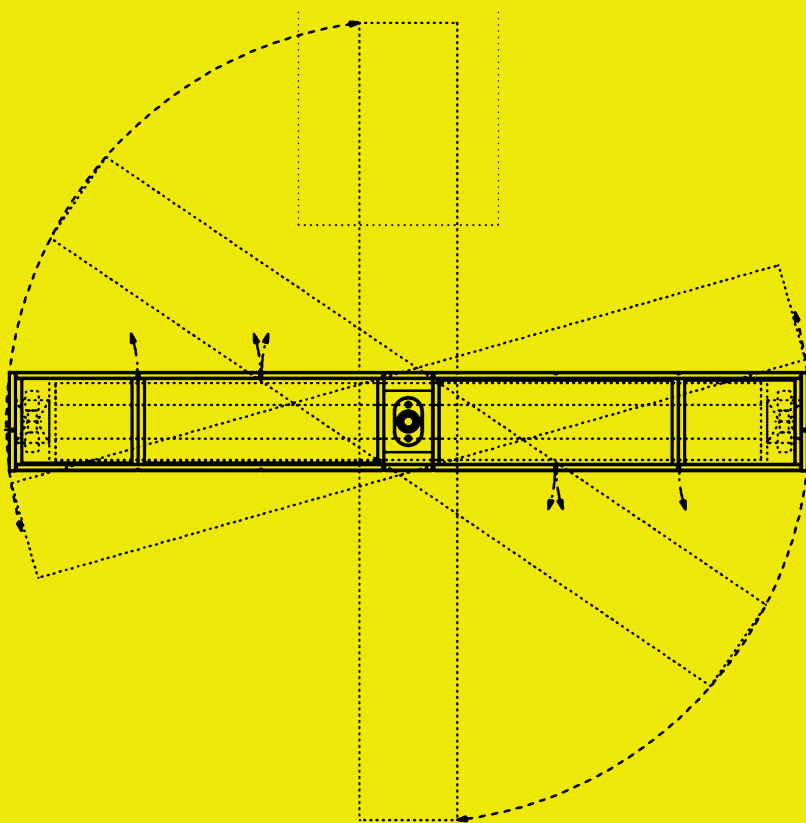


101 Spinning Wardrobe



by Storp Weber Architects

Project Details

Practice:	Storp Weber Architects
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Designers:	Patrick Weber and Sabine Storp
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Weber and Storp contributed equally to this project through their joint practice Storp Weber Architects.

Title:	101_Spinning Wardrobe
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Output type:	Building
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Function:	Family dwelling
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Location:	Queen's Park, London
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Client:	Private
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Practical completion:	2010
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Budget:	£6,500 (overall project budget £110,000)
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Area:	25m ² (overall project 220m ²)
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Engineer:	Alan Baxter Partnership
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Fabricator:	Better Construction
-------------	---------------------





1
**View of the green
and yellow rooms
next to each other**

Statement about the Research Content and Process

Description

The 101_Spinning Wardrobe was one component of a larger refurbishment of a Victorian terraced single-family house situated on Queen's Park in north-west London. It is part of a series of projects by Storp_Weber_Architects that investigate the effects of kinetic objects in existing building fabrics – an attempt to change the way spaces are seen and occupied through movement.

In 101_Spinning Wardrobe the object introduced into the building is represented by a moveable 'play structure' between the bedrooms of two children. It responds to research into the significance of kinetic environments for influencing the habits of children. It proposes that a playful environment can aid in the development of spatial awareness, alertness and wellbeing of children.

Questions

1. How do children understand and inhabit spaces through body movement?
2. How can a space engage and help children in their spatial development?
3. How can cinema, especially silent films, inform building design theory and practice?
4. How can small-size interior spaces be temporarily adapted to facilitate multiple uses?

Methods

Story-telling, architect-made toys, model-making at various scales and stop-frame animations as architectural design and communication tools. Cinematic, literary and design references were used to generate and contextualise the design process for the project: in particular, Buster Keaton's films *One Week* (1920) and *The Scarecrow* (1921); C.S. Lewis's novel *The Lion, the Witch and the Wardrobe* (1950); and Bruno Munari's 1950–1970 child-informed design. The resulting design is an interactive, kinetic structure connecting and dividing two bedrooms in a playful way.

Dissemination

Exhibited at the Building Centre, London; reviewed in *Architects' Journal*, *Grand Designs Magazine*, *Designboom* and *Archidose*; presented at the ArchTheo conference in Istanbul and published in the proceedings; available as an online film (with over 12,000 views).

Statement of Significance

Shortlisted for the AJ Small Building Award (2011).

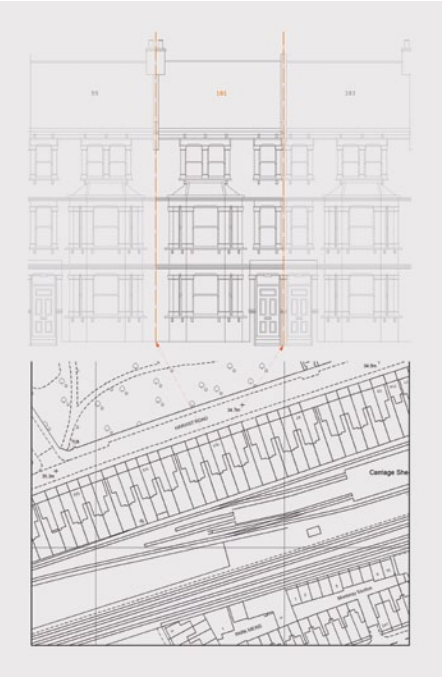


Introduction

The 101_Spinning Wardrobe is part of a refurbishment of a Victorian house overlooking Queen's Park in north-west London. One part of the commission was the general refurbishment of the house throughout all the four floors, and the creation of additional space in a conversion of the existing loft space. The second part of the work consisted in drastic changes to three areas through the introduction of three bespoke furniture and wall elements. First, the top floor of the building was transformed with the introduction of a stair-loft room element. This was conceived as an independent structure that offered an escape to a newly created space on top of the building, providing a view over London. Second, the ground-floor entrance area was completed with the introduction of an organising furniture element under the stairs. The third element, the Spinning Wardrobe, was necessary because the children quickly outgrew the available space. [fig. 1–9]

The objective of the Spinning Wardrobe was to explore issues of adaptability and play in the domestic setting with a central focus on young children as a user group. A key concern was the users' tactile relationship to their house on the one hand, and the proactive 'creation of a home' on the other.

Buster Keaton's silent movies, Italian designer Bruno Munari's work and C.S. Lewis's children's novel *The Lion, the Witch and the Wardrobe* were the lead inspirations for experimenting with ways of dividing the available room into two. By a simple manoeuvre along the diagonal axis, each room gains space without the need for a corridor. The rooms become both divided and connected through a rotating 'play structure'. This moveable object provides the children with the ability to pass through from one room to the other. If they wish to be left alone, they can lock themselves away from the adult world by blocking off the entrance to both rooms. Both beds are built into the wall, with flaps and doors to join or separate the two spaces. [fig. 10–12]



3

3
Site location plan
and elevation



4

4
The existing building
prior. The three areas
to be changed are
marked in yellow.

5
1: Newly created
roof space with a
view over London;
2: Spinning Wardrobe;
3: Furniture piece
on the ground floor

6
Model illustrating
how the roof element
is slotted into the
existing fabric of
the house



5



6

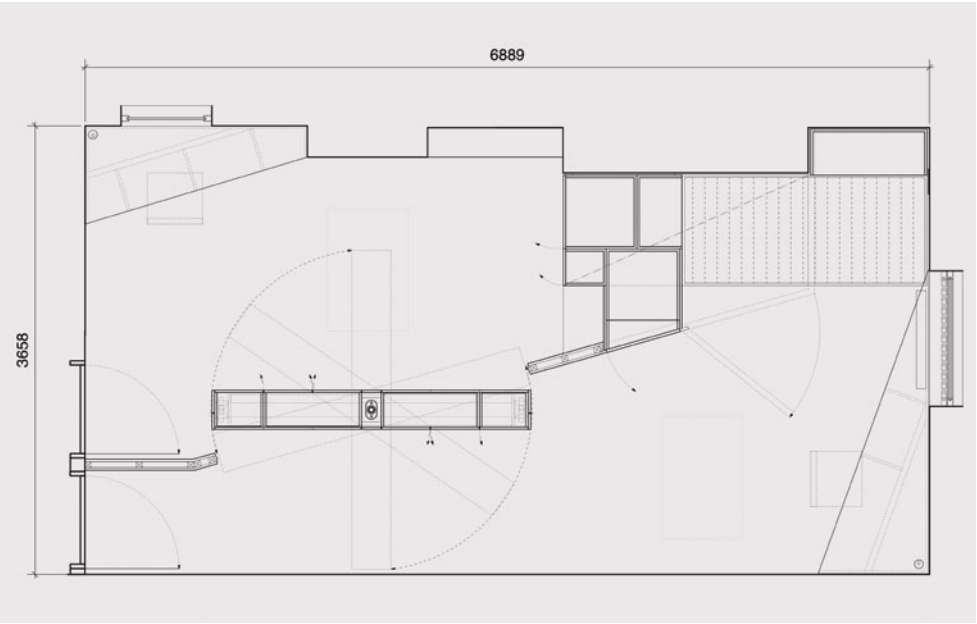




8



9



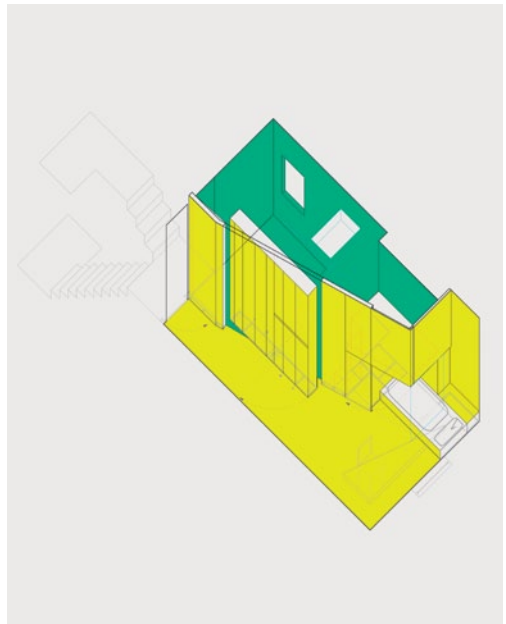
7 (previous page)
View of the green room

8 (previous page)
View of the finished stair towards the new space on top of the existing house

9 (previous page)
View of the yellow room



11



12

10
Plan of the Spinning
Wardrobe situated
in the two bedrooms

11
The flap connecting
the two rooms

12
The dividing wall
between the two rooms

Aims and Objectives

1. To invent multiple spatial configurations within the confined limits of the existing building fabric of a dwelling.
2. To use kinetic wall pieces to empower children to develop different ways of engaging with space.
3. To develop appropriate flexible and participatory models that improve design communication between architect and users (particularly young users). [fig.13–15]

Questions

How do children understand and inhabit spaces through body movement?

Children have a very different understanding and perception of space, led by movement and the tendency to explore. Especially in early years (three to five years old), role-play takes up a significant part of their daily routine. Most environments are conceived, designed and built by and for adults, often without any real consultation with the client – in this case the children. In 101_Spinning Wardrobe, the children were consulted and actively participated in the design process. A series of depictive wooden blocks were produced to help children and parents explore the spatial implications of the different design approaches. The adaptability of the models was then used to seek a similar adaptability on the scale of the built intervention.

How can a space engage and help children in their spatial development?

The role of play in children's development has dramatically changed over the last decades, because increasingly play has taken a more static role (e.g. computer games and play stations) in comparison with more dynamic experiences of play usually practised outdoors in the past.

This research-led design introduced a kinetic environment in the interior of the house, allowing the children to explore and experience 'space' through body movement.

How can cinema, especially silent films, inform building design theory and practice?

Buster Keaton is one of the most imaginative and playful filmmakers of the silent movie era. The naivety of his character combined with the inventiveness of the sets inspires this design. The way Buster doesn't accept a norm or a standard was used to convince the client to come up with a non-standard solution for the refurbishment. In addition, time-frame animations were used for design communication.

How can small-size interior spaces be temporarily adapted to facilitate multiple uses?

Adapting domestic spaces is often more a necessity than a maxim. Right from the outset it was clear that the actual shell of the building, the fabric of the outer walls, was not big enough to accommodate all the necessary spaces required by a growing family, and so design innovation was necessary. [fig. 16]





14



15

13
View of the green
room inhabited

14
View of yellow room
sleeping area

15
View of the flap
connecting
the two rooms

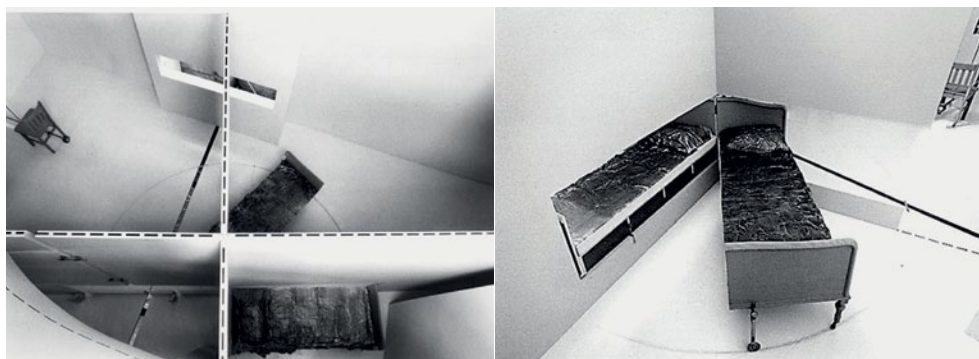




16
The flap connecting
the two sleeping
areas in use



17



18

17
Buster Keaton,
One Week (1920)

18
Diller & Scofidio
The Withdrawing Room,
 1987

Reproduced by permission
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Context

The work concerns kinetic objects and flexible spaces. It is situated within an interdisciplinary context ranging from child psychology and silent films to graphic design of the 1960s and contemporary architectural installations.

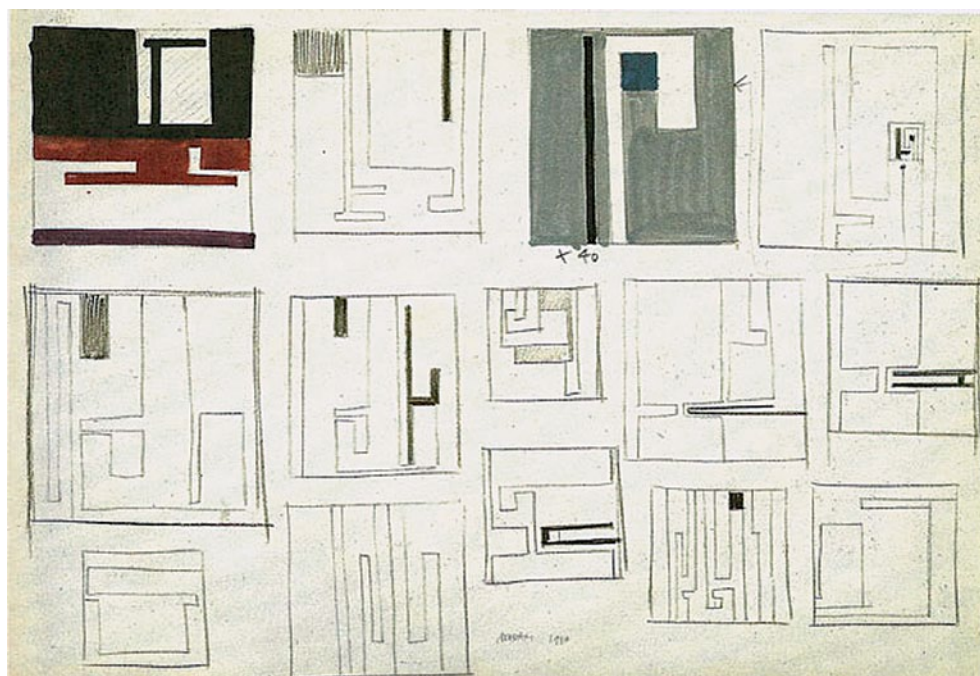
1. The silent films of Buster Keaton, especially two scenes from *The Scarecrow* (1921) and *One Week* (1920), raise questions about how domestic spaces and objects might be used in multiple and unconventional ways. In *The Scarecrow* the opening scene is an imaginative inhabitation of a 'one-room house'. Every item of furniture has at least two uses: the bed is a bathtub, the table turns into a wall panel, the gramophone is a stove and the bed turns into a piano. Everything moves, can turn, tilt, transform, allowing the space – one room – to be transformed into all the domestic environments usually required for living.
2. Bruno Munari's 'Unreadable Book' series from 1953 was nothing more than an assembly of different coloured and shaped pages overlapping – creating ever-changing patterns that were open to different interpretations. Munari used design to understand children, to open up their imaginations, to play with the way they see their environments. Toys and play structures were the tools, and imagination and interaction were at the heart of the play.
3. Liz Diller and Ricardo Scofidio's installation *The Withdrawing Room* (1986) and Terry Gilliam's film *Brazil* (1985) share a similar idea of furniture occupying two different rooms. *The Withdrawing Room* is part of a larger installation where the furniture is divided by a wall, with half of it protruding out of the wall on each side. In *Brazil* an office desk is fought over by the occupants of the two offices on either side. The characters are unaware of each other's presence; the only communication is through the moving desk. There is a play, an interaction, between the two characters. An action on one side has an immediate reaction on the other side of the room. Negotiating the space and its boundaries is at the heart of this work.
4. Ismail Said (Faculty of the Built Environment, Universiti Teknologi Malaysia) researches the spatial development of children and the way in which they respond to stimuli ('Architecture for Children: Understanding Children Perception towards Built Environment', *Proceedings of International Conference Challenges and Experiences in Developing Architectural Education in Asia*, Islamic University of Indonesia, 2007). He links 'real space', 'social space' and 'inner space', and researches how a trigger of stimulation leads to a measurable increase of satisfaction; it creates new memories and is an essential part of growing up. [fig.17–21 & 32]



19

19
Bruno Munari,
Un Libro Illegibile
 (Unreadable Book),
 1953

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20

20
Bruno Munari,
Un Libro Illegibile
(Unreadable Book),
1954

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21

21
Bruno Munari,
'Abitacolo' children's
bed and play/learning
structure, 1971

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22
Jigsaw room toy,
with components
for the four possible
room configurations



Methods

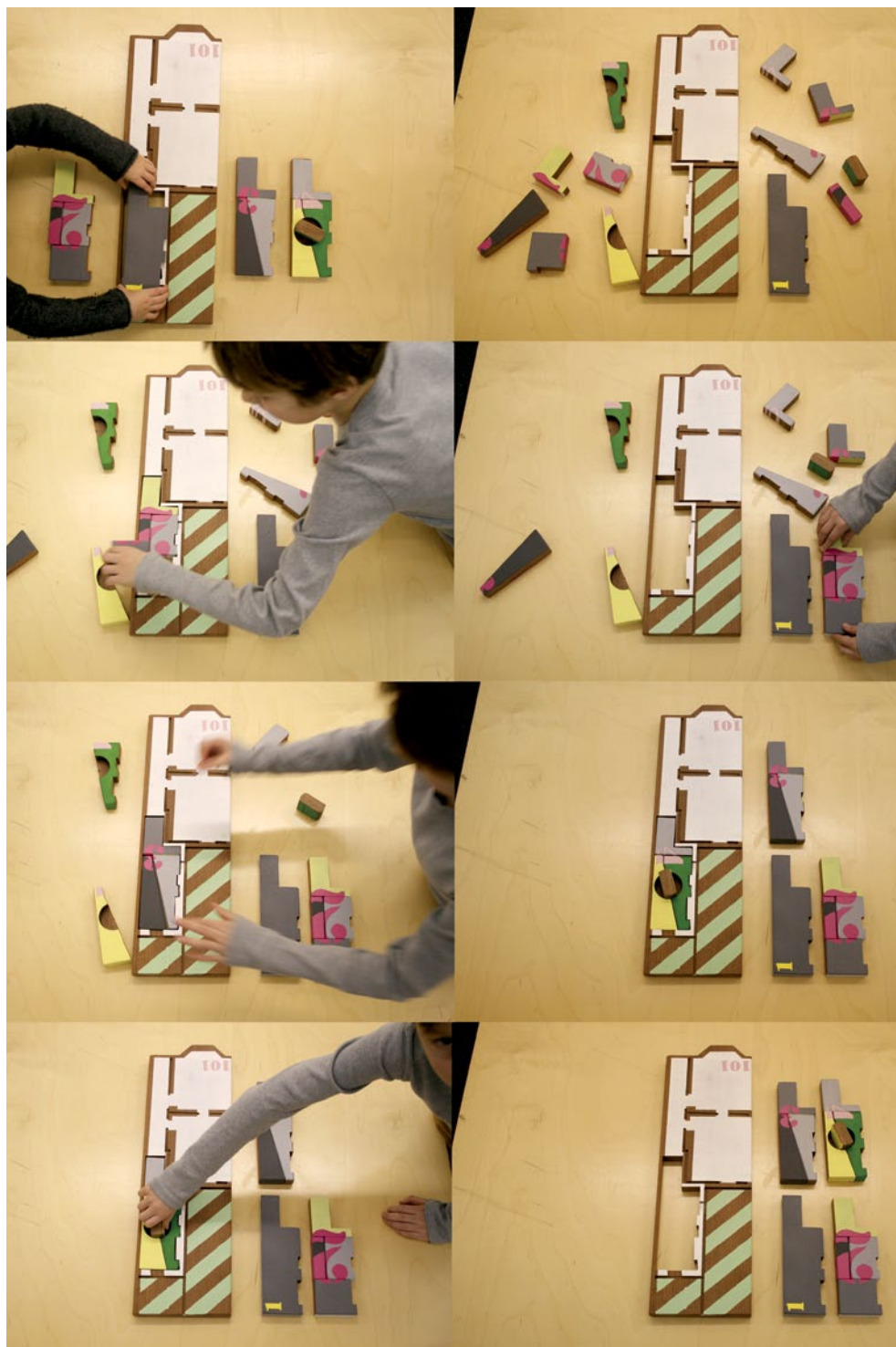
Regular discussions with the client focused on how the space would be used and aimed to challenge the brief for a standard refurbishment. All internal fittings, walls, ceilings, etc., were removed to create a blank canvas from which the design was started. A simple move, the division of the rooms diagonally, was used to eliminate the need for corridors to get to the individual rooms.

Story-telling for design and communication

The Lion, the Witch and the Wardrobe was used to describe the main aim of the spatial arrangement to the children. Webber visualised the fantasy novel's plot of the hidden doorway leading into a magical country by incorporating into the actual book an interplay of cut-outs and colour insertions. This layered book-model suddenly opened up a series of possibilities for imagining how the new space(s) would be inhabited. [fig. 24–26]

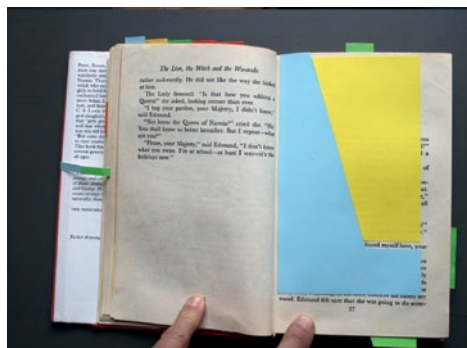
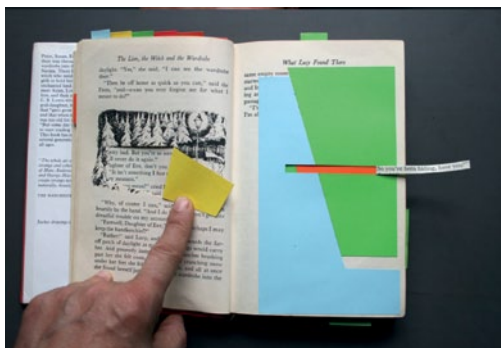
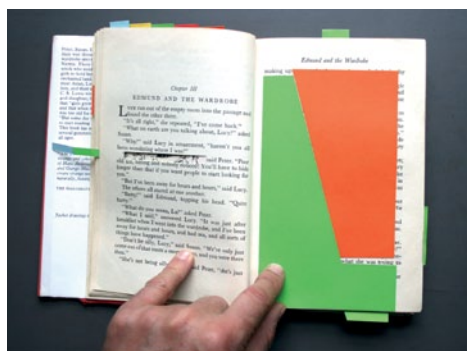
Toys as participatory tools

An interactive jigsaw-like toy was used to explore solutions for connecting and separating the room(s) and to communicate, via tactile means, the different configurations to the user group. Children and parents played with the different blocks representing the different areas ('rooms') to better understand the spatial implications of their manoeuvres. Munari's work in the 1970s with independent play structures helped further to describe the approach to the clients. [fig. 22 & 23]

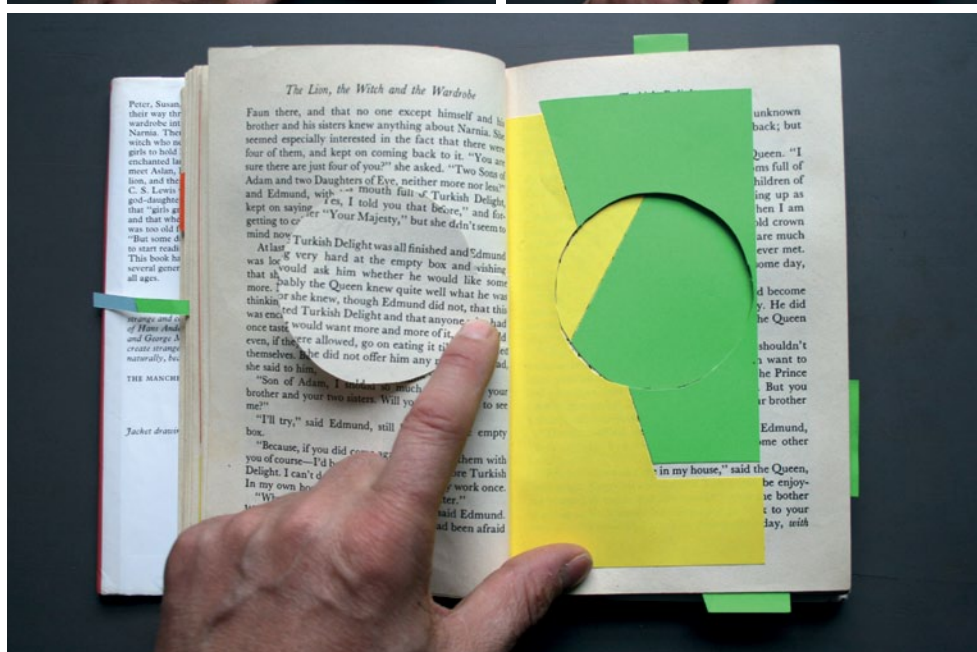
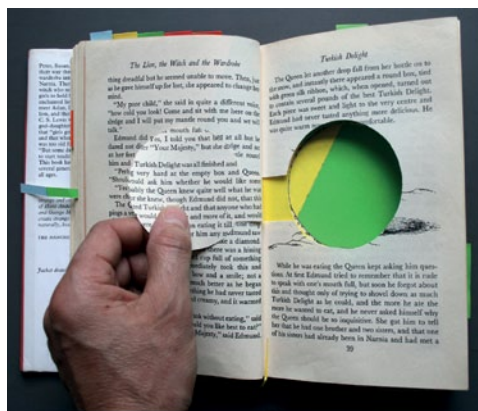
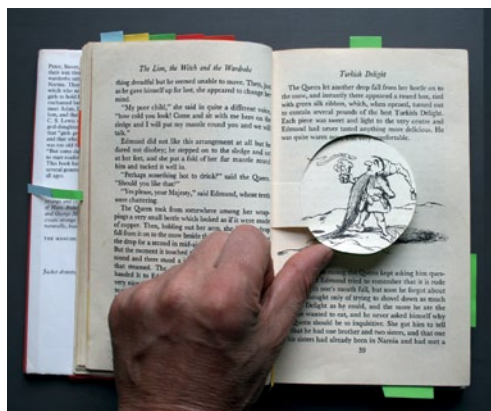


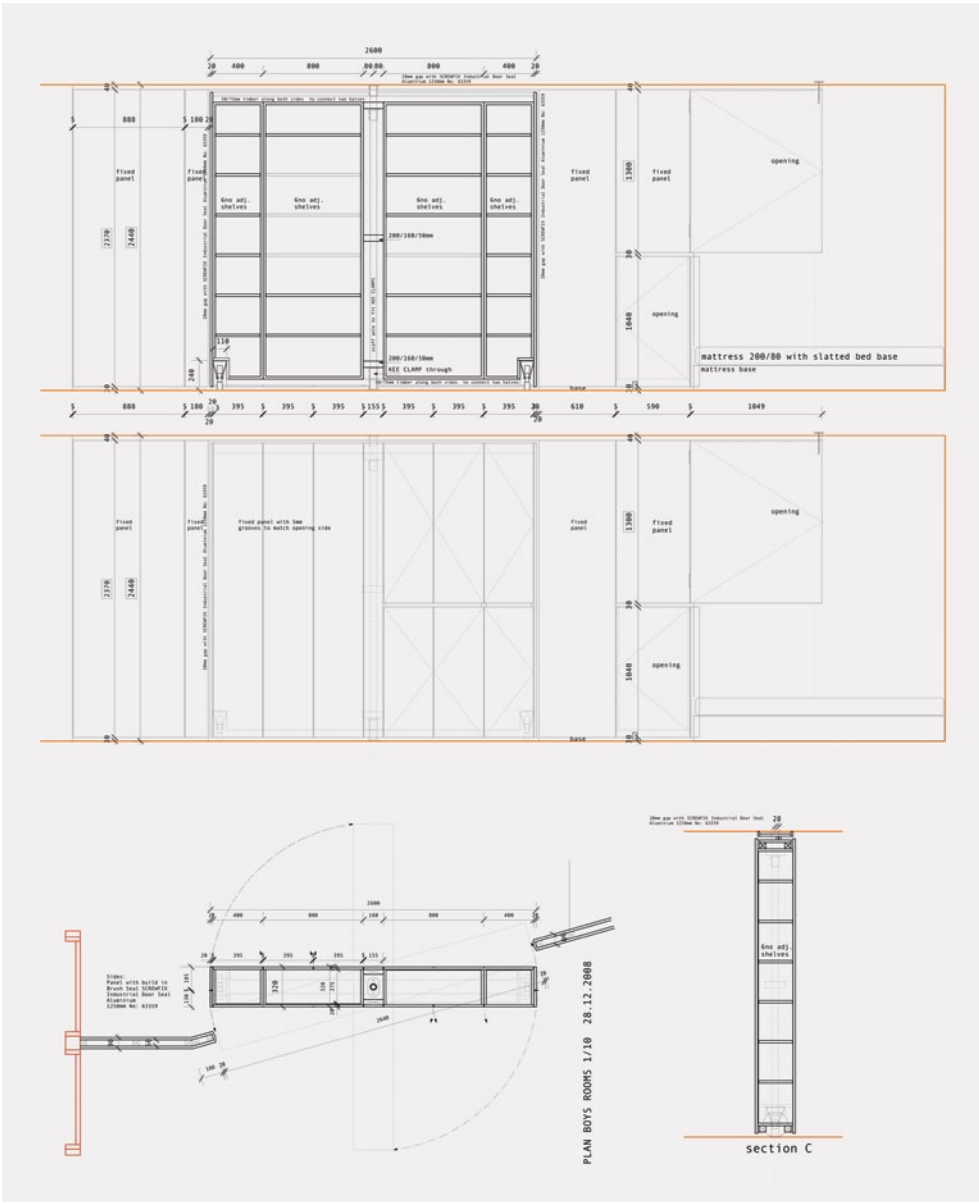


24



25





24–26 (previous page)
*The Lion, the Witch
and the Wardrobe*
book-model, showing
flaps, insertions and
colour studies to
describe the design
principles of the project

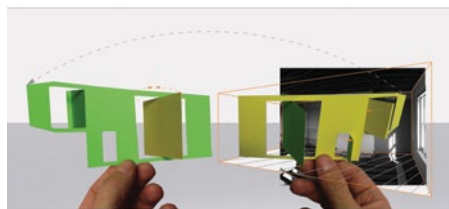
Model versus drawing

A series of trial-and-error sketch models and prototype models were produced. The models had an experimental purpose and were made to test and describe the spaces in motion. The models were fully operational, with moveable flaps, doors and hatches, so that each situation could be tested and its spatial organisation refined.

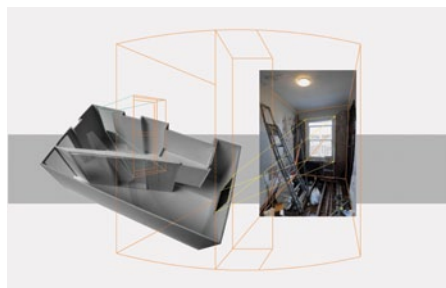
For the fabrication process, the drawings were inadequate to describe fully the three-dimensionality and operation of the piece. Instead, a bigger 1/10-scale cardboard model was made to describe to the builder what the structure would look like and how to build it. This model was used on site throughout the construction process and revisions were discussed and tested directly on it. [fig. 27–30]

Still-frame animation

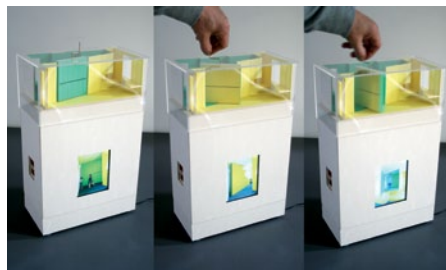
A still-frame animation of the Spinning Wardrobe was made to describe the space in use. The film brings some of the Keaton references back and can be seen as a notional instruction manual for the space. [fig. 31]



28



29



30

27
The Spinning
Wardrobe, plan
and sections

28
Kinetic model of the
coloured diagonal
wall between the
two bedrooms

29
Model in relation
to the existing space

30
Model and film of the
Spinning Wardrobe



Dissemination

Exhibition

AJ Small Projects, exhibition organised by New London Architecture in the Building Centre, London (Feb–Mar 2011).

Conference presentation and publication

Patrick Weber, 'Play-room-play', in *House and Home from a Theoretical Perspective (ARCHTHEO 2012: Theory of Architecture conference)* (ed. Efe Duyan and Ceren Öztürkcan). Istanbul: DAKAM (Eastern Mediterranean Academic Research Center), 2012. pp. 100–111.

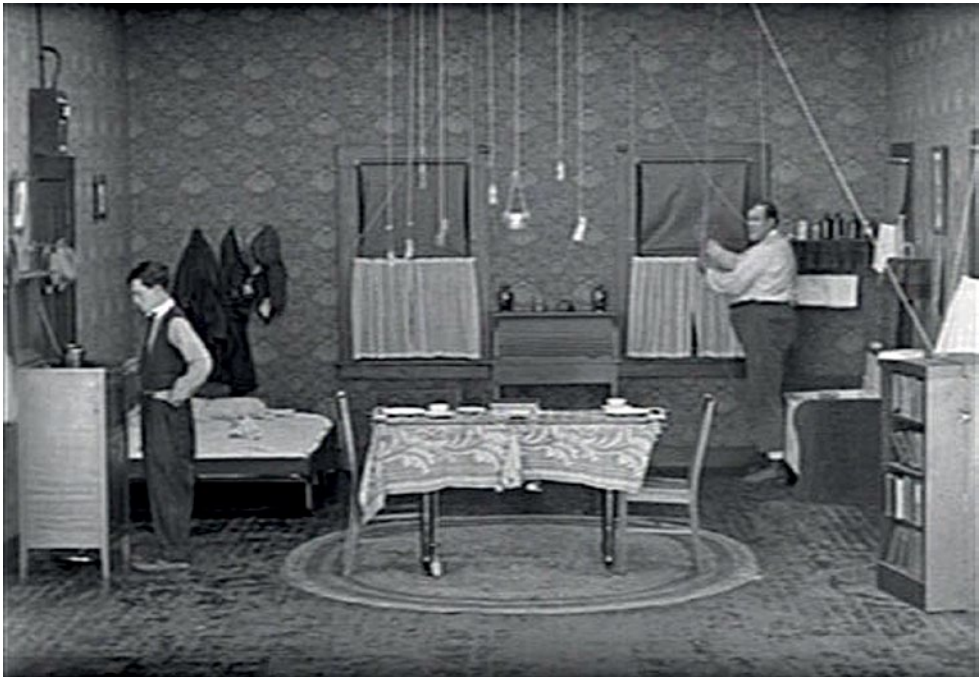
Online films

Spinning Wardrobe – Film (00:01:28) on *YouTube* showing the spinning wardrobe (over 12,000 views): www.youtube.com/watch?v=t2XPBcNDAjo

Room:Play:Room – Film (00:00:58) on *YouTube* showing the jigsaw room toy: www.youtube.com/watch?v=7I4wN0I_UY4

Reviews

Print reviews in *Architects Journal* (2011) and *Grand Designs Magazine* (2011), and online reviews on *Designboom*, *Architects Journal*, *Archidose* (*A Daily Dose of Architecture*).



32

Related publications by the researcher(s)

Conference presentation and publication

pp. 33–45

Patrick Weber, 'Play-room-play', in *House and Home from a Theoretical Perspective (ARCHTHEO 2012: Theory of Architecture conference)* (ed. Efe Duyan and Ceren Öztürkcan). Istanbul: DAKAM (Eastern Mediterranean Academic Research Center), 2012. 100–111.

Online films

p. 46

Play:Room:Play – Film (00:00:58) on YouTube showing the jigsaw room:
www.youtube.com/watch?v=7I4wN0l_UY4

p. 47

Spinning Wardrobe – Film (00:01:28) on YouTube showing the spinning wardrobe (over 12,000 views): www.youtube.com/watch?v=t2XPBcNDAjo

Related writings by others

Print reviews

pp. 49–51

'Spinning Wardrobe, London', in *Architects' Journal* (27 Jan 2011). pp. 30–31.

pp. 52–53

'Moveable designs', *Grand Designs Magazine* 83 (Jan 2011). p. 134.

Online reviews

p. 54

AJ: www.architectsjournal.co.uk/buildings/aj-small-projects/spinning-wardrobe-london-by-s-w-architecture/8609870.article

p. 55

Designboom: www.designboom.com/design/storp-weber-architecture-spinning-wardrobe-between-two-kids-bedrooms

p. 56

Archidose (A Daily Dose of Architecture):
<http://archidose.blogspot.co.uk/2011/08/spinning-wardrobe.html>

pp. 57–58

IS arquitectura: <http://is-arquitectura.es/2011/08/10/dos-dormitorios-en-una-habitacion-con-armario-giratorio.html>

p. 59

AFASIA: <http://afasiaarq.blogspot.co.uk/2010/05/s-w-arch.html>

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