Prima del glossario
Riflessioni di tipo linguistico e metodologico sui libri interattivi
Before the glossary
Linguistic and methodological reflections on interactive books

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CITATION

ABSTRACT

La disponibilità di un glossario per i libri interattivi è da tempo auspicata in particolare da chi, in assenza di linee guida standardizzate, si occupa della loro catalogazione, ma anche da studiosi e specialisti che si trovano spesso a dialogare su questi materiali partendo da presupposti diversi, concettuali e linguistici. In prima battuta il problema del glossario riguarda i libri, però nella pratica comprende anche oggetti che libri non sono, ma che presentano gli stessi dispositivi.

L'attuale situazione di fatto vede consolidata nelle varie lingue e anche all'interno della stessa lingua una varietà di definizioni, le quali mostrano abitudini terminologiche e scelte implicite che rendono difficile un confronto e una standardizzazione. Il fenomeno è particolarmente rilevante per quanto riguarda i libri per l'infanzia, che presentano una estrema varietà nei dispositivi e nelle loro combinazioni, richiedono molteplicità di azioni e generano effetti diversi, con funzioni spesso narrative e con obiettivi ludici e didattici.

L'ipotesi metodologica è che il glossario debba partire non tanto dal confronto delle varie definizioni attualmente in essere (che comunque sono da tenere ben presenti), ma dalla costruzione di un'esplicita tassonomia, di una classificazione ad albero di oggetti simili in classi e sottoclassi, in funzione della quale standardizzare gli aspetti lessicali. Partire cioè dall'osservazione degli oggetti e in modo induttivo proporre le definizioni.

Nell'ultima parte dell'articolo viene proposta come esempio un'analisi ravvicinata sul dispositivo "aletta" (*flap)*, apparentemente semplice ma estremamente flessibile, in grado di stimolare, specie nel campo dei libri per l'infanzia, sempre nuove sperimentazioni creative per le quali occorre trovare il 'giusto' nome.

The availability of a glossary for interactive books has long been hoped for in particular by those who, in the absence of standardized guidelines, deal with the cataloging of interactive books but also by scholars and specialists who often find themselves discussing these materials starting from different presuppositions, conceptual and linguistic. In the first instance the glossary problem concerns books, but in practice it also includes objects which are not books but which present similar devices.

The current situation sees a variety of definitions consolidated in various languages and even within the same language, which show terminological habits and implicit choices that make comparison and standardization difficult. This phenomenon is particularly relevant with regard to children's books which present an extreme variety in devices and their combinations, require multiple actions and generate different effects, often with narrative functions and with playful and educational objectives.

The methodological hypothesis is that the glossary should start not so much from the comparison of the various definitions currently in place (which in any case must be kept in mind) but from the construction of an explicit taxonomy, a tree classification of similar objects in classes and subclasses, based on which to standardize the lexical aspects. That is, starting from the observation of objects and inductively proposing definitions.

In the second part of the article, a close analysis of the 'flap' device is proposed as an example, apparently simple but extremely flexible, capable of stimulating, especially in the field of children's books, ever new creative experiments for which ones to find the 'right' name.

Before the glossary

Linguistic and methodological reflections on interactive books*

One of the first problems that arises when dealing with interactive books is the lack, both at an Italian and international level, of a shared lexicon, despite the existence of some proposals, not without contradictions, which never manage - nor do they aspire - to offer a generalizable and exhaustive framework of the subject.[1] The problem is even greater when dealing with interactive books intended for children, since they present a variety and technical complexity unknown previously and in other types of books: the reason is historically to be found in the origins of these materials , which in the 19th century experienced a rapid and significant expansion, both quantitative and qualitative, favored by the development of new technologies but above all by a new vision of childhood, which leads to seeing the child as the recipient of a dedicated book market, in which interactive books – with their effects of amazement and wonder – find a space of choice on the double side of education and entertainment, immediately linking themselves to the world of pre-cinema and paper games and toys (Vagliani 2019, 183-204). It is from this need - and from the specific skills acquired over the years by the Fondazione Tancredi di Barolo, in particular with respect to children's books - that the small working group promoted by the International Center on Interactive Books dedicated to this complex and stimulating topic was born , which, starting from these initial reflections, will involve scholars and experts belonging to the main linguistic areas involved, with the aim of arriving at a practical and systematic proposal. This is a *work in progress*, the results of which have long been hoped for in particular by those who, in the absence of standardized guidelines, deal with the cataloging of movable and interactive books. This issue was already discussed in February 2021 during the online conference "POP-APP International Conference on the description, conservation and use of movable books", the proceedings of which were included in the first issue of the JIB.[2] On that occasion, Andrea De Pasquale expressed himself in particular on the cataloging problem, providing concrete suggestions, including terminological ones, in view of the creation of an Italian standard (De Pasquale 2022)[3]; while the Istituto Centrale per il Catalogo Unico delle biblioteche italiane e per le informazioni bibliografiche (ICCU) had called for the opening of "a multi-voiced dialogue that avoids, or at least reduces, the risk of proceeding in no particular order", underlining the role that the Fondazione Tancredi di Barolo and the International Center on Interactive Books could play in this (Buttò and Bruni 2022).

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* The images accompanying this contribution all relate to materials kept at the Fondazione Tancredi di Barolo in Turin.

[1] See for example what Ellen Rubin stated when presenting the glossary accompanying *Animated Advertising*: "The definitions below are intended to help the reader better understand these dynamic devices that are used in many of the items in this exhibition. […] Unfortunately, booksellers and collectors don't always use them consistently. […] Outside of this catalog several of the terms may be used interchangeably and noted with the applicable definitions" (Rubin 2023, 99).

[2] *JIB*, V. 1 N. 1 (2022): Proceedings of POP-APP. International Conference on the description, conservation and use of movable books.

[3] A methodologically accredited proposal for the bibliographic and bibliological description of a specific category of interactive books, the anatomical flap books, but also extendible to other typologies, was put forward in Giacomelli 2023 (the second part of the article is part of this issue on pp. 72-106).

In reality, the glossary problem turned out to be much more complex than expected, especially taking into account that it is not objectively possible to work on such a tool while remaining within a single language, especially since the terms used in this field have strong connotations. interlinguistic, linked in particular to the preponderance of studies in English, but also to the different linguistic and terminological 'habits' within the individual languages, so consolidated as to often make it difficult to establish equivalences while remaining outside the individual *koiné*. A clear example at an international level is the ambiguity of the term 'pop up',[4] since, even if strictly speaking it indicates a specific device, it is often used as a synecdoche to indicate the books that contain it or even the entire category of movable books. Another is 'novelty', a term often used in the English to indicate a broad category of these 'border' materials,[5] unknown in other linguistic areas and not always accepted even within the area itself. Furthermore, the problem of synonyms within the same language and that of exact equivalences between different languages clearly emerge.

The starting point of the working group was to collect and compare glossary proposals, which are not always easily available. Among the rare specific contributions, we recall in particular the glossaries prepared for two bibliographical works that are both classic and - each for their own geographical area - pioneering, namely that of Ann Montanaro in *Pop-Up and Movable Books* and that of Pietro Franchi in *Apriti libro!*;[6] the articles by Brian Alderson, also a point of reference for the Cotsen Children's Library in publishing its vast catalog in multiple volumes;[7] the glossary edited by Mara Sarlatto in the volume *Pop-App. Scienza, arte e gioco nella storia dei libri animati dalla carta alle app*;[8] the extensive specific entries published on the website of the interesting Canadian project *ArchBook. Architectures of the Book*.[9]

Other proposals are obtained by looking at contributions on interactive books that do not provide a formalized glossary as such, but which in fact offer definitions and classifications useful for our purpose, as in the case of *L'Art du Pop-Up et du livre animé* by Jean-Charles Trebbi, who also has an English edition, or by *Interactive Books: Playful Media Before Pop-Ups* by Jacqueline Reid-Walsh.[10]

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[4] Even the Fondazione Tancredi di Barolo, since the first initiatives that led to the birth of the International Center on Interactive Books, has played and plays on the ambiguous evocativeness of the term: think for example of the exhibitions "POP-APP. Scienza, arte e gioco nella storia dei libri animati dalla carta alle app", inaugurated simultaneously on 8 May 2019 in the two locations in Rome and Turin, or at "Pop-UPiemonte. Libri animati nella storia dell'editoria piemontese tra Ottocento e Novecento" publishing between the nineteenth and twentieth centuries, set up at the Library of the Piedmont Region from 23 October to 29 November 2019. Note, in the margin, that the *pop up* device, one of the most scenographic, loved and known as effect, is paradoxically one of the least interactive: to activate it you simply need to open the book that contains it, in a gesture that coincides with that of 'normal' reading. But it is precisely this 'not having to do anything' that makes the effect more surprising, since by simply opening the book the image literally jumps out of the pages, in a completely unexpected way for those interacting with the book for the first time. In practice it's like opening a surprise box, a paper 'Jack in the box'.

[5] For example, Alderson distinguishes "*novelty books*" from "*movable books*" by the fact that the former are based on "distinctive treatments of the book's leaves rather than on any additional mechanism" and include, among others, books printed on linen, shaped books, flap transformation books, hole books, panoramas (Alderson 1998b, 15-17). This categorization was explicitly taken up by Cotsen in its catalog (Descriptive Method 2019, XXII-XXIII). Another 'container' term, partly overlapping, is '*oddities*' (see e.g. Whitton 1986, 213-232).

[6] Montanaro 1993; Franchi 1998.

[7] Alderson 1998a; Id. 1998b; Descriptive 2019.

[8] Sarlatto 2019.

[9] The project is promoted by the Humanities and Fine Arts Digital Research Center at the University of Saskatchewan. The *Glossary* can be read at the link: https://drc.usask.ca/projects/archbook/glossary.php.

[10] Trebbi 2012 (the title of the English edition, published in the same year in Barcelona, is *The Art of Pop-Up. The Magical World of Three-Dimensional Books*); Reid-Walsh 2018.

Or publications during exhibition events such as *This Magical Book. Movable Books for Children (1771-2001)* by Leslie McGrath, *Prima del 3D. Piccole carte a sorpresa e libri animati (XIX-XX secolo)* edited by Laura Borello and Pompeo Vagliani or *Pop-up. La magia dei libri*, which contains the speech by Massimo Missiroli and Matteo Faglia *La storia del libro pop-up*.[11] Other ideas come from volumes dedicated to the work of individual artists or publishers, in particular Hildegard Krahé's bibliography on Lothar Meggendorfer or Julia and Frederick Hunt's work on Ernest Nister.[12]

Also of interest are a series of works dedicated to materials made mainly of paper and not books, but with characteristics which, as will be argued shortly, make them similar to interactive books and which therefore require at least partly common terminology. Think for example of the 'paper toys' presented by Blair Whitton, the 'toy theatres' described by Peter Baldwin, the peepshows surveyed by Ralph Hyde or the advertising materials with moving parts collected by Ellen Rubin.[13] In view and in preparation of deepening the discussion, we asked ourselves some linguistic and methodological questions, which we would like to share with the readers of this first proposal, with the aim of offering food for thought rather than definitive answers.

Firstly, **what is meant by a glossary?** Beyond the general definition,[14] which refers to a list of terms linked to each other and not immediately understood in common, so much so that they cannot be clarified with simple semantic equivalences, it seems important to immediately understand which function (or which functions) intends to attribute to it: if, for example, it is thought of above all as the first and basic step in view of a uniform and regulated cataloging of these peculiar bibliographic materials, in short, a tool primarily for use by librarians and cataloguers in general, it will be necessary to provide precise and clear terminological equivalences to be used as key words. But this does not remove the possibility that these equivalences can - and perhaps must - be accompanied by reasoned explanations, clearly enriching understanding and recognition, potentially useful for all possible users, such as scholars, specialists, paper designers, paper engineers and the simply passionate readers.

We then need to ask ourselves **what the objects are to be named**. In the first instance the reference is to books, but in practice (and in all the already existing glossary proposals) the field is broader, since it also includes objects which present the same animation devices but which are not books, from the point of view of from a bibliographic point of view. The most immediate reference is to movable papers in the broad sense, such as loose plates, greeting cards and advertising materials,[15] all objects that are intuitively associated with books because they are made of paper (but with the possibility of parts in other materials, for example metal), generally 'flat' and with built-in devices that 'animate' them, creating three-dimensional effects and/or making them interactive.[16]

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[11] McGrath 2002; Borello and Vagliani 2014; Missiroli and Faglia 2017.
[12] Krahé 1983; Hunt and Hunt 2006.
[13] Whitton 1986; Baldwin 1992; Hyde 2015; Rubin 2023.
[14] The Oxford English Dictionary define it as "a collection of glosses; a list of explanations of abstruse, antiquated, dialectal, or technical words; a partial dictionary".
[15] For a vast and interesting review of the types of "animated advertising" materials, please refer to the recent Rubin 2023.
[16] Historically, in some cases these materials anticipated the devices that will then be introduced in interactive books, with respect to which they also experienced parallel and subsequent success.

Both on a technical and logical level, however, the field is broader, as experience and literature attest: we are faced with varied objects that present a *continuum* that goes from books to games and toys, especially paper but not only that, with respect to which it is complicated to draw clear lines of demarcation. 'Non-book' objects which, however, are similar to interactive books in terms of purposes, technical devices used and effects generated, showing more or less marked similarities in form, effect, function and objective. Think of 'paper theatres', like the beautiful ones created by Engelbrecht in the eighteenth century, usually included among paper toys.[17] Or peep shows,[18] which represent a fairly homogeneous subset, where the emphasis is not so much on movement (once assembled, they can be enjoyed still) but on three-dimensionality and which show strong affinities with theaters from the point of view of function and effect; in practice these are theaters with increased interactivity which allow for a greater effect of depth and perspective, amplified by the extension and design, which includes figures sized based on the distance between the first and last scene.[19] One or more holes on the first table also allow you to look behind, to 'peep' (hence the name), creating a discovery effect and 'entering' the scene, in a sort of immersive reality that recalls pre-cinema. Finally, as regards the shape, the canvas that holds the individual wings together can be folded, transforming them into objects that can be easily stored in a specially supplied case, and then placed next to each other on a shelf as if they were books. For differentiation, it is also worth underlining that sometimes, especially in sales offers, theaters are terminologically assimilated to dioramas, a fact which demonstrates the ambiguity of this word too.[20]

It is therefore a common and evident experience that there are objects that have characteristics different from those that bibliographically characterize books, but that use devices and generate effects similar to those found in them. A glossary designed for book materials would therefore be applicable, with the necessary distinctions, also to these objects, by virtue of their analogies.[21] For these reasons our glossary will not only deal with books: the first term we propose to define all the materials it will take into consideration, book and otherwise, is **interactive objects (*oggetti interattivi*)** or even better, underlining the human intervention in their manufacturing, **interactive artefacts (manufatti interattivi)**.[22]

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[17] The 'theatres' are an excellent example of a non-codified name; they are usually included in exhibitions and reviews that concern movable and interactive books (see for example POP-APP 2019b, 35-41). On the typology, see at least Whitton 1986, who includes them among "paper toys" together with interactive books, and Baldwin 1992.

[18] See at least Hyde 2015.

[19] In paper theaters the individual floors are separated and must be mounted on a fixed support. They also take on the appearance of real miniature theatres, of which they structurally imitate the various parts: wings, proscenium, scenes and backdrop.

[20] A diorama, properly speaking, is a box in which objects placed in perspective are inserted, sometimes set within scenes, which make it similar to a completely static theater (it moves 'in one piece', like an ornament). It is usually not made of paper and is often (but not necessarily) for educational use, as evidenced by the presence of dioramas in numerous catalogs of nineteenth-twentieth century school objects, while the function of theaters is more recreational.

[21] Moreover, not only are there materials such as the metamorphoses that are already treated together with books in some libraries, especially foreign ones, but there are also numerous cataloging programs for non-book material in which these objects are or could be inserted and for which a glossary shared could prove very useful. To stay in Italy, think for example of SIGECweb, a platform managed by the ICCD (Istituto Centrale per il Catalogo e la Documentazione), which allows the cataloging of a variety of cultural assets (archaeological, architectural, artistic, photographic, musical, numismatic, scientific and technological, etc.) and which is already used in many libraries alongside specifically book cataloging tools, such as SBNweb.

[22] According to the Oxford English Dictionary, 'artefact' means "an object made of modified by human workmanship, as opposed to one formed by natural processes".

Speaking of interactivity linked to books, it is clear that any type of book presupposes interaction with the reader through the action of opening it in order to read it, leaf through the pages, look at the images. Illustrations may sometimes be folded one or more times and therefore require opening to be viewed. By '**interactive books**', however, we only mean artefacts that have the intrinsic 'basic' characteristics of the book (pages, cover, title, illustrations, etc.) and to which devices have been added by design that generate different, unexpected, surprising or wonder, thus increasing the potential for knowledge and entertainment, creating a kind of 'augmented reality' *ante litteram*. It is a territory of creative experimentation that brings these artefacts closer to artists' books.[23]

The basic difference between a 'normal' book and an interactive book is one of **design**: the latter is specifically designed to generate possibilities of use or special effects that are not present in the former. This design is carried out through the development of *ad hoc* devices, which can be of various types and complexities, including paper products (different materials can also be used, such as wood, plastic, metal and fabric). We must also always keep in mind that not everything that is interactive is also 'movable', think for example of paper theatres, books with holes or shaped books.

A further problem is given by **books that contain multiple types of devices**, the final effect of which increases the result of the individual effects. In these cases, by common observation, it is necessary to first identify the individual mechanisms and then, to catalog or describe the artefact, establish in which order to indicate them. With respect to this, we propose to **account for the devices exactly in the order in which they are seen and manipulated by opening the book**, thus keeping track of the sequence of interaction expected by the reader.

The working method

In approaching the problem of the glossary we discussed the working method to be adopted to arrive at shared and sharable definitions, to be identified initially within the same language and subsequently at the level of different languages (initially: Italian, English, German and French). As mentioned, the current situation sees a variety of definitions consolidated, which presuppose multiple implicit choices: for example, an interactive book can be named based on the simple device (think of 'flap book', in Italian '*libro con alette*'), or by adding to the name of the device a specification relating to the action to activate it (as for 'lift the flap'). Then examining the great variety of books that have the flap device at their base, it is clear that in many cases the name adopted refers to the effects that the presence of mobile flaps can generate (this is the case of some 'transformation books').[24] **The devices, actions, effects** and the different ways in which they can be combined in the artefacts are therefore all elements that the glossary will have to explicitly take into consideration and which will have to give an account of.

Faced with this, it was decided to adopt an **inductive method**, i.e. to start not so much from the comparison of the various definitions currently in existence (which will in any case be kept well in mind, both as starting points and in subsequent denominative proposals), but rather from the careful examination of real objects that use common basic devices, albeit with different ways and effects. In other words, we believe that **the development of a glossary must be linked to**

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[23] See at least Castellucci 2022.
[24] On books with flaps see *infra*.

the construction of an explicit taxonomy, a tree classification of similar objects into classes and subclasses comparable to that historically used for the natural sciences, according to which standardize lexical aspects. At a procedural level, it seems useful to us to group the terms by 'families' of devices, so as to better detect and highlight the differences and similarities, offering a more complete and easier to use tool (only alphabetical order, on which usually based on glossaries, does not allow this overview). As we will see shortly, we tried to test this method with what, initially, can be considered the simplest of devices: the flap.

The flap, a simple but versatile device

We started by selecting around twenty interactive books chosen *ad hoc* from those preserved in the library of the Fondazione Tancredi di Barolo, in order to have a rather wide and varied - although not exhaustive - range of the flap 'class' available.

Methodologically we tried to build a taxonomy hypothesis by analyzing similar materials in detail, highlighting the differences in the device, functioning and effects, as well as highlighting the actions necessary to activate it and the different purposes of the book (educational, playful, etc.). In conducting this analysis, it was useful and at times enlightening to consider not only the device, but the entire volume in which it is included, giving importance to the titles, any presentations and/or instructions for use, other texts present and to the overall design aspects of the whole.

The first hypothesis to be verified is that the flap is at the base of all the selected devices; we then tried to identify a certain number of possible subclasses from which to draw inspiration in preparing the glossary.

As regards the language, we hypothesized to adopt the equivalence between the English term 'flap' and the Italian '*aletta*', already well attested in the literature.

From a historical point of view, as widely and timely recalled by Lindsay McNiff and Michelle Kelly Schultz when setting up the *Flap* entry within the *ArchBook* project of the University of Saskatchewan (Canada), "although their specific design varies from book to book, flaps are typically defined as the parts of a page used to conceal text, illustration, or a combination of both".[25] But over time the flap has demonstrated its versatility and complexity, in fact "by drawing on the relationships between the visual, the cognitive, and the tactile, flaps exemplify interactive and multifaceted learning tools, and remind us of the continuing challenge to communicate not only through words, but also through images and reader interaction".[26] In practice flaps can be simple or multiple and open and act in all directions.

First at all, however, we ask: what is the difference between a folded sheet and a flap?

In the case of the sheet, its being folded arises from simple reasons of space, to make it fit into a book without decreasing its dimensions and without increasing those of the volume. This safeguards it on a level of conservation and enables to be seen it in its entirety once unfolded. By contrast, the flap serves to hide, reveal, or move something. It has an 'extra' value linked to the effect you want to achieve, as we will see shortly. The distinction is therefore not in the 'folded sheet of paper to open' device in itself, but in the purpose given to this device, which is designed to generate special effects following certain actions: the single device is therefore designed and

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[25] For the entire entry, carefully detailed, see McNiff and Schultz 2012.
[26] Ibidem.

built accordingly, and all the innovative variations are the subject of creative, sometimes complex, experiments.

In support of this thesis, we can refer for example to the medical volume *Nosce te ipsum, vel anatomicum vivum* (1716).[27] Like other interactive volumes of an anatomical type, it offers a co-presence of folds instrumental to the spaces and flaps. The large sheets with the image of the body of a man and of a woman, in fact, are arranged in such a way that they can be contained in the format of the book thanks to a double fold, vertical and horizontal. At the same time, they support a number of flaps to be lifted in order to look inside the various layers of the figure, visualizing the individual organs **(Fig. 1)**.
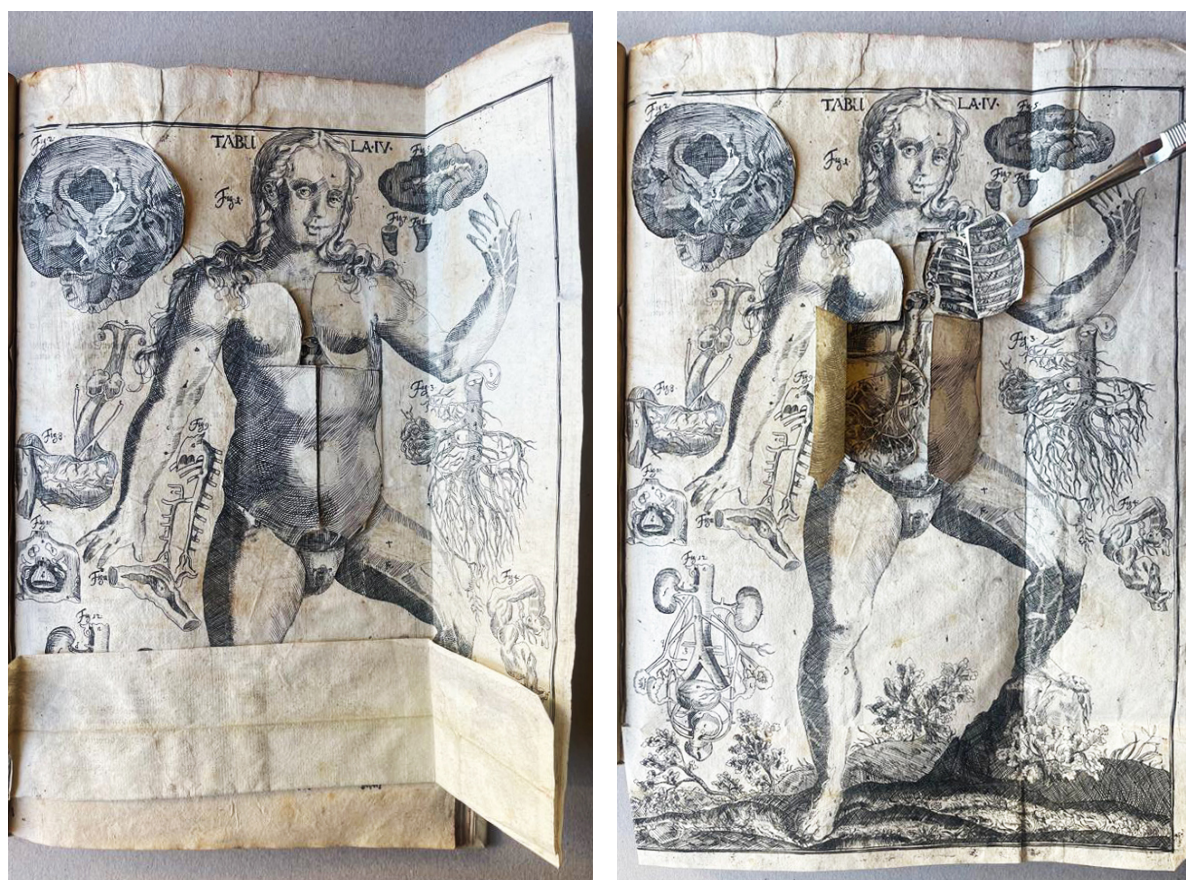

Fig. 1

Typically flaps in anatomical books organize information by hiding and revealing, offering the possibility of progressively lifting the layers that make up the bodies and internal organs (the flaps) to achieve an ever greater depth of vision.[28] Thereby we can see what's 'inside' but also what's 'beyond', that is, other underlying organs. As Jacqueline Reid-Walsh recalls: "Separate leaves each featuring a different element were hinged together at the top and fixed to the page enabling a viewer to open up layer by interleaved layer and gaze for example into a head, or torso or

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[27] Hellwig 1716.

[28] "While some flaps are designed to conceal information, and thus compel the reader to reveal the text or illustrations beneath, other flaps organize information into logical layers. Early anatomy texts, including the famous examples by Vesalius, Descartes, and Remmelin, depict body parts, bones, muscles, nerves, and internal organs using superimposed flaps that are drawn and shaped to represent specific elements of human anatomy" (McNiff and Schultz, 2012).

abdomen".[29] The flaps can have a plain back, and therefore act only as a 'cover' of the underlying layer (as in the previous example), or they can also have a printed back and designed in such a way as to complete the image that 'emerges' by raising the upper flap, as in *De homine figuris et latinitate donatus to Florentio Schuyl* (1662, **Fig. 2**).[30] Typically, the flaps of these anatomical books are shaped, printed on both sides and, as happens in all technical and scientific interactive books that make use of this device, glued in order to create the effect of depth by a three-dimensional image from the outside to the inside.

Fig. 2

A different use of flaps is seen in the case of Alexandre de Laborde's garden architecture manual, that was a visual projection of the required restoration work to be done. We took consideration into the Italian edition published together with *Trattato di topografia di Perrot* (1838), where each flap has a jagged outline and partially covers the underlying image, and is designed in such a way as to create – by raising and lowering – two different images, both of which maintain full coherence while changing. In this edition the flaps are kept well extended and closed thanks to the presence, at the unsecured end, of a tab to be inserted into the appropriate cut made on the underlying page (**Fig. 3**).[31] The emphasis here is on another effect that the flap can effectively produce, that of a transformation: a 'before' and an 'after', which in Laborde take the exception of 'before' and 'after' by the intervention of the architect on the landscape, as in a rendering.

Fig. 3

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[29] Reid-Walsh 2016.

[30] Descartes 1662.

[31] Perrot 1838. The work consists of 17 colored plates and 7 in black and white. This is the second Italian edition of the French original; the first, published by the factory in the Fondaci di S. Spirito and undated, did not present this system of closing the flaps and in the title reversed the order of the two treatises: *Teoria dei giardini, di Alessandro de Laborde, preceduta dal piccolo Trattato di topografia di A.M. Perrot* (see Bibliography 1843, 201).

With regard to children's books, the flap is mainly a 'dual' device, designed to represent two states (initial and final). It has the main function of hiding the underlying image and then revealing what's inside, what's behind, what's underneath, and so on, through the action of lifting, opening, and closing. The dichotomous state can symbolically represent values such as good/evil, action/consequence and take on an important narrative function with respect to the text.

Very recurrent and intuitively linked to the flap is the image of the door, which by its nature closes and must be opened, as in the animated page of the Dutch book *Kleinigheden voor kinderen* by Löhr (1809) (**Fig. 4**).[32]

Fig. 4

Another door, among the examples taken into consideration, opens revealing a "double surprise", that is, a second image, visible in transparency if backlit, that of the lover of the spinner's niece (*La fileuse*) (**Fig. 5**).[33]

Fig. 5

Yet, what opens by lifting the flap is not always a door. Other times it involves, for example, lifting a the lid of a casket, as in the famous and moralizing *The Toilet* by Stacey Grimaldi (1821) or in *A*

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[32] Löhr 1809. It is considered the first Dutch-language children›s book with moving parts (Buijnsters and Buijnsters-Smets 2001, 394).

[33] The small plate, accompanied by the concise narration of the story, belongs to the series of 6 engraved and colored plates *Les portes fermée ou les doubles surprises*, dating back to around 1820: "Chaque figure représente un personnage se tenant devant une porte, et, lorsque l'on ouvre celle-ci, on découvre un second personnage, puis un troisième par transparence, d'où le titre de doubles surprises" (Desse [s.d.], 395).

Suit of Armor for Youth (1824), attributed to the same author.[34] Other times it may be a tablecloth, a curtain or a dress, that is lifted in order to see what's underneath.

Sometimes opening the door or lifting a flap can have a clear narrative function and be the beginning of an entire story or be the basis of the story. For example, let's think of *Das verloren geglaubte Hänschen* (1873),[35] where the grandmother, in search of her grandson, gradually lifts or opens the blanket of a bed, the door of a wardrobe, the lid of a well, the door of a stable, a gate of wood, the tablecloth of a table until he is found asleep behind the curtains of an alcove (**Fig. 6**).
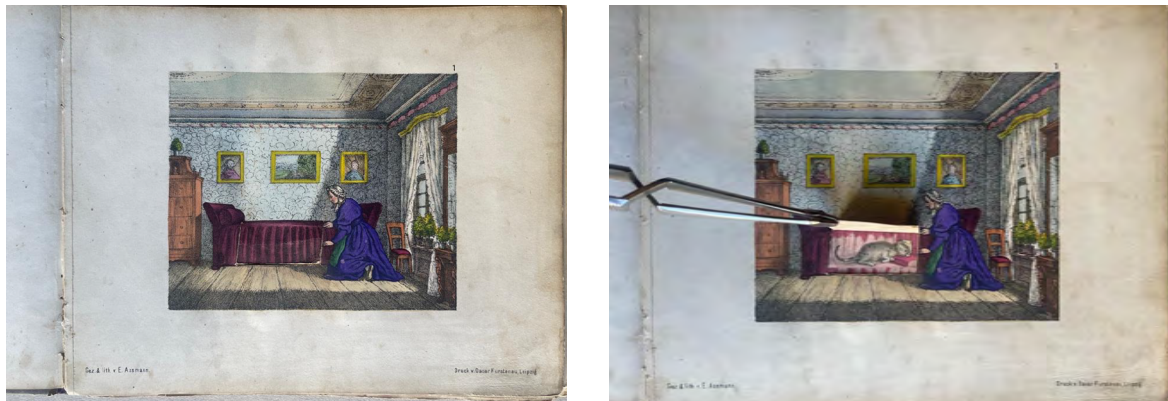

Fig. 6

Or, moving forward in time, think of Bruno Munari's book *Toc toc* (1945),[36] which transforms the door itself into a cover and adds an onomatopoeic title to evoke the action of knocking, followed by the typical question of who is beyond the door ("who is it?") and then by invitation to the child to carry out the consequent action: "open the door". Added to this is a hole, similar to a peephole, which, allowing the drawing of an eye to be seen, evokes the presence of a mysterious someone beyond the door. The opening of the cover/door then pushes the child, through short texts and drawings, to raise an obligatory succession of flaps of decreasing size, which act as internal pages of the book and which show gradually smaller 'containers' and animals (from the giraffe to the ant!), guaranteeing fun but also instructive function, since based on a logical series (**Fig. 7**).
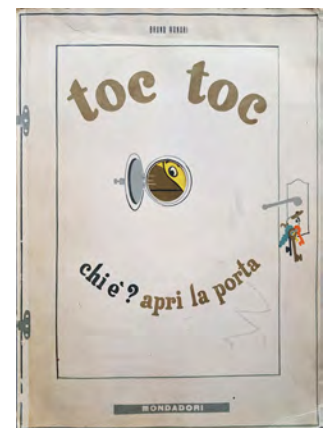

Fig. 7

[34] See e.g. POP-APP 2019b, 14, 17 (cat. no. B6).
[35] Das verloren 1873.
[36] Munari 1945.

As is apparent from our discussion, flaps form a wide category and may be devised in different ways to achieve distinct outcomes. Below we discuss a category of flap that is intended to be flipped 180° and illustrated on both sides.

Depending on where it is placed on a page it achieves different effects. A seemingly simple example consists of a flap illustrated on both sides and fixed in the center of the page so that it can be easily flipped is *Ups and Downs in Picture Town*. In the book the idea of duality is present throughout: the title and the cover image refer to the swing and its movement up and down, animated by the verses:

> So here we go up, up, up, dears,
> And here we go down, down, down!
> You'll say when you look,
> "We know it's a book,
> But it seems like a Picture Town!".[37]

The two images on the flap allow two different 'scenes' to be completed. The effect is a 'transformation' whereby the child, by moving the flap, sees two different images, the reading of which is guided by short captions in verse underneath the moving page (**Fig. 8**).
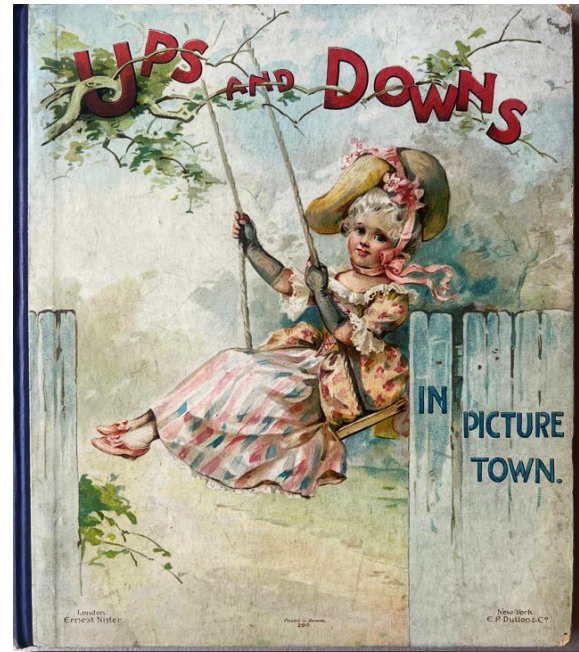

Fig. 8

Another way the flaps work on images can be seen in the albums *Contes illustrés* (1870),[38] each containing two well-known stories. Take for example the one containing *Le Petit Poucet* and *Le*

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[37] Carlton 1890, [3].
[38] These are French-language editions of a Dutch collection, see Buijnsters and Buijnsters-Smets 2001, 403.

Petit Chaperon Rouge: in both cases the moving pages require the child to lift the two horizontal flaps covering the page upwards, revealing a second, much larger scene underneath of the first; a further flap can then be raised on the right side of the figure, magically giving life to a third, even larger scene. For *Le Petit Chaperon Rouge* the three scenes represent Little Red Riding Hood alone in the woods, the encounter with the wolf and finally her arrival at her grandmother's house, where the wolf lying in bed awaits her – – a dimensional progression of the images that dilates the fantastical spaces (**Fig. 9**).

Fig. 9

By contrast, in *Magical Changes* (1879) the flap is smaller than the page. In the first position it covers part of the image below, but since the figure matches perfectly with the one visible below, it gives life to the first 'scene' told in the text of the nursery rhyme written at the bottom on the base of the flap. Turning the flap reveals the complete image representing the ending of the rhyming story (**Fig. 10**).[39]

Fig. 10

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[39] Magical 1879.

The flap that folds 180° can also be situated on the external edge of a page. The folded part emerges out of the page, revealing and completing the underlying image. Rey's book *Anybody at home?* (1939) has a playful and educational purpose. The text asks direct questions, stimulating curiosity, and states the actions to be carried out or to be avoided. The 'answers' are revealed by the action of lifting the flap. For example, "Don't go too near, / just stand away. / Something comes out, / What does it say?" are the verses that accompany the figure of a hive from which, by raising the flap, a swarm of bees emerges (**Fig. 11**).[40]
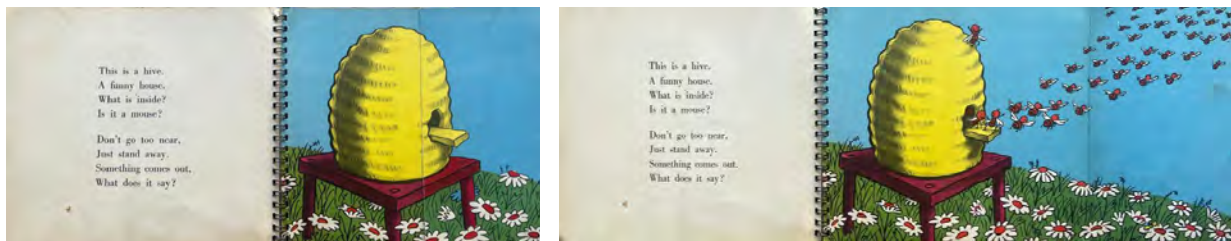

Fig. 11

In this section we discuss three books with diagonal flaps which may be placed in different positions on the page. In *Volta e ridi. Celie in figure pei bambini*, a rare booklet published by Vallardi at the end of the 19th century, perhaps of French origin, the flap, illustrated on both sides, is cut diagonally at 45° and can flip at 180°, interacting with the two different scenes represented on a double page in the booklet. The use is not immediately intuitive since the images are revealed in alternation and not in sequence. The captions above help to 'recognise' the two scenes and provide guidance in reading: in fact, it is necessary to always start from the full page, which is transformed by turning the half flap diagonally (**Fig. 12**).

Fig. 12

The diagonally folded flap also occurs in a Dutch ABC book, *A.B.C. De poems gaat meê; de hond blijft thuis; piep, zei de muis in 't voorhuis!* (1880), where each page presents a square illustration in which four triangular flaps are inserted.[41] The opening and closing of each one highlight the double image of four letters of the alphabet per page: the first image represents a large capital letter,

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[40] Rey 1939, [5]. Or again: "Look in this hole, / What can it be / That lives deep down / Under this tree? // You cannot tell? / Why, then, dear me, / Just turn the page / And you will see" (Ibidem, [1]).
[41] Louwerse 1880.

while the other reveals an image of an object the initial of which begins with same letter. In this case, the transformation facilitates the memorization of the letter/name association of the object (educational purpose). It should also be underlined that the lifting of all four flaps on the same page gives rise to a figure that evokes three-dimensionality (a pyramid with a square base) (**Fig. 13**).[42]

Another unusual Dutch primer, *Pret, Pret, Altijd Pret*, (1880) is linked to playful didactics.[43] Here, an intelligent and very original use of multiple flaps of different sizes allows the construction of progressive images, each of which is related to a word (first monosyllabic and then bisyllabic) which is composed using the letters (or syllables) shown in the top portion of each flap. The various words are then composed in turn corresponding to the illustrations below which are gradually created by turning over the flaps, with a very effective design of the text/image relationship (**Fig. 14**).
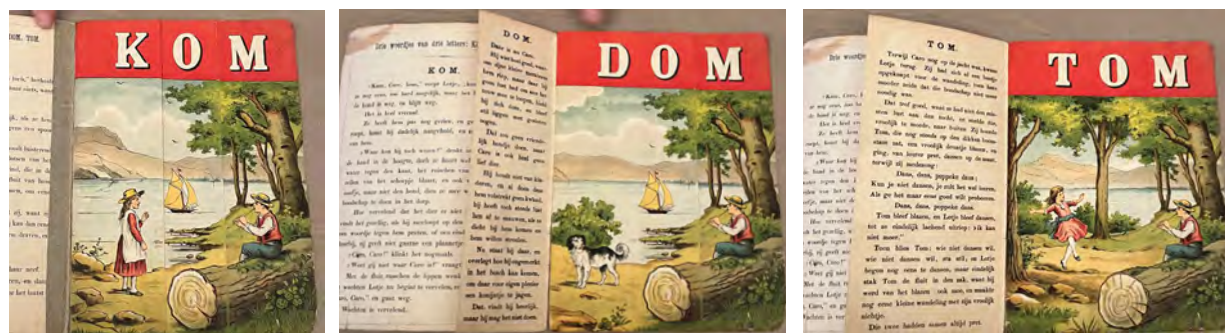

Fig. 13

Fig. 14

Pantomime Toy Book is the most interesting title of a series of complex multi-flap books published in America by McLoughlin Brothers, but originally published in England by Nister. The background in which the various stories are placed is a 'real' theatre, complete with proscenium, side boxes, orchestra pit in the foreground: the 'performance' begins with the presentation of some of the main characters on the stage, while moving the first flap begins the sequence of the main scenes of the story. Thanks to careful planning of the images, by turning the flaps, of different sizes, twelve 'frames' of the story are gradually highlighted. In the specific case of *Cinderella* (ca. 1880), the story is provided in verse and prose at the beginning and at the end end with the moveable images in the middle (**Fig. 15**).[44] It can be assumed that here, as in the other books in

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[42] By analogy with respect to the forms and didactic intentions, our thoughts turn to a book that is otherwise very different, *The Elements of Geometrie* (London, 1570), where "thirty-two of the figures found in Day's imprint are pop-up constructions: two-dimensional diagrams of pyramids and cubes are printed on flaps that the reader folds together to create three-dimensional renderings […]. *Elements* thus offers the reader the unique opportunity to view the same shape in two different states – collapsed and fully-formed – without damaging any of the essential components. This use of a simple flap technology to create three-dimensional shapes contributes much to the experience of visualizing difficult mathematical concepts" (McNiff and Schultz 2012).

[43] Agatha 1880. On this book, which belongs to the *Agatha's 5 Verrassende Prentenboeken* series, cf. Buijnsters and Buijnsters-Smets 2001, 126, 418.

[44] Cinderella 1880 ca.

the series, all inspired by classic fairy tales well known to children through oral narration even before reading, the book functions more as a pre-cinematic game than as an illustrated reading book. The central mobile insert is in fact (perhaps for this reason) thought of as 'independent' from the written pages. The success and diffusion of such books are probably largely linked to their possibility of being used independently of the text, as paper toys. The magic of making ever different figures appear by 'turning' these unusual pages that are actually flaps enables a story to be told without words.

Fig. 15

Now we discuss two examples of books using horizontal flaps that create complicated effects. As we have seen, the device of the flap works with increasingly complex transformation effects, acting on images and texts with ever greater virtuosity. In the French publications created on the occasion of the Universal Exhibition of 1867, not surprisingly entitled *Les Transformations Comiques. Tableaux Parlantes*, the flaps, of different sizes, cut horizontally and illustrated on a single side, combine to create different figures which, with titles or short captions, allow the subject to reconstruct the entire tragicomic story of *Cadet Roussel (ses defauts et sa chute)*. The correct manipulation of the sequence of flaps following the various episodes of the story is rather complex; therefore, as it is said at the beginning of the volume, it is necessary to follow the progressive numbering printed on each flap.[45] By moving the various flaps in the correct sequence, the character's expression also completely changes, almost creating a flip book (**Fig. 16**).

Fig. 16

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[45] "Pour suivre convenablement le sujet, il est de rigueur de tourner les feuillets, successivement, un à un, et par ordre numérique" (highlighted words by the author) (Les transformations 1867, [1]).

The transformative effect of the horizontal flaps is enhanced and amplified in *Les Godichards en Voyage. Transformations Excentriques* (1900 ca.), in which the figures of the characters themselves, divided into three horizontal stripes figured on both sides, represent different heads, different bodies and different legs. These parts can be combined to represent bizarre characters that are still 'coherent' with a construction of a figure, and for this very reason fun **(Fig. 17)**.[46]
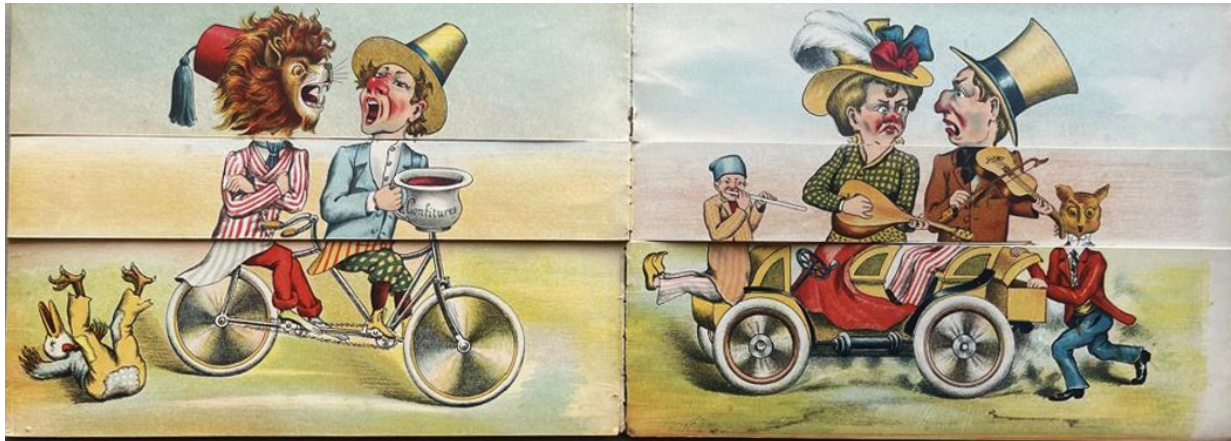

Fig. 17

Here the problems of nomenclature become more evident. As in many similar cases, the word 'transformations' is present in the title (eccentric, funny, etc.) and the enormous quantity of figures of different characters is emphasized which can be gradually built by combining the various horizontal flaps that are also completely random.[47] For this type of material the transformation effect is preponderant compared to the original device of the flap. How should we refer to these kinds of books in the glossary?

One approach would be to discuss this type of book in relation to transformation books/albums. They too are mainly game books, as they have no educational objectives or relationship with a text.

Taking these considerations into account, in view of the future glossary it could therefore be proposed to call these artefacts **toy books with transformation effects** (underlining their playful value) or **flap books (or multiple flaps books) with transformation effects** (instead highlighting the device at the base), in Italian ***libri gioco a trasformazione*** or ***libri con alette con effetti di trasformazione***.

We look forward to ongoing discussions within the working group as we derive the glossary.

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[46] Les Godichards 1900 ca. This type of book is often colloquially referred to as 'head/body/legs'.
[47] Sometimes the word transformation is replaced in the title by a similar one (es. "Variations Amusantes") but further writing on the cover reminds us that it is an "Album a transformations".

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