impetus. Achille Sclavo (1861-1930), an internationally renowned hygienist, scientist, teacher, educator, and a leading advocate on school hygiene, was one among them. His educational role was crucial for the development of increased national awareness of the importance of hygiene in Italy.

This essay centers on the pedagogical efforts of Achille Sclavo with the aims of reconstructing his pedagogy and educational work, illuminating this unknown aspect of his life and thus discussing his views on hygienic education which were indicative of attitudes, beliefs, and ideas of his time. Also, another aim is to provide historical evidence for the alliance between hygiene and pedagogy as an important means for the development of health promotion in childhood. The present study uses as primary historical sources written texts (books and articles) by Achille Sclavo, which mainly refer to issues of school hygiene and hygienic education. In fact, the remarkable writing activity by Sclavo was part of several other activities aiming at disseminating a hygienic culture in Italy. In doing so, this paper explores some aspects of the socio-political, educational, and scientific culture of the first decades of the twentieth century on the development of a hygienic awareness. These "fragments of culture" that are shared within the pedagogical and scientific community are presented and discussed.

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<sup>8</sup> M. Brunelli, J. Meda, *Gymnastics between school desks: An educational practice between hygiene requirements, healthcare and logistic inadequacies in Italian primary schools (1870-1970)*, in «History of Education Review», 46(2), 2017, pp.178-193.

<sup>9</sup> According to Gaetano Bonetta, hygiene was «the art of sobriety for a measured life. It provides its protective agents against human passions or a series of prescriptions to combat those which are frequently considered as the vicious of this century, that is, drunkenness, gluttony, anger, fear, laziness, pride, vanity, ambition, envy, jealousy and avarice». G. Bonetta, *Corpo e nazione: l'educazione ginnastica, igienica e sessuale, nell'Italia liberale*, Milano, Franco Angeli, 1990, p. 287; Id., *Nelle palestre del Regno. Le vicende della ginnastica educativa nei primi 50 anni dalla legge Casati*, in «Lancillotto e Nausica», 1, 2009, pp. 16-25; Id., *L'educazione del corpo fra sport e politica*, in M. E. Bruni (Eds), *Modi dell'educare*, Lanciano, Carabba, 2016, pp. 19-47.

<sup>10</sup> See M. Gianfrancesco, *Scuola, igiene, Nation-building: maestri e medici nell'Italia liberale*, in «Diacronie. Studi di Storia Contemporanea: Sguardi sul Novecento: istruzione pubblica, conflitto ideologico, dinamiche turistiche» 37, 2019, < [http://www.studistorici.com/2019/03/29/gianfrancesco\\_numero\\_37/](http://www.studistorici.com/2019/03/29/gianfrancesco_numero_37/) >

## 2. Education - Hygiene: a firm alliance

There is a firm link between hygiene and education as both fields of study are commonly aimed at the transformation of the subject and the environmental conditions<sup>11</sup>. This relationship was particularly evident with the establishment of the hygienist movement in the mid-nineteenth century<sup>12</sup>. However, the first signs of health improvement began to emerge at the end of the eighteenth century when the Industrial Revolution prompted changes in social structure and demographics of unprecedented intensity. In those years, in view of the overall social and economic transformations, the educational changes, and the main achievements of hygienic science, the Italian government undertook several reforms intending to improve the general level of health of the working classes. In addition to private and domestic hygiene, there was the development of social hygiene, which was concerned with protecting the health of the entire population through preventive interventions.

The partial but significant changes which were implemented with the health reform of 1888<sup>13</sup> did not lift Italy from that condition of social concern and underdevelopment. In that time, the hygienists who were trained at the school of Luigi Pagliani<sup>14</sup> made different proposals to both central and peripheral administrations to set the priorities of the important interventions for the public health. Soon, however, people began to understand how epidemics and endemic diseases could be addressed and often avoided by simply changing individual and collective daily habits, for example, by following the most basic rules of hygienic prophylaxis. i.e., hand cleaning, sterilization, vaccination, ventilation, and adequate lighting of the premises. However, only an authentic «inner revolution»<sup>15</sup> could have favored a positive attitude towards hygiene and respect for human life in its psycho-physical unity.

In the first half of the nineteenth century, the school was considered to be the main place for the spread of infectious diseases due to the poor cleaning of the premises and the close contact between pupils, who were forced to attend classes in unfavourable conditions. «The school – Angelo Celli stated – is an actual outbreak of infection, a breeding ground for many diseases that afflict mankind»<sup>16</sup>. Hence, the development of a hygienic enterprise should have started in schools through the collaboration of teachers, primary teachers, in particular, and school doctors<sup>17</sup>.

<sup>11</sup> See F. Cambi, *I medici igienisti e l'infanzia: controllo del corpo e ideologia borghese*, in F. Cambi, S. Ulivieri, (Eds), *Storia dell'infanzia nell'Italia liberale*, Firenze, La Nuova Italia, 1988, pp. 53-80.

<sup>12</sup> See G. Vicarelli, *Alle radici della politica sanitaria in Italia, Società e salute da Crispi al fascismo*, Bologna, il Mulino, 1997; G. Cosmacini, *L'arte lunga: storia della medicina dall'antichità a oggi*, Bari, Laterza, 2014;

<sup>13</sup> The law n. 5849 of 1888 represented a turning point for the definition of the Italian health policy and established the *Direzione Generale di Sanità*.

<sup>14</sup> Luigi Pagliani was the first qualified lecturer in hygiene in Italy and he worked as the consultant of the Prime Minister Francesco Crispi in drafting the first Italian Public Health Act in 1888. In 1878 he was the founder of the *Società d'Igiene* see. L. Pagliani, *Lo sviluppo dell'organismo umano nell'infanzia, puerizia, adolescenza, pubertà e giovinezza, con deduzioni igieniche, pedagogiche e sociali*, Torino, Paravia, 1925.

<sup>15</sup> A. Sclavo, *Discorso di inaugurazione pronunziato il giorno 29 settembre 1929 al 7 Congresso naz. d'igiene tenutosi in Siena*, Siena, Tip. Lazzeri, p. 5.

<sup>16</sup> See A. Celli, *L'igiene e l'educazione popolare*, in A. Zani, *L'educazione fisica: sunti di conferenze tenute al collegio romano nel mese di giugno 1895*, Torino, ditta GB Paravia e C. editori, 1895, p. 29. Measles, varicella, defective, typhoid fever, scabies, scarlet fever, smallpox were among the most widespread diseases.

<sup>17</sup> See D. De Rosa, M.T. Bassa Poropat, *Maestri e Medici alla fine dell'Ottocento: il ruolo dell'igiene nell'educazione scolastica*, in «Scuola e Città: rivista mensile di problemi educativi e di politica scolastica», 1, 1988, pp. 5-13.

On the occasion of a meeting of the Commission appointed by the government with the task of making proposals at the end of the World War I<sup>18</sup>, Achille Sclavo read a report in which he encouraged the strong collaboration between school and hygiene for two main reasons. First, modern hygiene has a theoretical and scientific corpus of knowledge which makes it similar to other sciences. It was, therefore, opportune to include hygiene in elementary school programs since it could help in providing useful indications to protect the pupil's health. Second, hygiene principles are better learned in childhood rather than in adulthood. The school must, therefore, teach students the principles of this science and invest in teacher preparation.

Hence, school had to contribute to the hygienic renewal while teachers and doctors were considered to be the pioneers. However, hygienic propaganda could work far from any improvisation and not only when the enemy «knocks at the doors»<sup>19</sup>. Any educational action should be primarily addressed to elementary schools which represented the ideal learning environment for the application of some basilar hygienic principles. In this sense, Alessandro Lustig of the Royal Higher Institute of Studies in Florence expressed concerns about the unhealthy environmental conditions of many school buildings, which were denounced by numerous reports, e.g., Camillo Corradini's report<sup>20</sup>. «If the number of schools – Lustig warned – does not increase, the conditions of the buildings do not improve, the pedagogical hygiene is not addressed, there will never be any hope for a moral regeneration of our people»<sup>21</sup>. In fact, if the traditional mission of an educational institution was to prepare children for life, to educate for mutual respect, it couldn't be allowed that children would have spent «many hours in a row, in dirty, humid schools, without bathrooms, where there is no light, and water»<sup>22</sup> with the consequent risk of contracting infectious diseases.

The diffusion of a sound hygienic consciousness was considered to be result of a slow learning process. To complicate things, the ignorance and prejudices of many parents were the main obstacles to the implementation of a hygienic education. Only an educational intervention could provide effective and lasting results, while the teaching of hygiene should have more practical applications, according to the characteristics of each student. In fact, children and young people were open to change and they could not easily stick to any kind of superstition or beliefs. For this reason, they were prepared to learn good hygiene rules that could be easily implemented, and they could have a beneficial influence on the entire family (*upward education*). Within this context, different initiatives were undertaken to promote hygienic propaganda in the schools. For example, the *Associazione Italiana per l'Igiene della Scuola* was founded in Genoa in 1913 by dr. Mario Ragazzi. It has promoted the publication and the free distribution of the book *Per la Scuola Nuova*<sup>23</sup> to mayors, health officers, inspectors and teachers. This brief

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<sup>18</sup> See A. Sclavo, *Per l'Igiene Sociale*, Siena, Tip. Lazzeri, 1918.

<sup>19</sup> *Ivi*, p.7.

<sup>20</sup> See C. Corradini, *Relazione presentata a S. E. il Ministro della Pubblica Istruzione dal Direttore generale per la istruzione primaria e popolare dott. Camillo Corradini in Italia*. Direzione generale dell'istruzione primaria e popolare, *L'istruzione primaria e popolare in Italia*, Roma, Tip. operaia romana cooperativa, 1910.

<sup>21</sup> A. Lustig, *Igiene della scuola, ad uso degli insegnanti delle scuole primarie e secondarie e delle scuole normali e di pedagogica*, Milano, F. Vallardi, 1911, p. 4.

<sup>22</sup> *Ivi*, p. 5.

<sup>23</sup> See Associazione Italiana per l'Igiene della scuola, *Per la Scuola Nuova*, Milano, Federazione italiana delle

book contained simple and significant indications related to an educational program in favor of school hygiene. Moreover, the magazine «Igiene della Scuola» began in 1911, a monthly review that summarized the more important contributions regarding school hygiene in Italy and abroad.

Given these premises, especially in the big cities of Northern Italy, the role of the school doctor became more incisive within the school context since he carried out formative activities for health promotion. For example, he should provide indications on the school building, monitor school conditions (e.g., cleaning, maintenance), teach students the main hygienic rules; collaborate with teachers and instruct them about the main advancement of the hygienic science to fight the infectious diseases; collaborate with teachers and help them to identify the symptoms of diseases.

### 3. A brief portrait of Achille Sclavo

In this brief section, I outline the essential biographical profile of Achille Sclavo to highlight the noble qualities of the educator and to present some insights and innovative projects in the field of school hygiene<sup>24</sup>.

Achille Sclavo was born on 21st March 1861 in Alessandria. He received a degree in Medicine and Surgery from the University of Turin, and he was fascinated by the hygiene courses taught by Luigi Pagliani (1847-1932). In 1887 he followed Dr. Pagliani in Rome to the *Direzione Generale della Sanità*, an institution created by Francesco Crispi within the reorganization of the national health system; first, he served as secretary doctor, later he worked in the scientific laboratories. In 1892 he was appointed as Director of the bacteriological laboratory of the *Direzione Generale della Sanità*. When in 1896 the *Direzione Generale della Sanità* was suppressed by the Minister of Health Di Rudinì, Achille Sclavo started his university career: he worked at the University of Siena and then at the University of Sassari. In 1898 he moved back to Siena, where he was appointed as the director of the University Laboratory of Hygiene until 1918. In Siena, he held the position of the Magnificent Rector of the University in two different periods in the years 1914-1919 and 1924-1926. From 1918 to 1924, he was a professor of Hygiene at the *Istituto Superiore di Studi pratici e di perfezionamento* which in 1924 became the University of Florence. He succeeded Giorgio Roster as Chair of Hygiene, who taught hygiene from 1878 to 1918.

The scientific contribution of Achille Sclavo covered several fields of research: hygiene, immunology, general biology, microbiology, water supply, biological water purification, human nutrition, bromatology, construction. His studies culminated in researchers on anthrax, a severe infectious disease affecting humans and animals, especially sheep

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biblioteche popolari, 1914.

<sup>24</sup> About the Achille Sclavo's life see G. Petragliani, *Achille Sclavo, 1861-1930*, in *Medici Cuneesi*, Cuneo, Tip. Editoriale, 1938 pp. 5-7; G. Mazzetti, *La vita e l'opera di Achille Sclavo*, Siena, Tip. Istituto Vaccinogeno Toscano A. Sclavo, 1949; F. Vannozzi, *Achille Sclavo*, in B. Baccetti (Ed), *Cultura e Università a Siena*, Siena, Nuova Immagine Editrice, 1993, pp. 215-221; Eadem, *Achille Sclavo e la società del suo tempo*, in S. Maggi (Ed), *Cittadella della scienza. L'Istituto Sclavo a Siena nei cento anni della sua storia (1904-2004)*, Milano, Franco Angeli, 2005, pp. 21-37; G. Bufalino, *La cura igienica nel pensiero e nell'opera educativa di Achille Sclavo*, in «*Medicina & storia*», 10(19/20), 2010, pp. 77-100.

and cattle. On the 22<sup>nd</sup> October 1895, on the occasion of the 10<sup>th</sup> Congress of Internal Medicine in Rome, he revealed the first results on the characteristic of *Bacillus Anthracis*, which is responsible for the disease - on its mechanisms action, and the method of preparation of the curative serum. For this achievement, he was awarded the Riberi Prize (1903) by the Royal Medical Academy of Turin. Thanks to this grant, he managed to equip his country house in the surrounding area of Siena, and he established the first laboratory where he could prepare the serum which then became the well-known *Istituto Sieroterapico e Vaccinogeno Toscano*<sup>25</sup>.

The constant commitment of his active work in the field of the hygienic education was mainly aimed at pupils. However, his educational interventions were targeted were aimed at a wide range of audiences: army's technical staff, priests, nurses, students of the *Carabinieri School of Florence*, doctors, teachers as well as university students. As President of the Sienese gymnastic association he supported the value of sport and promoted the physical education. During the First World War, he worked in the recreation centers for the military's children in Florence. As a member of the Council of the healthy rural health camp in Camerata, he took care of the children of tuberculosis patients, working as a primary teacher and not just as a hygienist. Through this experience, he got to know better the child's psychology and to identify precious pedagogical indications, which are widely discussed in the book *Per la propaganda igienica. Scuola e igiene*<sup>26</sup>. In 1921 he founded the *L'Associazione Nazionale degli Igienisti* (National Association of Hygienists) which influenced the main decisions on health policy. The Association succeeded in establishing a wide network of hygienists who showed a strong cohesion. Sclavo died in Genoa on 2<sup>nd</sup> June 1930.

#### 4. Educational Innovation and the Development of a Hygienic Consciousness in the pedagogy of Achille Sclavo

Achille Sclavo was very confident in people's ability to refuse the *status quo* due to two strong qualities, which on several occasions and in the absence of support of the State, «allowed them to save themselves from disasters»<sup>27</sup>, namely acute intelligence and common sense. He supported these qualities with the hope that people would realize that their great interest should lie in schools and education.

In order to understand the important educational implications of Achille Sclavo's thought and work, the book *Per la propaganda igienica. Scuola ed igiene* should be taken as a significant starting point. Because of its originality and clarity, the book could be considered a «model in the art of vulgarizing knowledge»<sup>28</sup> since it shows the passion of both the educator and the scholar. «I have decided – Sclavo stated – to write this book where some advice, which I based on my experience on school hygiene, will not be completely useless to the teachers»<sup>29</sup>.

The informative book was written in 1924 in the rural health camp in Florence, where, at that time, many children of tubercular patients were hosted. The book was

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<sup>25</sup> See S. Maggi (a cura di) *Cittadella della scienza*, cit.

<sup>26</sup> See A. Sclavo, *Per la propaganda igienica: scuola e igiene*, Milano, Paravia, 1924.

<sup>27</sup> *Ibidem*, p. 8.

<sup>28</sup> N. Tiberti, *L'opera scientifica e sociale di Achille Sclavo*, Siena, Tip. S. Bernardino, 1931, p. 30.

<sup>29</sup> A. Sclavo, *Per la propaganda igienica*, cit., p. 8.

dedicated to elementary teachers with the aim of enabling them to fulfil their mission as educators of young people, also in relation to public health education. Discouraged by the politicians, Sclavo, therefore, turned his attention to those who, by profession, spread culture, knowledge, skills and good habits to the younger generation<sup>30</sup>. In fact, he was deeply convinced that to develop a solid hygienic awareness it was necessary to refer to schools and to the young generation, which are like «wax for adaptation and like bronze for the retention of the information received»<sup>31</sup>. During his various professional experiences, he was particularly surprised by the children's intelligence and acumen. For example, on several occasions, he recalled some personal episodes. One day, Achille Sclavo asked a child: «If cholera were to affect the Mayor or a poor goat herder in Canosa, for whom would you feel more compassion? ». The girl replied without hesitation: «For the goatherd because he is ignorant, while the Mayor is educated, and he should not take cholera! ». On another occasion, during his visit to a school in the suburbs of Siena, he asked the pupils why the infected people were brought to the hospital. One child answered: «At the hospital a person heals faster, and it hurts less than at home»<sup>32</sup>.

Sclavo's innovative pedagogical assumptions could be placed within the context of the profound educational movement that has affected the field of education in the early twentieth century, namely the *Educazione Nuova*<sup>33</sup>. Until that time, the traditional didactic models were mainly characterized by codified knowledge transmitted through uniform methods and standardized teaching methods. The arrangement of rigidly constrained school desks, the use of repetitive textbooks, and the acritical lessons were some examples of traditional models of schooling, which usually repressed the interests and the natural spontaneity of pupils.

With its innovative proposals, the *Educazione Nuova* movement had different educational purposes. For example, it was aimed at developing a critical and reflective attitude of students so they could be actively involved in the learning process by starting from the observation of the phenomena. Within this context, the teacher played a central role since he/she had to convey pupils' interests, exalt everybody's qualities, promote diversified activities and collaborate with pupils, who did not leave the «school without learning the method of using intelligence to broaden one's knowledge». In contrast to the pupil's tendency «to draw the consequences immediately from the first appearances of things»<sup>34</sup>, Sclavo recalled the motto from Goethe on different occasions: *Look at all sides of things*.

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<sup>30</sup> Sclavo suffered from many disillusionings, misunderstandings and criticisms. He criticized the politicians' indifference and reticence in accepting hygiene advice as well as their abstruseness to acknowledge the main problems of Italy - first of all that of education. Politicians received a resounding lesson from the facts occurred in the first World War: «It not true – Sclavo stated – that only countries with a strong culture have resisted the shocks of a revolution, which did it bring so much ruin where civilization was poor» A. Sclavo, *Per la propaganda igienica*, cit., p. VIII.

<sup>31</sup> G. Mazzetti, *La vita e l'opera di Achille Sclavo*, cit. p. 31.

<sup>32</sup> *Ibidem*, p. 17.

<sup>33</sup> See M. Tomarchio, G. D'Aprile, *Educazione Nuova e Scuola Attiva in Europa all'alba del Novecento. Modelli e temi*, in «I Problemi della pedagogia», 16 (4-5), 2010; Id., *Educazione Nuova e Scuola Attiva in Europa all'alba del Novecento. Figure ed esperienze*, in «I Problemi della pedagogia», 16 (4-6), 2011.

<sup>34</sup> A. Sclavo, *Per la propaganda igienica*, cit. pp. 13-14.



The *Scuola all'aperto*<sup>35</sup> (open-air school) was an example of this new approach to education where pupils were free to move and express themselves. It represented a link between the regular school and the *colonia scolastica* (a healthy camp for children) since its purpose was to offer weak, anaemic pupils an education in accordance with their physical and psychological needs. However, the educational institution had vague and unclear origins, and it was sometimes characterized by its therapeutic purposes, sometimes by being an innovative didactic model, and at other times by the combination of different aims. In all cases, in an open-air school, the experience and the direct observation of natural phenomena were the starting point for any learning process: the sprouting of plants, the rustling of leaves, the course of the sun, the running of the clouds could act as a stimulus to sharpen the spirit of observation and allow children to live a harmonious relationship with the surrounding environment. Sclavo wrote: «In the garden of an open school, the teacher has at his disposal precious didactic materials from nature to let students acquire useful knowledge through observation in a pleasant manner»<sup>36</sup>.

The most innovative intuition of the open-air school was related to the teaching practice. «We need to innovate in a variety of ways» – Sclavo warned. «The traditional school– the hygienist continued – was almost everywhere far from real teaching since it is true that Dewey's assertion that school is at present especially organized to convey ideas through words, rather than through judicious use of the various sense organs»<sup>37</sup>.

Several chapters of the book *Per la Propaganda igienica* are organized in the form of dialogues between the teacher and pupil, confirming the idea of a refusal towards a traditional teaching method. For example, in the book, the term *lesson* was never mentioned, while constant reference was made to the term *conversation*, which explains an adherence to a didactic model based on shared knowledge.

Here are some examples:

«The teacher goes to the blackboard and writes:

Do not mess.

To clean.

To disinfect.

He gave the task to Enrico, who is good at writing, of copying the text on strips of paper and of sticking them on the walls, in the bathroom, in the kitchen, and on trees in the garden. «You will have the opportunity»– he added – «to appreciate the wisdom contained in these warnings».

Then silence fell, and the teacher started talking again:

«From the first day we met, I warmly recounted the cleaning of your body, but my words have not achieved in all the desired effect. The guilt, to be honest, was rather mine than yours because since I wanted to be satisfied, I had the duty to teach you the reasons of the cleaning...

To proceed with order, it seems to me that first of all, we need to take care a little close to the object of the personal cleanliness, that is of the skin. What is this skin? How is it made? [...]

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<sup>35</sup> See Tomarchio, M., L. Todaro, *Spazi formativi, modelli e pratiche di educazione all'aperto nel primo Novecento*, cit.; D'Ascenzo, M. *Quando l'outdoor education non si chiamava così*, in R. Farné, F. Agostini, *Outdoor education. L'educazione si-cura all'aperto*, Parma, Edizioni Junior, pp. 45-49; D'Ascenzo, M. *Per una storia dei diritti dell'infanzia. Le scuole all'aperto nel primo Novecento in Italia*, in M. Tomarchio, S. Olivieri (Eds), *Pedagogia militante. Diritti, culture, territori*, Ets, Pisa, 2015, pp. 675-681.

<sup>36A</sup>. Sclavo, *Per la propaganda igienica*, cit., Introduzione.

<sup>37</sup> *Ibidem*, p. 5

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Look at my forearm, on which you will find rather long hairs, as generally on that of adult individuals. Follow the course of the hair».

Carlo: «At this point, they lean backwards».

Costantino: «They resemble hooks to catch».

Teacher: «The comparison is good [...]».

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Teacher: «Hurry up, guys! Come all around me here. This morning, I will teach you to do a great thing».

*(Signs of lively attention)*

Teacher: «I will teach you how to clean the body».

*(The attention is attenuated, but it is reviving since they see that the teacher removes his jacket, raises his tie and collar, rolls up his shirt sleeves over his elbow, and wears a beautiful white apron).*

Gino *(Looking at the teacher)*: «He looks like a cook».

Teacher: «What harm would it be if I go into the kitchen to cook a little? Would I lose dignity by changing job? And would you love me?».

Gino: «Oh, no, really! ».

Teacher: «We will start to clean the hands. Why should we give preference to them? ».

Carlo: «Because children get dirty more often».

Teacher: «You said a very great truth. Several times, I have also seen touching with hands things that were not better to touch. This is a very bad habit, and I hope you can free yourself from it for love of beauty and of your health [...]».

Teacher: «What do we need to do start with the work that we have decided to do? ».

Carlo: «Water and soap».

Enrico: «The brush for the hands».

Teacher: «Despite being clean, not all waters are equally good for washing»<sup>38</sup>.

His passion for education led Sclavo to build a network of educators, teachers, school inspectors, all of whom shared the unique educational mission of protecting the child's health. For example, Achille Sclavo remembered with admiration the noble social aims of Miss Giuseppina Pizzigoni's educational project, who founded and directed *La Rinnovata School*<sup>39</sup> in the popular Ghisolfa district of Milan in 1904. Thanks to his frequent visits, he managed to admire the great passion that animated the work of teachers working there. He noted that teachers' attitude was different from that of other teachers working in traditional schools. In fact, in these institutions, the poor hygienic conditions of the premises created, not infrequently, profound aversion to the school:

«What order, what cleanliness, what abundance of beautiful things, good, instructive in there! When I was a child, I did not study in a place like [...] Could this school become a propaganda

<sup>38</sup> A. Sclavo, *Per la propaganda igienica*, cit. pp. 113-115.

<sup>39</sup> See O.R. Cassottana, *L'attivismo e la figura di Giuseppina Pizzigoni. Riletture critiche*, in «Formazione, lavoro, persona», 10, 2019; S. Chistolini, *The School La Rinnovata Pizzigoni and the Concept of Learning as Source of Life*, in «Rassegna di pedagogia», 73(3/4), 2015, pp. 367-384; Id., *Lasilo infantile di Giuseppina Pizzigoni. Bambino e scuola in una pedagogia femminile nel Novecento*, Milano, Franco Angeli; Pizzigoni G., *La scuola elementare rinnovata secondo il metodo sperimentale*, Paravia, Milano, s.d; Id., *Linee fondamentali e programmi e altri scritti*, La Scuola, Brescia, 1956; Id., *Linee fondamentali e programmi della scuola elementare rinnovata secondo il metodo sperimentale*, Paravia, Milano, 1922.

center for other schools? Why do not oblige or at least invite all the elementary teachers to visit that school and to attend some training? Why do not allow that school could be also attended by people who come from abroad? »<sup>40</sup>.

Scavo's closeness to the large group of elementary teachers was witnessed, for example, by his friendship with the teacher Argia Mingarelli at the open-air school *Ferdinando Fortuzzi* in Bologna. She published an article in the city magazine *La vita cittadina* ("La City Life") in 1919, in which she described the activities of the school and recalled the meeting with Scavo:

«In this remote corner of Bologna, which is green with ancient plants, one of the nicest forms of social assistance palpates in the sun. Many foreigners, in large part, doctors and pedagogists, came here to study and visit this place and its functioning. A hundred children predisposed to tuberculosis due to frailty, oligoemia, and convalescents came to this school every morning, moving from narrow and poor houses. The professor Scavo, the illustrious hygienist, last month honored us with a visit and he can prove it»<sup>41</sup>.

The relationship with the Sicilian educator Michele Crimi was another example of his solid collaboration with educators. Michele Crimi from Sicily (1875–1963) was a prominent pedagogist, a school inspector and education activist associated with promoting outdoor learning in Italy<sup>42</sup>. Crimi is best known for her particular interest in hygienic education and in the *scuola aperta*, in which students studied in outdoor classrooms. The exchange of letters showed reciprocal admiration, and although Crimi and Scavo did not have the opportunity to meet in person, Crimi expressed his admiration for the hygienist's educational work with an article, which was published in 1942, in the *Bollettino medico degli ospedali e dispensari di Trapani e Provincia*<sup>43</sup>.

In the letter dated 8<sup>th</sup> January 1925, Scavo expressed his deep gratitude for two reports received by Crimi and was pleased with the activities carried out in the R. *Corso Magistrale* in Marsala and its related institutions<sup>44</sup>.

I have finished to read the brief book that you kindly sent me and in which you give an account of the life held in Marsala in the *Corso Magistrale* and at the *Associazione Pro Infanzia*. I'm eager to congratulate you on all the magnificent things, you have been able to do<sup>45</sup>.

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<sup>40</sup> A. Scavo, *Igiene ed edilizia scolastica*, Siena, S. Bernardino, p. 14.

<sup>41</sup> A. Mingarelli, *La scuola all'aperto*, Bologna, Cooperativa Tipografica Mareggiani, 1919, pp. 3-6.

<sup>42</sup> See M. Tomarchio (Ed), *Lo sperimentalismo pedagogico in Sicilia nel primo Novecento e Michele Crimi*, Roma, Anicia, 2007; AA.VV., *M. Crimi. Un Manager della scuola*, Palermo, Vittorietti, 1981; M Tomarchio, G.D'Aprile, *Michele Crimi (1875-1963), Pagine inedite di pedagogia siciliana*, Acireale-Roma, Bonanno, 2007; M.Tomarchio, *Michele Crimi, interprete di un modello di istruzione integrale* in «Rassegna di Pedagogia», 2011, 393-400.

<sup>43</sup> See M. Crimi, *Achille Scavo educatore*, in «Bollettino medico degli ospedali e dispensari di Trapani e Provincia», 10(3), 1942, pp. 153-160.

<sup>44</sup> See. M. Crimi, *Il R. Corso Magistrale di Marsala e le sue istituzioni. Relazione del I triennio di vita*, Marsala, Soc. Industriale Tipografica, 1914; Id., *Il R. Corso magistrale e l'Associazione Pro Infanzia di Marsala, Relazione per gli anni 1915-1920*, Marsala, Soc. Industriale Tipografica

<sup>45</sup> Professor Maria Tomarchio from the University of Catania made available the unpublished letter of Michele Crimi to Achille Scavo (8 January 1925).

Expressing deep regret for not having been able to visit the institutions in Marsala, Sclavo continues:

«If many commitments did not hold me back, I would visit Marsala, where I could actually see so many things that I dreamed about to improve our schools. Unfortunately, few people serve the country as much as you do. This is a reason why I beat my hands more warmly. Best wishes for a growing fortune [...]»<sup>46</sup>.

In the autumn of 1942, the Sicilian educator decided to visit Siena and the places where Sclavo worked and developed his scientific and social activity, including the wards at the Tuscan Serotherapeutic and Vaccinogenic Institute, which, at that time, was directed by Prof. Domenico D'Antona. He visited Siena and the open-air school on the *Fortezza Medica*, which reminded him of the Sclavo's commitment to the hygienic education. During his visit, Crimi could better understand the regret expressed years ago by Sclavo, for not being able to pay Crimi a visit in Marsala («If I had not been held back by many engagements, I would have visited Marsala»). Crimi ended his journey in Tuscany by exclaiming, «What luck for me if I could find him [*Sclavo*] here among the little Sienese person!»<sup>47</sup>.

## 5. Physical Education

The time-honored concept of a “healthy mind in a healthy body” was prominent in medical and public discourses by the turn of the twentieth century<sup>48</sup>. The traditional school, with its discipline and constrained spaces, tended to block the natural tendency to movement and freedom of expression, confining the activity of the child to the limited space of the school desk<sup>49</sup>, “a real torture device”. «It is not enough – Sclavo advised to the elementary teachers – to build the school desk according to hygienic requirements

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<sup>46</sup> *Ibidem*.

<sup>47</sup> *Ibidem*.

<sup>48</sup> M. Donato, *Storia dell'educazione fisica e sportiva: indirizzi fondamentali*, Roma, Studium, 1998; F. Felice, *Storia dello sport in Italia: dalle società ginnastiche all'associazionismo di massa*, Rimini-Firenze, Guaraldi, 1977; P. Ferrara, *L'Italia in palestra. Storia, documenti e immagini della ginnastica dal 1833 al 1973*, Roma, La Meridiana, 1992; M. Ferrari, M. Morandi, (Eds.), *I programmi scolastici di «educazione fisica» in Italia. Una lettura storico-pedagogica*, Milano, Franco Angeli, 2015; M. Ferrari, M. Morandi (a cura di), *I programmi scolastici di «educazione fisica» in Italia. Una lettura storico-pedagogica*, Milano, FrancoAngeli, 2015; A. Paolo, *La ginnastica come disciplina della scuola elementare negli anni dell'unificazione italiana. Una proposta di «ri-contestualizzazione» storiografica*, in «Espacio, Tiempo y Educación», 2, 2017, pp. 187-208.

<sup>49</sup> Over the past 20 years in the field of the history of education, there has been a growing interest in the material culture of the school see. S. Braster, I. Grosvenor, M.M. del Pozo Andrés, (Eds), *The Black Box of Schooling. A Cultural History of the Classroom*, Bruxelles Peter Lang, 2011. With specific regard to the material culture of the school, the research group working in the University of Macerata has given more space to research on these topics thanks to the foundation, in 2004, of the *Research Centre for the History of Textbooks and Children's Literature* and, in 2006, of the related journal *History of Education & Children's Literature*. See M. Brunelli, *The Centre for the Documentation and Research on the History of Textbooks and Children's Literature in University of Macerata (Italy)*, in «History of Education & Children's Literature», 4(2), 2009, pp. 441-452; L. Pomante, M. Brunelli, M. (2017). *Un recente colloquio internazionale di studi sulla cultura materiale della scuola e sulle nuove sfide che attendono la ricerca storico-educativa*, in «History of Education & Children's Literature», 12(2), pp. 643-652.

but is it fundamental that the lessons are often interrupted, allowing the child to address its particular physiological needs. More is young the pupil and greater freedom of movement must be granted»<sup>50</sup>.

The hygienist was aware of the formative value of physical education. It has practical implications as it contributes to the development of the pupil's personality, including the consolidation of his/her physical abilities, the conquest of physical and mental well-being, the good use of free time, collaboration and socialization. In fact, physical exercises help children to improve attention, overcome their shyness, cultivate generosity, develop a sense of solidarity, moderate impulsiveness and strengthen their character.

Sclavo has recognized the need for systematic studies in the field of physical education. Drawing on modern research findings on physiology, he wanted to emphasize energetic gymnastic exercises that were the most powerful means of developing a healthy body among Greeks and Romans. The purposes of a physical education were multiple: hygienic, thanks to the improvement of health, of resistance to hard work and fatigue and the intensification and regularization of organic functions; aesthetic, thanks to the harmonious development of the various parts of the body and particularly of the muscular system; economic, thanks to the adaptation of movements to their purpose, each time adjusting the energy to be spent, avoiding uselessness muscle excesses and fatigue; pedagogical, thanks to the development of qualities of precision, perseverance, order, and conscience in their strength<sup>51</sup>.

In the occasion of the conference held in Rome for doctors of a school hygiene course<sup>52</sup>, after recalling the key moments of the history of physical education, Sclavo described the most common gymnastic methods at the time, indicating their strengths and different weakness. In this sense, the good teacher should have a wise eclecticism since he/she has to decide which method to use each time, by varying, reducing, forcing the movement concerning the needs of the child. During his speech, he also noted the significant contribution made by Prof. Angelo Mosso, director of the Institute of Physiology at the University of Turin, to the study of the scientific foundations of physical education<sup>53</sup>.

Despite the importance of various gymnastic methods, Sclavo used to advise elementary teachers to promote naturalistic gymnastics. In fact, according to the Sienese hygienist, this was the most suitable among the other methods to the life needs and natural tendencies of boys and girls. In an open-air school, the pupil could freely climb trees and walls, play on the ground, lift weights and rest when signs of the first fatigue come. Not all the children could actively work and resist hard physical work. In fact, anemic or tubercular children could not exaggerate with muscle work and violent exercises. Among the other important activities, there were the walks, outdoor games as a crucial means of developing respiratory and circulatory functions as well as arousing the attention, the readiness, the decision, the joy, the singing as an exercise for respiratory gymnastics.

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<sup>50</sup> A. Sclavo, *Per la propaganda igienica*, cit. p. 174.

<sup>51</sup> *Ragazzi, Igiene della scuola e dello scolaro*, Milano, Hoepli, 1914, pp. 164-165.

<sup>52</sup> See A. Sclavo, *Per l'educazione fisica*, Siena, S. Bernardino, 1914.

<sup>53</sup> Mosso was defined as the *Apostolo dello Sport* because of his commitment to the development of the physical education. see Angelo M., *La fatica*, Milano, F.lli Treves, 1891; Id., *La Riforma dell'Educazione. Pensieri e appunti*, Milano, Treves, 1898; Id., *L'Educazione fisica della Gioventù*, Milano, Treves, 1893; Id., *La riforma della ginnastica*, Milano, Treves, 1898.

A brief reference should also be made to the importance of manual work the aim of which purpose was not to teach pupils a job but to develop an interest in manual occupations, which turned out to be an actual formative experience for the development of several abilities, such as precision, order, and attention.

Finally, Sclavo was committed to promoting of the establishment of informal groups, associations, the organization of conferences for the dissemination of sports culture. In this sense, he increasingly encouraged the need to integrate traditional and formal educational activities with non-formal formative experiences of socialization, together with the organization of extracurricular activities. For example, he was the leader of a group of *Ragazzi Esploratori* (Explorers Guys)<sup>54</sup> in Siena.

## 6. Educational experimentations in schools.

Beyond the conception of hygiene teaching, as reflected in the teaching manuals, individual initiatives in Italy concerned the teaching of hygiene practically and experimentally. For example, 'in the context of the initiatives to promote hygienic education in schools, it is important to highlight an important educational project, which is overlooked in the few critical writings on Achille Sclavo. This experimentation started in the scholastic year 1916-1917 in elementary schools, kindergartens and recreation centers of Tuscany, under the supervision of prof. Sclavo and Pavone with the collaboration of the Ministry of Health and the Ministry of Education<sup>55</sup>. In view of its theoretical premises and the adopted methodological approach, it represented an innovative experimentation aimed at the diffusion of the hygienic culture and based on a strong alliance of health professionals and teachers. The purpose of the initiative was to spread the most basic notions of hygiene among the children and adolescents with particular reference to hygienic rules of the cleanliness of the person and of the clothes, through seminars to be held by appropriately appointed health professionals. This project was carried out in the cities of Florence, Pistoia, Arezzo, Siena, Pisa, Livorno, Lucca, Viareggio, Massa, Carrara and Grosseto.

At an initial meeting on 14<sup>th</sup> November 1916, a project summary with a clear view of the scope of the experimentation was distributed to all the health professionals. In this sense, the project should focus on lower typologies of schools, including, if possible, kindergartens. It should be carried out in a rather limited number of schools to focus on the necessary intensity of the intervention while a great deal of attention should be given not to cross certain boundaries, e.g., the level of education of participants. The adopted methodology should be that of conversations with the children, in the presence of the teachers, to introduce the fundamental principles of individual hygiene.

The work should be constantly directed towards the following main objectives:

- To supervise the maintenance of the school buildings;
- To improve the personal cleaning for pupils;

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<sup>54</sup> M. Furia (Ed) *Storia dei Ragazzi Esploratori Italiani:1910 - Bagni di Lucca. Nascita dello scoutismo in Italia*, Calenzano, La Marina, 2001.

<sup>55</sup> See A. Pavone, A. Sclavo, *Esperimento di propaganda igienica nelle scuole della Toscana*, Roma, Tip. Artero, 1918.

- To avoid the children's bad habits of bringing hands and objects to the mouth.
- To persuade teachers of the value of hygiene, especially in schools<sup>56</sup>.

A brief book published by the Ministry, containing useful information relating to hygienic principles was distributed. Also, the Ministry printed the Decalogue of Hygiene targeted to teachers, pupils, and families, which was also printed on the cover of many notebooks or hung on the school walls.

All the health personnel first tried to seek the alliances of teachers, being convinced that the development of a clean conscience should be started with them; only later, the pupils could be involved. The experimentation had significant implications. For example, concerning the pupils, the work of the doctors developed in a triple-phase:

The demonstrative phase consisted of teaching pupils how to wash hands and face, how to cut nails and keep them short; how to get used to showing clean hands to the teacher and the doctor; remove the bad habit of bringing the hands and objects to the mouth and that of spitting on the ground.

The inspection phase consisted of examining the head of the children to ensure that there were no lice, and persuading them to bring the short hair; sending lousy children home and advising parents to identify and clean the head; favouring the hygiene of the intimate parts and in verifying the conditions general child health.

The didactic phase consisted of giving children the most important concepts of individual hygiene through family conversations. These principles formed the basis of a good civil education and they had to be transmitted according to the different stages of childhood development. The teaching method and programs were different depending on the level of education of the audience whether they were addressed to elementary school children, kindergarten children or from upper classes.

The results of the formative intervention varied greatly from one city to the other and from one school to another, depending on the quality of collaboration between the teachers, the school, and the municipal authorities, but also based on conditions under which the experimentation took place. However, the final reports of the health professionals recorded the achievement of educational objectives. For example, there was a decrease in the number of dirty children. Also, it was appreciated that fact the pupils could recognize the value of temperance and the risks of unhealthy food and alcohol. Concerning the families, health professionals saw the positive implications of an ascending education which was excreted tough their children. «More than once – a doctor stated – I've heard parents repeating several things which were said to children in schools»<sup>57</sup>.

The intervention gave appreciable results from different perspectives, and as a researcher, Sclavo tried to experiment and test his ideas by identifying the best condition for an successful hygienic education: the importance of a coordinating of school doctors; an improvement in health legislation and rules; well-trained health professional employed by the office of hygiene in municipalities; the development of a hygienic awareness among teachers; improvement of hygienic conditions of school environments; the need for a local hygiene regulation, the early start of hygienic education in kindergartens or pre-primary education, the allocation of private and public funds for the purchase of

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<sup>56</sup> *Ibidem*, p. 5.

<sup>57</sup> *Ibidem*, p.41.

shoes, aprons, linen, soap for poor pupils; the collaboration with others institutions – municipalities, recreational centers, after-school programs, – from the perspective of an integrated educational system to better consolidate the results of a hygienic propaganda in schools.

## 7. Concluding remarks

This hygienic movement at the end of the nineteenth century and with greater intensity at the beginning of the twentieth century was able to unify, not without some resistance and battles, a wide range of intentions and to generate a broad set of reflections, proposals, debates, initiatives and actions that would gradually bring between changes in the conception and practical nature of school space, time distribution, teacher training, curricula and educational experiments.

Within this context, this aim of this paper was to reconstruct the pedagogy of Achille Sclavo, who placed great importance on the hygienists' participation in schools and on their collaboration with teachers. This fundamental and innovative collaboration was the core of his educational interventions. Even today we often refer to the notion of an *integrated education system*<sup>58</sup> to indicate the desirable alliance among the different cultural and educational agencies (formal and not formal).

Further, Sclavo highlighted the central role of the school because it was the context in which hygienic knowledge and its practices could be spread. However, the role of the school was ambiguous: on one side, the hygienic education was promoted in the school context; on the other hand, pupils could get sick in the same environment due to the bad hygienic conditions of the buildings. In this sense, the terrible hygiene condition of school buildings was one of the objects of Sclavo's criticism of a health-threatening public space. Together with other hygienists, he focused particularly on the lack of fresh air, the shortage of space and light, and the risks arising from an unfavorable location.

Another important and significant implication of his work was his view on the so-called *educazione ascendente* (upward education). Sclavo turned his interest in the education of children since teachers could have a strong influence on the pupils and, through them, in an upwards manner, on parents and other relatives. In his experience, parents were often reluctant to any novelties but, thanks to their children, they could appreciate the importance and usefulness of the hygienic principles.

However, the work of hygienists was not limited to express the latest forms of medical-scientific innovations in a simple manner. In their book, e.g., *Per la propaganda igienica. Scuola ed igiene*, there are broader political and cultural aspirations linked to the building of the idea of Nation, to the ideological values of bourgeois, and the education of people free from uncivilized behavior. In this sense, Franco Cambi argues that the knowledge of experimental medicine is also a power and both an ideological and institutional domain. Medicine, through social hygiene, plays a guiding and "filtering" role in society, in which all the deviations and resistances of the persons are "medicalized" and therefore controlled<sup>59</sup>. It is therefore evident a dialectical relationship between health and

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<sup>58</sup> F. Frabboni F., F. Pinto Minerva *Manuale di pedagogia e didattica*, Roma-Bari, Laterza, 2013.

<sup>59</sup> F. Cambi, S. Ulivieri, *Storia dell'infanzia nell'Italia libera*, Scandicci, La Nuova Italia, 1988



ideology, between daily practices and morality, between education and politics which shows its symbolic powers through the hygienic propaganda. Finally, the school has always played an important role in educating and emancipating the popular classes from their conditions of sickness and poverty, thus contributing to the cultural and social modernization of the country, according to the so-called “hygienist utopia” of the late XIX century and in combatting the “physical degeneration” of Italians, through gymnastics and hygiene<sup>60</sup>.

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<sup>60</sup> A. Ascenzi, M. Brunelli, E. Rampichini, *Hygiene education and museums: experiments and suggestions from a school museum*, in «History of Education & Children’s Literature», 16(2), 2019, pp. 935- 952.