

The Long and Fascinating History of Scientific and Ludic Imagination in the Interactive Books (13th-20th centuries)

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ABSTRACT

The paper indicates some threads of study and some research perspectives for the study of mobile and interactive books (14th – 20th centuries).

KEYWORDS

Interactive books, description, conservation, enhancement

CITATION

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The conference (POP-APP. International Conference on description, conservation and use of movable books, February 16-19, 2021) the proceedings of which are presented here, is the natural outcome of a series of scientific and expository activities springing from a close collaboration between the Tancredi Foundation of Barolo and the University of Rome “La Sapienza”: first of all, the exhibition, which took place simultaneously in Rome and Turin in the spring of 2019 and the publication of the homonymous volume *Pop-app: science, art and play in the history of movable books from paper to apps* (2019 It./2020 Eng.).

However, the Conference, which we had to postpone for a year because of the Covid, has been also a launching pad for other significant initiatives which aspire to involve both public and private institutions, whether they be Italian or not, and especially the international community of scholars and researchers of these special books.

For the first time in Europe, the conference brought together some of the most illustrious scholars to discuss three guiding themes: description, conservation, and enhancement of movable and interactive books.

Movable books, ancient or modern, products of the most diverse areas of knowledge, are for the historian (and not exclusively book historians) objects of special interest because they open new territories of learning and new fields of research to plow:

- from an historical perspective, to better investigate the origins and reconstruct the cultural contexts in which they were created and in which they were circulated (e.g. research of the sources in Arab and Jewish cultures would be enriching);
- from the production process perspective: what was the manufacturing process; what skills were required of the trades people; who supervised the conception and the generation of the mechanical and optical devices, which led to the most variegated systems of image animation;
- from the bibliological viewpoint, due to the presence of diverse materials (parchment, weight paper, cardboards, metal, string and so on) and their various compositions (within the book or extra librum) and their assemblage (by the typographer /binder o reader). “What makes these books from the incunabula period particularly special is the fact that they contain images that had to be assembled after the sheets that would become the book had left the press, after the sheets had been folded to form the gatherings that would form the book, and almost certainly after the gatherings had been stitched together to form the book itself” (Richard Cunningham, 2004);
- from a bibliographic standpoint, for all the cases which do not yet have standard bibliographic descriptions, with the exception of the research paper by Anthony S. Drennan, who however, focuses on a specific bibliographical type i.e, *The Bibliographical Description of Astronomical Volvelles and Other Moveable Diagrams*, (2012);

- from a philological standpoint, the philology of printed texts or textual bibliography, useful in recognizing and reconstructing the history of the so-called variants introduced during the print run which in some cases, especially those concerning ancient books, can determine the correct construction and reconstruction of the mechanical devices incorporated;
- from a conservation perspective, the procedures and restoration techniques for which we do not yet have consolidated guidelines, other than good practices put in place by individual libraries and institutions;
- from a linguistic point of view, for the lack of a conventional international glossary (if not in the domain of the English language, but even in this case the lexicon has not been completely stabilized);
- from the perspective of the History of Science and the History of Art, for the meeting between the iconographic tradition and scientific knowledge in representing and creating a complex, multimedia, multiform and evolving instrumental culture;
- from the point of view of the sociology of reading, since few studies have been carried out on the sociocultural composition of the audience of these “augmented books” of the first modern era and how they were accessed and utilized;
- from an economical viewpoint, other than a few exceptions, further studies need to be carried out on the sources relative to the costs, the economy of books and the collector’s interest in these special books;
- finally, the unexplored territory regarding the potential of digital technology for a diverse and “augmented” fruition of these very delicate hybrid objects currently subject to deterioration and mechanical damage.

It would be therefore worth attempting a bibliographical enterprise to reconstruct the map of the whole European production between the 14th and 20th centuries. This enterprise would allow us to analyse and compare the different types and production characteristics of these works, the socio-cultural composition of their recipients, their methods of use and, last but not least, the economic dimension of a phenomenon, with an in-depth study of the cost of their production and sales. As we said, the epistemological and factual contiguity of knowing and doing also explains the professional contiguity among creators, instrument manufacturers and printers. The phenomenon is significant, if we think of the close economic and cultural connection with scientific, academic and university centres, and with the self-learning practices promoted significantly by the printed book industry. These “enriched books” of the early modern age are hybrid objects that change the cognitive systems of learning, as, at least in their intentions they optimise and speed up some logic operations and calculations. Understanding their use therefore means broadening the horizon of understanding our modernity.

Gianfranco Crupi

The late eighteenth century metamorphic books and Harlequinades can be considered as the link between the history of movable books for children and that of ancient books.

Since their target is the child, these artifacts are mostly playful and entertaining, not losing however their educational and didactic purpose.

There are new experimentations aiming to incorporate into the "object book" many ideas derived from the parallel worlds of the child's imagination: those of paper games, toys and pre-cinema objects.

In addition to the text and illustrations, defined by as the software of the book (Farné, 2019), adjustments to the hardware allow the child to carry out a series of additional actions: folding, cutting, gluing, inserting cut-outs into special slots, lifting paper flaps, pulling figures.

Such actions have a precise purpose: they are closely linked to the narrative text and thus movable books can "give life" to characters and stories, showing an extraordinary affabulatory function in the case of children's books.

Designing a movable book, then, involves the creation of a system of interactions between the hardware and the software of the book and the child, with increasingly magical and surprising effects.

These new interactive books appear as real paper platforms (Reid-Walsh, 2016) that pioneer and connect to today's digital platforms.

I would like to provide a specific example by mentioning the first "Interactive" book with movable parts by Jean Pierre Brès, *Le livre Joujou* (1831).



In this precious little book, the plates can be moved and modified by pulling and sliding the figures.

There is a small symbol, an asterisk, placed within the text, exactly indicating when the child should activate the device to animate the scene, just like a touch-screen application.

From the second half of the nineteenth century, with an extraordinary effort of paper engineering of the book, complex artifacts were made available on an ever-widening market.

They presented an extreme variety of devices, generating visual (movement and depth), tactile (shape and materials) and even audible effects, such as in «speaking books». Sometimes more than one device can be present in the same artifact.

For example, a panorama book can be opened as a concertina and, by pulling a page down, three-dimensional scenes can be discovered, inside which some figures can also be moved by using levers. In the background, you can spin volvelles making different characters appear.

This extreme variety certainly implies specific problems about conservation and cataloguing.

With regard to conservation, first of all it is necessary to consider that the most beautiful and spectacular books are those most frequently used by children and therefore they are almost destroyed.

The recovery (if possible) of mechanisms (e.g. Meggendorfer's complex and sequential lever systems or the most elaborate pop-ups), requires some paper engineering competences, which I believe are not present in educational programs.

Similar considerations can be made for description/cataloguing.

In particular, the presence of multiple devices within the same artifact requires the use of shared conventions to name it in a clear and univocal way, for example through the use of a generally accepted glossary. For both conservation and cataloguing, encouraging a confrontation between technicians and specialists in these fields and paper engineers could be useful.

With regard to the most recent production, it would also be desirable, where possible, to have an archive, real or virtual, of the work processes and of the technologies used, which are the most difficult things to understand and rebuild afterwards.

A few more specific considerations regarding the Italian scene.

Children's movable books of great historical interest, mostly imported, are scarcely present in our public libraries and it is not easy to have access to the private collections. This is the reason why it is difficult to have a knowledge of the existing heritage. The creation of a network, involving both institutions and private collectors, is most necessary.

As far as Italy is concerned, movable books are only marginally present in the texts on the history of children's literature, with the exception of a few recent cases in which Munari's role is considered. Their pedagogical (or antipedagogical!) function and their didactic use are also rarely studied.

Regarding enhancement, the widespread development of movable books for children in the nineteenth and twentieth centuries is considered a "free" territory of creative experimentation in the "object book".

These hidden treasures can still reveal extraordinary ideas on design, realized with limited means and technologies if compared to today's resources, which are sometimes even excessive...

This heritage, if better known, preserved and made available, could be of interest and inspiration for those who nowadays create movable books, develop interactive platforms in edutainment or apps to transfer children's books into new media.

It can also stimulate contemporary artists to deal with the "book form" in new artistic and digital experimentations.

This heritage should also be introduced and used in schools, from the specialized courses for restorers to the primary schools, many of which have been working for years with movable books.

In conclusion, we can say that there is a lot of work to be done, but also many opportunities to be seized! We hope that, according to their possibilities and resources, the Study Centre on Interactive Books and Fondazione Tancredi di Barolo, in collaboration with the other institutions who took part of the Pop-App Conference and with this new journal, can contribute to promote new studies and research, but also educational projects that focus on the interactive relationship between children and books, on reading, playing and learning, while inspiring their creativity.

Pompeo Vagliani