

A DIDACTIC INSTRUMENT OF HISTORICAL AND EDUCATIONAL INTEREST: THE CASE OF THE LUIGI BOMBICCI SCIENTIFIC DIDACTIC MUSEUM

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INTRODUCTION

An important element of research on the history of education is certainly represented by the identification, conservation and study of school heritage. This is an extraordinary source for research into the material culture of schools, and international historiography has been focusing its attention in this field for some time with a variety of theoretical approaches, which have only recently been open to international epistemological debate. The debate on the material culture of schools in Italy has developed timidly since the late 1980s, in the framework of historiographical renaissance aiming to overcome the political-legislative and theoretical-pedagogic approach of the history of Italian education, oriented to the research of 'real' school, that made of concrete teaching practices, people, contexts, objects and developments over time. And thus, a first thematisation of the «material life of schools», formulated by D. Ragazzini in a historiographical study (1983), further studied later by the author (1997) in the specific historical context of school education in the city of Bologna, with a review of the teaching instruments (text books, collections of objects), times and spaces (buildings, school furniture) and important educational figures working in the 'micro' rather than the 'macro' context (professors, administrators, intellectuals), and the hypothesis of turning them into a museum (2010; 2011). Over time, the term 'material life of schools' has been set aside in favour of the «materiality of education», understood as the set of «both symbolic and material assets» of education (E. Becchi, 1996) and later the even more preferable «educational culture» introduced in Italy by D. Julia (1995), then calibrated in terms of the documentary recovery of the «cultural heritage of schooling» (M. Ferrari, 2008), or «means of mass education» as recently discussed in historiographic terms by J. Meda (2011; 2012)¹. Within these nuances of meaning, Italian research has also attempted to

¹ RAGAZZINI, D., *Storia della scuola italiana. Linee generali e problemi di ricerca*, Firenze, Le Monnier, 1983, pp. 111-116; D'ASCENZO, M., *La scuola elementare in età liberale. Il caso Bologna (1859-1911)*, Bologna, CLUEB, 1997, particularly pp. 15-18; pp. 271-397; D'ASCENZO, M., «Il Museo della scuola a Bologna tra memoria e progetto», *Ricerche di Pedagogia e Didattica*, n. 1 (2009), pp. 1-22; ID., «Dalla mostra al museo? Ipotesi per un museo della scuola e dell'educazione», *Ricerche di Pedagogia e Didattica*, n. 7 (2012), n. 1, pp. 1-28; BECCHI, E. (Dir.), *Storia dell'infanzia. Dal Settecento ad oggi*, Rome-Bari, Laterza, 1996, pp. 160-168; JULIA, D., «La culture scolaire comme objet historique», in NOVOA, A., DEPAEPE, M., JOHANNINGMEIER, E.W. (Dir.), «The Colonial Experience in Education: Historical Issues and Perspectives», *Pedagogica Historica*, Supplementary Series, I (1995), pp. 353-382; FERRARI, M., «I beni culturali della scuola tra storia e pedagogia», *Annali di storia dell'educazione e delle istituzioni scolastiche*, 15 (2008), pp. 21-26; FERRARI, M., MORANDI, M., PLATÈ, E., *Lezioni di cose, lezioni di immagini. Studi di caso e percorsi di riflessione sulla scuola italiana tra XIX e XXI secolo*, Bergamo, Junior, 2011; MEDA, J., «Mezzi di educazione di massa»: nuove fonti e nuove prospettive di ricerca per una

look into the heart of the «*black box of schoolings*», expressed by the tangible and intangible culture of schools defined above all as the material history of school objects in English speaking areas (*materiality of schooling*)² and *historia material* or *cultura material de la escuela* or *etnohistoria de la escuela* in Spanish areas³.

Within the study of the culture or material «life» of schooling (a term I prefer but which expresses the vividness of everyday school life of generations of teachers and pupils compared to the risk of an economic or archaeological approach of ‘material culture’) a crucial role is certainly played by the identification of new sources providing us with traces of schooling in past times. Also in Italy, the many conferences and publications bear witness to research over the past decades which has seen a new and abundant season of studies on text books, writing books, the biographies of teachers and histories of schools and schooling on different levels, and specific institutions have relaunched the need to identify, collect, study and safeguard the educational and school heritage of the past, with the three-fold purpose of conservation, study and dissemination for educational and teaching purposes.⁴ Within the complex Italian and international historiographic panorama, touched on only briefly here, I would like to concentrate on the specific area of study of the ‘Luigi Bombicci’ Didactic Museum, referring to some studies preceding the historical-philological study in historical-educational terms.⁵ In this work I would like to specifically describe its multi-semantic relevance and the many hermeneutic levels that this source maintains today for the history of education and schooling, not only in Italy but also internationally, seeking to place a «local» research in a global perspective, in the ‘local-global’ manner constituting one of the salient features of international schooling historiography.

1. SCHOOLING HERITAGE SERVING NEW DIDACTICS

What was, and what is this Didactic Museum today? Which study contents and many hermeneutic meanings does it still hold today?

Today this museum lies in the city of Bologna and is open to schools, with targeted teaching paths, built over time by the primary school teachers of the municipality, as part of the «Teaching Rooms» included in the city’s ‘integrated learning system’. This museum has been located in the same building since 1927, following its purchase by the Municipality of Bologna from the Società degli Insegnanti which had legitimately owned it since 1898, the city’s ‘Teachers’ Society which had appointed mineralogist and scientist Luigi Bombicci to set it up in 1883-1884. Its more than a century-old history dates back to the second half of the 19th century, the period in Italy marked by the construction of the national education system, linked to the political and pedagogic project of «building Italians’. Given the starting dates of the Museum, in 1883-1884, we have to look at the ‘macro’ and

«storia materiale della scuola» tra XIX e XX secolo», *History of Education and Children’s Literature*, VI 1 (2011), pp. 253-279; ID., «La ‘Historia material de la escuela’ como factor desarrollo de la investigaci?n historico-educativa en Italia», in MORENO MARTINEZ, PEDRO, I., SEBASTIÁN VICENTE, A. (dirs.), *Patrimonio y Etnografía de la escuela en España y Portugal durante el siglo XX*, Sociedad Española para el Estudio del Patrimonio Histórico-Educativo (SEPHE) y Centro de Estudios sobre la Memoria Educativa (CEME) de la Universidad de la Murcia, 2012, pp. 17-32.

² LAWN, M., GROSVENOR, I. (Dirs.), *Materiality of Schooling: Design, Technology, Objects, Routines*, Symposium Books, Oxford, 2005; LAWN, M. (dirs.), *Modelling the Future. Exhibition and Materiality of Education*, Symposium Books-CEINCE, Oxford, 2009; BRASTER, S., GROSVENOR, I., POZO ANDRÉS, M. M. (Dirs.), *The Black Box of schooling. A cultural History of the Classroom*, Brussels, Peter Lang, 2011.

³ ESCOLANO BENITO, A., HERNANDEZ DIAZ, J. M^o (dirs.), *La memoria y el deseo. Cultura de la escuela y educación deseada*, Valencia, Tirant Lo Blanch, 2002; VIÑAO FRAGO, A., *A sistemas educativos, culturas escolares y reformas*, Madrid, Morata, 2002; ESCOLANO BENITO, A. (Dirs.), *La cultura material de la escuela. En el centenario de la para Ampliación de Estudios, 1907-2007*, Berlanga De Duero, Soria, Centro Internacional de la Cultura Escolar, 2007; ID., «La cultura material de la escuela y la educaci?n patrimonial», *Educatio Siglo XXI*, 28, n. 2, (2010), pp. 43-64; VINA O FRAGO A., «La historia material e inmaterial de la escuela: memoria, patrimonio y educación», *Educación*, Porto Alegre, 35, 1 (jan.-br. 2012), pp. 7-17; CABRERA YANES C., «El patrimonio educativo inmaterial: propuestas para su recuperacion y salvaguardia», in RUIZ BERRIO, J. (Dir.), *El patrimonio histórico-educativo. Su conservación y estudio*, Madrid, Editorial Biblioteca Nueva, 2010, pp. 53-90.

⁴ On these topics, I refer to the historiographical reconstruction started by J. Meda (2011), already mentioned in this work, and to the specific bibliographical references made therein.

⁵ In this regard, refer to D’ASCENZO, M., VIGNOLI, R., *Scuola, didattica e musei tra Otto e Novecento. Il Museo Didattico ‘Luigi Bombicci’ di Bologna*, Bologna, CLUEB, 2006.

‘micro’ context of its origins, clarifying the reasons and objectives of the many stakeholders involved in this cultural and educational project which is still very much alive today.

The museum is set against the background of methodological and didactic renewal of 19th century Europe, and the proud entry of «object lessons», also known as «object method» or «object teaching», depending on the European area, which triggered the need for collections of objects designed specifically for teaching purposes. Tracing the author’s careful reconstruction of the term ‘object lessons’ in the famous *Dictionnaire de pédagogie* edited by Ferdinand Buisson in 1887, we can see that the French term ‘leçons des choses’ coincides with «*object teaching, object lessons* dus au sens pratique des Américains». ⁶ They are clearly considered an application of the intuitive method,

«on désigne sous le nom de leçons de choses un procédé d’enseignement, une des applications de la méthode intuitive»⁷

also known as ‘natural’, the forefathers of which were identified in the centrality of senses, observation and reasoning by Comenius

«knowledge always necessarily starts in the senses (as nothing is in the intellect, which has not firstly been in the sense): why therefore should education begin with the verbal explanation of things and not from their direct observation? Only thereafter, after an object has been shown, can it be more widely explained in words...»⁸

which in didactic terms leads to the need for specific images or models for teaching

«if sometimes the objects themselves are not available, other substitutes can also be used, like models or images created specifically for teaching; this method is commonly used by teachers of botany, zoology, geometry, geodesics and geography, who usually add figures to their descriptions. Something similar should be done for natural sciences and other fields...»⁹

to be presented in the classroom in a sequential and rigorous manner

«the children are shown the objects spoken of, not only in pictures but actual object, for example, parts of the body, clothing, books, the house, utensils (...) and then if something mentioned in the book cannot be visually placed before their eyes, it is very useful to present it to the students in its own reality (...) this is why it is hoped that good schools can keep a collection of rarer objects which are too difficult to find in the home, so that whenever they are spoken of in the classroom they can be demonstrated»¹⁰.

The compiler of the entry underlined how, later, in the German area Francke had widely promoted trips to artisanal workshops for the students of the *Pedagogium* as this offered an opportunity to observe and learn the human world with their own senses; as Basedow, in his *Libro elementare per la gioventù* (1770) attempted a kind of re-issue of Comenius’s *Orbis pictus* developing the natural method as an intuitive method¹¹ and such reading was certainly known in the Austrian area to J. H. Felbiger in the drafting of his *Libro del metodo* (1775)¹², which con-

⁶ PLATRIER, voce «Leçons de choses» in BUISSON, F. (Dir.), *Dictionnaire de pédagogie et d’instruction primaire publié sous la direction de F. Buisson*, 1st part, second volume, op. cit., p. 1528.

⁷ Ibidem.

⁸ COMENIO, A., *La grande didattica*, in FATTORI, M. (Dir.), *Opere di Comenio*, Turin, Utet, 1974, p. 287.

⁹ Ibidem, p. 288.

¹⁰ COMENIO, A., *Il mondo delle cose sensibili figurato*, in FATTORI M. (Dir.), op. cit., p. 567. On the use of images in history of education, cf. R. FARNÈ, *Iconologia didattica. Le immagini per l’educazione dall’Orbis pictus a Sesame Street*, Bologna, Zanichelli, 2002; ID., *Diletto e giovamento. Le immagini e l’educazione*, Turin, Utet, 2006.

¹¹ PLATRIER, «Leçons de choses» in BUISSON F. (Dir.), *Dictionnaire de pédagogie...*, 1 part, second volume, op. cit., p. 1529. Still today there is no complete Italian translation of Basedow’s *Elementarwerk*, but there are plenty of references in A. Piazza, *L’educazione filantropica nella dottrina e nell’opera di G. B. Basedow*, Milan, Hoepli, 1920.

¹² POLENGHI, S., *La pedagogia di Felbiger e il metodo normale*, «Annali di storia dell’educazione e delle istituzioni scolastiche», n. 8 (2001), particularly p. 260 note 48; ID. (Dir.), *La scuola degli Asburgo. Pedagogia e formazione degli insegnanti tra il Danubio e il Po (1773-1918)*, Turin, SEI, 2012.

stituted one of the fundamental texts for the history of European pedagogy and education in the framework of the normal teaching method that was commonplace from the late 18th century, in Italy also thanks to Francesco Soave. Similarly, in the French area, at almost the same time as Francke, Rousseau had indicated sensory education as the natural way of learning, within the framework of the typically enlightened sensism

«the first faculties formed and perfected in us are our senses; they are therefore the first which should be cultivated, while they are the only ones we forget and neglect the most. It is not enough to use the senses to exercise them; we need to learn to judge correctly through them, as it were, to learn to feel; indeed we do not know how to touch, see, listen if we have not learned to do so»¹³

underlined as a fundamental methodological element for overcoming verbalism and abstraction

«objects, objects! I will never tire of repeating that we give too much importance to words: our talkative education will produce nothing but chatterboxes»¹⁴

As explained, at Rousseau's suggestion, some decades later in the Swiss area J. H. Pestalozzi researched the «method» known later as 'elementary', but also 'intuitive' or 'natural' both generally

«the precise purpose of education, is to lead men to clear concepts using psychological skill based on the laws of physical mechanisms, and the ultimate step in achieving this condition, that of leading them to definitions, requires that this be preceded by a set of descriptions of the sensitive world, which gradually proceeds from the intuition of individual objects to their name and from here to the determination of their properties, therefore the ability to describe them and from here the ability to learn a clear concept, that of defining them»¹⁵

and particularly, with the need to identify the «prime» elements of «number, shape and word» on which to base subject teaching. Specifically, he underlined the need to teach the nomenclature of objects and combine this as closely as possible with the objects themselves, on the basis of which, carefully and gradually, knowledge could be broadened and learning progressively disciplined

«to guide your child along the shortest rout to the ultimate purpose of education, the formation of clear concepts, right from the start, in every field of knowledge, you must carefully place before his eyes those objects which most visibly and distinctly embody the essential characters of the field they belong to, and are thus particularly suited to highlighting the essence, distinguishing this from the specific properties»¹⁶.

In the 'teaching laboratories' in Burgdorf and Yverdon, Pestalozzi sought the ABC of intuition used as a foundation for teaching school subjects, identifying a universal method which was embraced by the many visitors and admirers of the time, and from there spread and «experimented» in almost all European countries, and beyond. Pestalozzi's central role in didactic research was widely recognised in the English area also by Herbert Spencer. He considered him to be the authentic theorist and founder of the natural or intuitive method of general and subject teaching, however insisting on the historical meaning of the intuitive method as a precursor to the object method, with a parallelism between the learning of an individual child and that of the entire human species, according to the biogenetic law so dear to Spencerian evolutionism. In didactic terms this translated into the systematic development of the ability to observe the external reality which was required to develop the intuitive or natural method

¹³ ROUSSEAU, J. J., *Emilio o dell'educazione*, (edited by E. Nardi), Florence, La Nuova Italia, 1995, p. 137.

¹⁴ *Ibidem*, p. 202.

¹⁵ PESTALOZZI, J. H., *Come Geltrude istruisce i suoi figli*, edited by A. Banfi, Florence, La Nuova Italia, 1952, p. 162. On Pestalozzi and the intuitive method as a precursor of the object method, as early as the 1960s in Italy was D. Bertoni Jovine, *La lezione oggettiva*, in «Riforma della scuola», 1960, no. 10, pp. 17-21, then in ID., *Storia della didattica*, Roma, Editori Riuniti, 1976, vol. II, edited by A. Semeraro, pp. 519-533. On the central role of Pestalozzi concerning object lessons and their spread in the English area, cf. LAWN, M., «A pedagogy for the Public: the role of objects, observation, mechanical production and cupboards», in LAWN, M., GROSVENOR, I., *Materiality of schooling ...*, op. cit., pp. 145-162.

¹⁶ PESTALOZZI, J. H., *Come Geltrude...*, op. cit., p. 164.

«a common feature of all these methods is manifestly that of leading the child's mind down the same path covered by the human spirit. The truths concerning the number, the shape, the ratios of position, are all taken from material objects, and displayed to the child in a concrete form, to make him learn in the same way they were learned by mankind»¹⁷.

On this point however Spencer criticised the «object lessons» practised in 'Pestalozzi-style' English schools as an extension of a maternal education aimed at general education of the senses through an instrumental approach to objects. He on the other hand supported the extension of that method to all subjects, in order to develop the inherent method of the scientist in children

«*object lessons* should not only be delivered differently from the way they have been done thus far, but should also embrace a much larger number of objects and last much longer than they currently do. They should not be limited to objects found in the home, but also include those objects we find on the seashore; they should not end with the first period of infancy, but should continue throughout childhood to insensitively mix and blend into the research of naturalists and scholars.»¹⁸

At around the very same time in the French area, didactic research proceeded in the direction of the intuitive method based on 'concrete objects'. A very important contribution in this regard was offered by Maria Pape Carpentier in her *leçons des choses* presented at the World Fair in Paris in 1867 and printed in 1869 in the work *Cours d'éducation et d'instruction primaire* written with C. and F. Delon¹⁹. The French educator described how she had concretely practised her *leçons des choses* in Parisian nursery schools, before an audience of teachers and school inspectors, fascinated by the simplicity of the proposed materials and the educational efficacy of her lessons on bread, linen, cotton and means of transport, showing how

«everything can be used as a subject in an *object lesson*: fruit, a stone, a tool, a utensil, a piece of cloth, as long as your mind is used to observation and reflection»²⁰

proceeding gradually to convey first of all the colour and the shape of the object, then its use, its material and its provenance

«because this is the natural progression of ideas that observation stimulates in children. And thus the object lesson must respond to these tacit questions in this order, the order they are presented to the mind»²¹

and manage to place them in the three kingdoms of nature, from where they came. For this reason Maria Pape Carpentier pushed for the construction of collections of useful objects for teaching in various local schools

«I believe that it would be very useful to urge local councils, in proportion to their own means, to procure such collections of objects of the three kingdoms of nature, and have them placed in schools in special cupboards, so that the teachers can use them for the education and enjoyment of the children, in the cities and in the countryside.»²²

able to overcome mnemonic, repetitive, parrot-fashion learning of traditional schools moving towards a more effective use of the nomenclature of objects seen in pictures or, even better, seen and touched concretely by the

¹⁷ SPENCER, H., *L'educazione intellettuale, morale e fisica*, Italian translation by L. Cussini, with introduction and notes by P. Riccardi, Milan-Rome, Trevisini, 1889 (or. 1861), p. 56.

¹⁸ *Ibidem*, p. 80.

¹⁹ Paris, Hachette, 1869.

²⁰ PAPE CARPANTIER, M., *Del metodo naturale nell'insegnamento primario. Conferenze di Maria Pape Carpentier, traduzione con note ed aggiunte di Carlo Gargioli*, Florence, Sansoni, 1879, p. 74, conferenza V. On M. Pape Carpentier cf. C. COSNIER, *Marie Pape Carpentier Fondatrice de l'école maternelle*, La Fleche, Fayard, 2003.

²¹ PAPE CARPANTIER, M., *Del metodo naturale...*, op. cit. p. 89.

²² *Ibidem*, p. 13, conferenza I. This opinion was expressed in *Des salles d'Asile en Italie par M. Cormenin* written by Viscount Cormenin, born in Paris in 1788 and better known by the pseudonym of 'Timone': cf. note 13 by C. Gargioli on Conference I, p. 133.

students, i.e. the objects. This invitation was welcomed and put into practice in various Italian realities, and was widespread at local level, although not completely covered today by historical research, and was also part of the framework of the establishment at the same time of broader collections known as ‘pedagogical museums’ and/or didactic museums: collections of objects, books and documents for teacher training in the first case and collections of objects for specific teaching purposes used by the teachers in the second case, as reconstructed by the compilers of the entries in Buisson’s *Dictionnaire de pédagogie*²³. In particular the didactic museums were closely linked to the purposes declared by Pape Carpentier as collections of objects ready for use, as also indicated at practically the same time in the English area by Alexander Bain in his *Education as a science* (1879), a period in which also the pedagogical culture, the schooling industry²⁴, municipal and central school administrations demonstrated some knowledge of the international debate on the object method, indeed explicitly referring to it in the primary school *Programmi didattici* of 1888²⁵.

2. FROM GLOBAL’ TO LOCAL’, FROM ‘MACRO’ TO ‘MICRO’: TOWARDS A EUROPEAN HISTORY?

The Municipality of Bologna was one of the Italian local realities which developed didactic and/or school museums, through this specific didactic museum, which was not planned from the outset as either a university scientific museum or a school museum²⁶. A very special and veritable «virtuous circle» was create in Bologna in the late 19th century between different institutions fighting illiteracy and aiming to build a local education system, as part of the national education process. At the university –the world’s oldest, according to the origin of 1088 as stated by Nobel Prize Winner and poet, Giosue Carducci– many teachers were committed to educational and schooling issues; at the same time the municipal school administration officers were active in the progressist and Masonic mutual organisation process, aiming to promote primary schooling; the «grass roots» schools had joined to form a very active and dynamic Teachers’ Society, which worked effectively to propose and impose new teaching programmes and text books on the council, which promptly adopted them as the Society was run by the education councillors and officers working in the local school administration. For a short but very intense period, the Teachers’ Society also produced a journal entitled ‘La scienza dell’educazione’, which reported on the experiences and ideas of the object lessons and the renewal of teaching based on the European object method, also referring to the collections and educational museums of various Italian municipalities. In 1883 Pietro Siciliani, a professor of philosophy at the University of Bologna and recently elected Chairman of the Society, proposed the establishment of a pedagogical museum based on the European models of the time and the one opened in Rome by Minister Bonghi for training Italian school teachers. However, the Società degli Insegnanti preferred to set up a nature museum for the explicit purpose of primary school teaching. On Siciliani’s death (1883) the Society defin-

²³ S.A., «Musées pédagogiques», in BUISSON, F. (dir.), *Dictionnaire de pédagogie et d’instruction primaire publié sous la direction de F. Buisson*, 1st part, second colume, Paris, Hachette et C., 1887; FATALOT, A., «Musées scolaires», in BUISSON, F., *Dictionnaire de pédagogie et instruction primaire*, 1st part, second volume, cit., p. 1991. On these issues in the light of the World Fairs in the late 19th century in Europe cf. FUCHS, E., «All the world into the school: World’s Fairs and the emergence of the school museum in the nineteenth century», in LAWN, M., *Modelling the future...*op. cit., pp. 51-72.

²⁴ Pape Carpentier’s classification of objects was also included in the teaching materials of the Catalogue of the publisher Paravia ‘School object museum for the study of nomenclatures and practical knowledge of plants, animals and minerals in their natural, processed and composite states. Drawer containing around 200 natural samples, arranged in methodical order: Clothing-Food-Home-Variou metals. Collection set up using M. Pape Carpentier’s natural method» as emerges on the back cover of the volume by E. MAYO, *Lezioni sugli oggetti date a fanciulli dai sei agli otto anni in una scuola condotta secondo il metodo del Pestalozzi, tradotte da Claudia Antona-Traversi*, Turin, G.B. Paravia, 1913. This confirms the need to continue research of the catalogues of publishers and manufacturers of school materials, as Paravia and Vallardi –and others besides– in the framework of a reconstruction of teaching instruments above all in the period of establishment of the post-unification education system, of the history of teaching instruments, or educational technologies, or «means of mass education», as also defined by J. Meda (2011; 2012).

²⁵ D’ASCENZO, M., VIGNOLI, R., *Scuola, didattica e musei tra Otto e Novecento. Il Museo Didattico ‘Luigi Bombicci’ di Bologna*, op. cit.

²⁶ On these definitions refer to BRUNELLI, M., «La catalogazione dei ‘beni culturali’ della scuola: questioni metodologiche e concettuali», in CAVALLERA, H. (dir.), *La ricerca storico-educativa oggi: un bilancio storiografico*, Lecce, Pensa Multimedia, 2013, pp 193-218; MEDA, J., «La conservazione del patrimonio storico-educativo: il caso italiano», in MEDA, J., BADANELLI, A. M., *La historia de la cultura escolar en Italia y en España: balance y perspectivas*, Macerata, EUM, 2013, particularly pp. 180-193.

itively opted for the «didactic» solution, appointing the task to its member Luigi Bombicci, professor of Mineralogy at the University and friend of Carducci, a man sensitive to educational, school and didactic matters, on which he had published numerous works²⁷. He threw himself enthusiastically into the establishment of the collection-museum, and spent at least fifteen years designing, gathering and sorting the materials, not without some difficulties and contrasts, also with other members of the Society. In 1888 he had printed a first description of the Museum, with the important title of *Un museo didattico per l'insegnamento oggettivo elementare*, «A didactic museum for elementary object teaching», personally demonstrating the close link between the well-ordered scientific collection and the didactic nature of the object method, by which he intended.

«1. to facilitate primary school teachers in the direct and rapid study of all those objects which must be explained to the children, presenting good examples and highlighting their qualities, describing their uses, indicating the correct Italian names; 2. offering the possibility to present to the children not merely isolated objects one by one but rather *the series, or collections of objects, arranged specifically for this purpose*. An elegant arrangement of many objects makes the descriptions more pleasant and arouses the curiosity; it excites and sharpens the spirit of observation; while the different varieties included in the series of a Museum, at the end of each short lesson, heighten the desire for the subsequent lessons; 3. make the idea of the possibility of establishing a central didactic museum in every provincial capital where there are many primary schools clear and desirable; 4. act as the proof and the rule for CIRCULATING the monographs on object teaching, as if they were books loaned from libraries...»²⁸

To satisfy these objectives, he offered a broad collection of examples divided into the three kingdoms of nature, each one organised in a vertically series of thirty drawers for a total of ninety drawers placed in an elegant and functional cupboard. A further horizontal classification of these objects divided them into the three fundamental 'needs' of mankind, i.e. objects linked to the home, to food, to clothing, which were the essential backbone of a prototype bought by the Municipal Education Office in 1881 and also the organising «concepts» of the object lessons described by Pape Carpentier in her lessons in Paris. These museum-collections served first and foremost for teaching science, but also other subjects. The lexicon of Bombicci's specific internal organisation was also useful for teaching other subjects, such as history, geography and Italian language. This collection-museum also offered two other new elements, which Bombicci focused his attention on in a later monograph in 1898, completing the three descriptive and reasoned guides of the objects present in the collections, bound in elegant books with three different colours, patriotically representing the Italian flag: white for the vertical series of the mineral kingdom, red for the animal kingdom and green for the plant kingdom. Indeed, in Bombicci's mind every school would have these guides, 'monographs' used to better understand the objects presented to the students in order to develop their observation and reflection skills. The guides were designed to be highly useful for teachers taking the drawers from the central Didactic Museum for their lessons: Bombicci's system was therefore envisaged as «circulating», based on the library model for book lending which was already commonly used locally by the Bologna-based League for Education of the local people. This new element however implied a series of important practical problems: transferring the drawers and relative guides from one school to another in the city on a cart, using the objects in class and then returning the drawer was a highly complex solution, which required the management of a kind of lending register by an appointed person, who was also to be responsible for the maintenance of the materials, which were subject to breakage and wear. The difficulties faced by the schools of the time in using the museum probably limited its effective use, also linked to the historio-

²⁷ BOMBICCI, L., *Le scuole elementari in Italia, i loro maestri e i loro programmi. Conferenza tenuta in Budrio, il 21 aprile 1889*, Bologna, Zanichelli, 1889; ID., *Dall'Asilo infantile all'Ateneo, attraverso le questioni sociali. Prolusione per la solenne inaugurazione degli studi nella R. Università di Bologna, il dì 3 dicembre 1892*, in «Annuario della R. Università di Bologna», a.y. 1892-1893, pp. 19-92; ID., *Il lavoro meccanico, manuale, igienico, educativo, riposante, annesso alle scuole elementari. Conferenza tenuta il dì 16/4/1893, nella sala della Società degli insegnanti di Bologna*, Bologna, Libreria Treves di Pietro Virano, 1893; ID., *Scienza popolare, prelezioni, letture, conferenze*, Bologna, Fava e Garagnani, 1883; ID., *Un museo didattico per l'insegnamento oggettivo elementare con monografie circolanti fondato dalla Società degli Insegnanti di Bologna*, Bologna, Tipografia Gamberini e Parmeggiani, 1888; ID., *Descrizione di novanta piccole collezioni circolanti per l'insegnamento oggettivo, occasionale, nelle scuole elementari, con novanta prospetti sinottici per guida ed inventari*, Bologna, Mareggiani, 1898; ID., *La proprietà giuridica del Museo didattico da affidarsi alla Società degli insegnanti di Bologna*, Bologna, Mareggiani, 1899.

²⁸ BOMBICCI, L., *Un museo didattico per l'insegnamento oggettivo...*, op. cit, p. 4.

graphical question of the gap between the design of objects for schools (books, notebooks, pens, other equipment), their actual production and availability on the market, and their actual use in teaching practices: this gap marks the distance between the theoretical and pedagogical design for and in schools, their productive success as a *medium* of mass education and finally, and more difficult for historians to measure, their effective use in teaching. Also in this case we must ask the question, emerging from cross-referencing printed sources and archives concerning subsequent national school and city life, which I will now focus on, of their spread and knowledge beyond the city walls. As early as 1888, not yet in its final version, the Bombicci Museum took part in the Education Exhibition annexed to the Emilia Fair held in Bologna²⁹ with other didactic museums located in the city schools, as part of the second on «School museums for object lessons»³⁰. In its final version, on the other hand, the Circulating Didactic Museum took part in other national and international fairs, receiving a number of prizes and medals. In 1898 it was taken to the Fair in Turin, reported also in local newspapers³¹ after which Bombicci handed over the legal property of the Didactic Museum to the Teachers' Society of Bologna which had commissioned it, surrounded by some controversy³². Two years later in 1900, the Bombicci Museum also took part in the World Fair in Paris; however, as it was too complicated to transport the cupboards as far as the French capital, only photographic documentation concerning 18 of the drawers was presented (documentation which can still be seen today at the Museum's historical headquarters)³³.

Other archives sources of the Municipality of Bologna confirm that the Bombicci Museum also took part in the World Fair in Brussels in 1910 –and further research on the documentation concerning Brussels would be opportune here– thus contributing to the knowledge of the state of the art of Italian teaching in these international assizes, which historiography is currently investigating due to its clear relevance to a comparative cultural history of schools and education³⁴. Returning to its effective practical use, some documentary and archive traces bear witness to the fact that in 1907 all the schools in the city had a copy of the 'Bombicci monographs', deemed useful for an «if not indispensable then at least highly useful collection for teachers wishing to give object lessons»³⁵. From 1916 it was certainly used for didactic purposes by professor Giuseppe Michele Ferrari in his Pedagogy course as part of the teacher training programme, better known as the «School of Pedagogy», established to train future primary school headmasters and headmistresses. He borrowed the Museum from the Teachers Society and kept it at the university premises, attempting –unsuccessfully– on several occasions to incorporate it as a university museum for teacher training purposes. In March-April 1925 the Museum took part in the Education Exhibition of Bologna, set up after the National Education Exhibition in Florence organised by Calò and Lombardo Radice to document the conditions of Italian schools and teaching following the Gentile Reform of 1923. At the exhibition in Bologna, it was admired as an «irrefutable proof of zealous, intelligent and intense work»³⁶ alongside other school museums in several schools in the city and considering that it constituted a crucial part of the school museum of the city of Bologna. Between 1925 and 1927, also due to the closure of the Teachers' Society following the laws passed by the Fascist Regime, Bombicci's Didactic Museum was bought by the Municipality of Bologna, as it was

²⁹ where «the attention of pedagogists on those collections, marking a great step forward for teaching, was high, convinced that by now of the great importance of the consensus of those who must examine them and judge their utility» cf. GAMBARI, L., «Alla Mostra Didattica. Le collezioni del Prof. Bombicci», in *L'Esposizione illustrata delle provincie dell'Emilia in Bologna 1888. Periodico ufficiale per gli Atti del Comitato dell'Esposizione e dell'VIII Centenario dello Studio Bolognese*, Bologna, Stabilimento Tipografico Succ. Monti, 1888, p. 271.

³⁰ Municipal Historical Archive of Bologna (hereinafter ASCB), Education, 1888, b. 9, R 9 Folder 'Oggetti diversi', Folder on Industrial, Agricultural and Museum Exhibition held in Bologna in 1888. Sub-folder 'Exhibition on Emilia. Didactic Exhibition', Brochure 'Division IX Didactics'.

³¹ S. a., *Premiazione delle collezioni Bombicci*, in «Il Resto del Carlino», 9/12/1898, p. 2.

³² ASCB, Education, 1905, b. 4, Fasc. 'Primary Schools. Reports of school inspectors on school progress', E. Cappelletti, *La scuola elementare nel Comune di Bologna alla fine dell'anno scolastico 1904-05*.

³³ ASCB, Education, 1925, b. 1054, R 3, S 2, Letter from Burzi dated 13/7/1899.

³⁴ LAWN, M. (dir.), *Modelling the Future. Exhibition and Materiality of Education*, op. cit.

³⁵ ASCB, Education, 1907, b. 3, Letter from Cappelletti dated 1/2/1907.

³⁶ CERVELLATI, J., *La Mostra Didattica di Bologna*, in ASCB, Education, 1925, b. 1601, Folder 'National Teaching Exhibition, Florence, March-April 1925', cit. also in D'ASCENZO, M., *Tra centro e periferia. La scuola elementare a Bologna dalla Daneo-Credao all'avocazione statale*, Bologna, CLUEB, 2006, pp. 324-325.

«the most complete and ingenious teaching support known to date. When it travelled around the schools, the teachers used it willingly, being able to effectively illustrate their lessons using its collections.»³⁷

In the following years various local officers attempted, unsuccessfully, to make it a crucial element for a city museum of school history³⁸. After the Second World War it remained in a state of neglect for several decades, until it was rediscovered by headmaster Roberto Vignoli, who oversaw its recovery and use as a decentralised didactic facility of the Municipality of Bologna running workshops for all school levels, particularly primary and middle schools.

CONCLUSIONS

The Didactic Museum continues its educational activities today for local schools, thus bearing witness to the fertility and durability of such a versatile and long-lasting instrument.

As an element of the past heritage of education, today it still offers a living trace of a past yet still functioning «material life», legible on many planes of interpretation, which are outlined briefly here. Indeed, in my opinion, this Museum constitutes a historical and hermeneutical testimonial of a possible trace of different types of «histories»:

- The social history of the «virtuous» links between theoretical and academic pedagogy, municipal administration and grass roots schooling;
- The history of the schools of a city and a nation, the expression of the cultural and material heritage of schools over a century, to be conserved and enhanced for citizenship education;
- The history of teaching methods, in particular object lessons and the object method in the late 19th century;
- The history of subject teaching, particularly sciences but also other disciplines³⁹;
- The history of specific didactic instruments developed for schools, in the framework of the material culture of schools at least after Italian unification;
- The history of the ‘gap’ between the design of a didactic instrument, its production and actual use in and for schools;
- The history of professional and educational figures who designed and constructed a didactic instrument in a specific space and time, thus contributing to the definition of an instrument for educating the local people by promoting culture and schooling;
- The transcultural history of the school and educational heritage, in a perspective that is increasingly able to overcome the ‘micro’ and local dimension and target a European and international ‘global’ dimension, able to connect on different planes the many figures, histories, cultural and educational processes engrained in the materiality of education which is still present in the territory where we, citizens of Europe, live today, often unconsciously.

³⁷ ASCB, Education, 1925, b. 1054, Folder ‘Purchase of the Bombicci Didactic Museum by the Municipality for the aforementioned schools’, Cappelletti’s opinion of 30/4/1925.

³⁸ D’ASCENZO, M., VIGNOLI, R., *Scuola, didattica e musei. Il Museo Didattico ‘Luigi Bombicci’ di Bologna*, op. cit.

³⁹ In this regard refer to MARTINEZ BERNAL, J. M., *Renovación pedagógica y enseñanza de la ciencias: medio siglo de propuestas y experiencias escolares (1882-1936)*, Madrid, Biblioteca Nueva, 2001; MARTINEZ BERNAL, M. J., MARIN MURCIA, J. P., *El estudio del material científico para la enseñanza de la botánica en el CEME*, en MORENO MARTINEZ, PEDRO I., SEBASTIAN VICENTE, A. (dirs), *Patrimonio y Etnografía de la escuela en España y Portugal durante el siglo XX*, op. cit., pp. 157-166.