

# **Digital Creativity**



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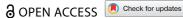
## **Derek Hales**

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## The Cacheian Objectile: design fictions of the furnishing of territories

Derek Hales

Salford Laboratory of Architecture, University of Salford, Manchester, UK

#### **ABSTRACT**

The Architect and Designer Bernard Cache suggested a renewed need to pursue the concept of technical objects as 'objectile' by philosophical rather than architectural means, reversing an earlier dedication to pursuing architecture by other (i.e. philosophical) means. There remains more to do in either regard, and this article contributes to such work by deploying objectiles in different registers than those originally intended. In the following pages, I deliberately misread one of Cache's examples to consider it a digital design fiction—one that is used to demonstrate the concepts at work in Cache's book within their philosophical frame and yet mobilized in new ways shifting the register of interest in objectiles to the furnishing of territories themselves—and to design fictions of scale-shifting and time-travel devices.

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The new status of the object no longer refers its condition to a spatial mold-in other words, to a relation of form-matter-but to a temporary modulation that implies as much the beginnings of a continuous variation of matter as a continuous development of form. (Deleuze 1993)

It is the philosopher Gilles Deleuze and psychoanalyst Felix Guattari, who claim philosophy as the creation of concepts. This claim over the creation of concepts is a measure of distinction between designers (who only work with concepts) and philosophers (who create them). In the epigraph above, one such creation of concepts is the objectile, it is a concept from the first digital turn in architecture that provides a guiding conception of the technical object that will be deployed in this article. The objectile concept was created counter to the idea of formal genesis in technical objects as an imposition upon the matter from the outside (hylomorphism). Instead, the technical object, say a piece of furniture, an instrument cabinet or an imaginary landscape, is conceptualized as an individuating difference or becoming. The concept objectile is developed in parallel by Deleuze and (somewhat undermining the claim by Deleuze and Guattari) by his former student, the architect and furniture designer Bernard Cache (Cache 1995). Two parallel versions of the concept circulate in English translations from the French, from 1993 and 1995 respectively.

In his book *The Fold: Leibniz and Philosophy* (1993), Deleuze also describes a tabular objectile in which

the surface stops being a window on the world and now becomes an opaque grid of information on which the ciphered line is written. [6] The painting-window is replaced by tabulation, the grid on which lines, numbers, and changing characters are inscribed (the objectile). (1993, 27)

This relation between what might be considered a description of projective geometry or a drawing machine after Desargues is interesting given the relation Cache gives between a table and bookcases in relation to a room, and a landscape containing a lake and a mountain framed by a window of the room that he uses to illustrate his discussion in the book Earth Moves (1995).

Cache has suggested a renewed need to pursue the objectile by philosophical rather than architectural means, reversing an earlier dedication to pursuing architecture by other means. There remains more to do in either regard, and this article contributes to such work by designing and deploying objectiles in different registers than those originally intended. This article gives such pursuit some address by exploiting a confusion within Cache's book Earth Moves and its subtitle The Furnishing of Territories—and the actual furniture Cache designs and uses to illustrate his book. In the following pages, I deliberately misread one of Cache's examples to consider it a digital design fiction—one that is used to develop or demonstrate the concepts of the book within their philosophical frame yet mobilized in new ways. In the present essay I shift the register of interest in objectiles to the furnishing of territories themselves-and to design fictions of time-travel furnishings, appliances, devices and other apparatus. The article is loosely split into two parts after some preliminary remarks. The first part will reconsider the objectile concept via a design by Bernard Cache in design-fictional terms and the second will mobilize the objectile concept in the science-fictional register of cinema. Traversing the two parts is a sense of a cinema of things extricated from Cache's book, Earth Moves: The Furnishing of Territories and a pataphysical sense of science fiction that I will unfold throughout.

The sense of furnishing I have in mind here seems to be not too dissimilar to that used by Enlightenment Philosopher John Locke (1690), with whom one could say Cache's text is ontologically antagonistic, but for whom-that is for Locke-we could say that what is at stake, is how external objects furnish the mind with ideas of sensible qualities, and for me how imagining furnishes understanding of another set of ideas with fictional objects, and designing machines for imaginary scientific problems. That Locke uses the metaphor of the camera obscura here is of some interest:

For, methinks, the understanding is not much unlike a Closet wholly shut from light, with only some little opening left, to let in external visible Resemblances, or ideas of things without; would the Pictures coming into such a dark Room but stay there, and lie so orderly as to be found upon occasion, it would very much resemble the Understanding of a Man, in reference to all Objects of sight, and of the ideas of them. (Locke 1690)

My own speculative remobilizations of the objectile concept, some 20 years after this wider architectural circulation had ossified and as computational design accelerated, suggested to me a refurnishing of objectile territories in pataphysical computing and speculative hardware (Hales 2016). Ideas in that work depended greatly on the pataphysician, Dr Faustroll, (Jarry 1996) a fictional 'discoverer' of pataphysics itself, created by fin-desiecle playwright Alfred Jarry. Amongst the imaginary machines Faustroll invents, is one described in a set of instructions for a remarkable piece of mobile furniture a time machine described in How to Construct a Time Machine (Jarry 1968). Whilst Cache does not quite design such fictional devices, he does design one remarkable piece of furniture which performs fictive manipulations of space and time through a kind of scale-shifting optical device:

A living room in an apartment that overlooks Lac Leman in Montreaux. The coffee table is inserted into a bookcase whose variable curvature surface runs along the wall. The glass plate of the table allows us to see two characteristic shapes of the local landscape: a small island combined with a mountainside. [...] the furniture reproduces the landscape, not as a reflection but as a miniature. (Cache 1995, 140)

The latter parts of this essay time-travels with objectile concepts and I employ the science of imaginary solutions, substituting a Doctor of Pataphysics, to do the work of David Kirby's 'Lab-Coats in Hollywood', the scientific advisors to the science fiction film industry in its making of diegetic prototypes. The concluding part two of the article provides a more pataphysical encounter constructed from the furnishing of a time-machine in the props and scenography of the film Je T'aime Je T'aime (Resnais 1968), implicating in this cinematic furnishing of territories, an indebtedness to Faustroll's understanding of time-machine construction. In what follows, our first more expanded encounter between design fictioning and philosophy will be with the objectile designed by Cache (Figure 1).

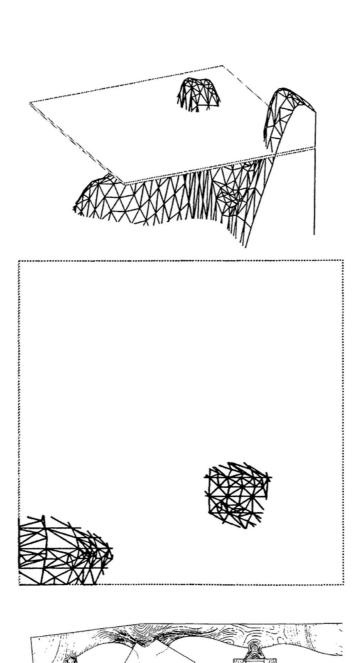
## **Objectile toy universes**

Deleuze creates the objectile concept in his work The Fold (1993), as its subtitle suggests, this is a book on Leibniz and the Baroque. It also contains the potential for engagement with possible worlds, indebted as this notion is to German philosopher and mathematician Gottfried Leibniz: possible worlds are amongst other ideas of the European Enlightenment developed by Leibniz but also differential calculus, monads, binary, and the universal language, each of which furnish his invention of an early calculating machine. Deleuze describes such a calculating and projective machine, somehow a philosophical encounter of Leibniz and descriptive and projective geometries: a tabular objectile or painting window.

Furnishing an apartment in Montreaux, as imagined in Earth Moves (1995) with the device of another room, imagined by Deleuze, in his allegory of a baroque house in The Fold (1993), is really only possible to conceive after the seventeenth-century geometrical theories of French mathematician and architect Girard Desargues. That is to say, after these theories have been used to furnish perspective optics and conics, allowing us to project from three dimensions onto a two-dimensional surface and Desargues's theories had been used to inform Leibniz's theory of monads, through metaphors involving projective geometry. This is made explicitly clear by Cache (in 2011), and sufficiently so to enable a contiguity of a projective geometric plane and illustrations of a table-top within the imagined apartment in Montreaux overlooking Mont Blanc. Cache provides three illustrations of this tabletop and its imagined mountain, a miniaturized Mont Blanc, in two plan views at different scales, and in a parallel projection drawing in the book (1995, 141) and repeated above (Figure 1). The table-top—an elevated imaginary ground plane, supports (and is supported by) a miniature version of a remote mountain range viewed from the apartment's 'paintingwindow' of the apartment: it is furnished by a mountain-table.

## Territories furnished with dreams of borrowed scenery

Neither Cache nor Deleuze make reference to what the eighteenth-century exoticist and architect Sir William Chambers calls 'toys in architecture' in the preface to his Designs of Chinese Buildings, Furniture, Dresses, Machines and Utensils (1757). Nonetheless, the idea of these toys and miniatures and the borrowing of scenery that Chambers subsequently develops as his great orientalist contribution to the English Baroque landscape seem to me to be pertinent early modern examples of design fiction from within the discipline



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**Figure 1.** Bernard Cache (1995). Table with Mountain. Apartment in Lausanne. *Earth Moves: The Furnishing of Ter- ritories*, p.141. Courtesy of the architect.

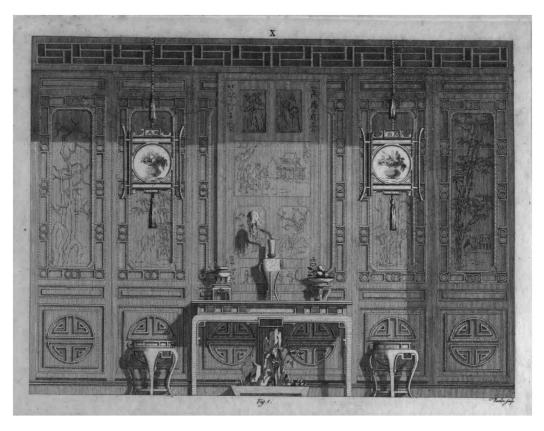


Figure 2. Sir William Chambers. Designs of Chinese Buildings, Furniture, Dresses, Machines, and Utensils. P.54.

architecture. These toy universes (design, miniatures, borrowed scenery) are at least possible to cross-pollinate with Cache's objectile territories from Chambers' orientalist encounters. As if, in the wake of Leibniz's own borrowings from China, it might be possible to reterritorialie a source of his interest in binary notation, to construct a sense in which all these ideas furnish a technical landscape and a plurality of territories or temporalities of the future. The furnishing of these technical landscapes comprises deep maps of relations between media and architecture, from the histories of geometries of the eye to the futures of the graphics processing unit; from the camera obscura to Cache's cinema of things (Figure 2).

The buildings of the Chinese:[...] there is a singularity in their manner, a justness of

their proportion, a simplicity, and sometimes even beauty, in their form, which recommend them to our notice. I look upon them as toys in architecture: and as toys are sometimes, on account of their oddity, prettiness or neatness of workmanship, admitted into the cabinet of curiosities. (Chambers 1757) (Figure 3)

[T]he whole ground is laid out in a variety of scenes, and you are led, by winding passages cut in the groves, to the different points of view, each of which is marked by a seat, a building, or some other object [...] They introduce into these scenes all kinds of extraordinary trees, plants, and flowers, from artificial and complicated ecchoes. (sic)

What Chambers observes, in the above two extracts from The Art of laying out Gardens amongst the Chinese (1757, 15), had already been theorized in China 1582, in the *Craft of Gardens* (Yuan Ye) Chapter 10 of Book three:

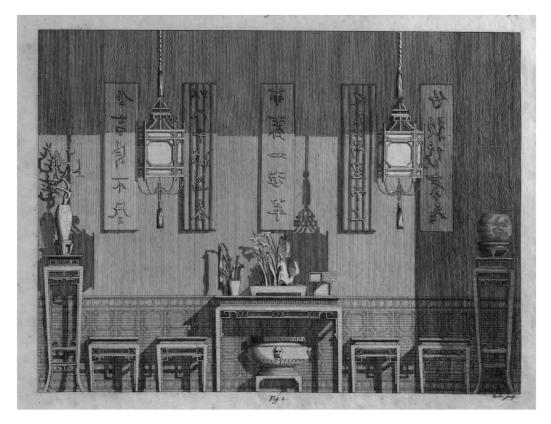


Figure 3. Sir William Chambers. Designs of Chinese Buildings, Furniture, Dresses, Machines, and Utensils. P.54.

Borrowed Scenery (Kuitert 2015). I suggest that there is just this kind of borrowing of landscapes at work in Cache's miniaturizing of Mont Blanc. I also observe that as a subject which was also of some interest to Viollet-le-Duc, this incorporation of Mont Blanc has a direct bearing on a possibly unconscious lineage of technical thinking for Cache's objectile project (Figure 4).

Cache's concern to incorporate Mont Blanc in miniature within an apartment overlooking it, mirrors, through my eyes, that of a panoramic reproduction of this mountain terrain in the interior of the Study at La Vedette, home of Viollet Le Duc in Lausanne. Viollet Le Duc's studies of the geologies of the habitat over several visits were grounded in his theory of the ordering of the earth's crust as 'entirely in accordance with the laws of geometry' (O'Carroll 2021). Whilst there is much more that could be said of this geometric ordering, Cache's furnishing of territories and Deleuze's own sketches of geological forces, in the present article of most interest are the theories of optics by Kepler. Specifically, the ways in which the geometries of optics of Kepler are informed by his observations on an experiment in Dresden in which a room within the Kunstkammer is turned into a camera obscura, and how the optics of the miniature and the panorama figure as the augmentation of realities for Cache and Viollet-le-Duc, respectively. This is to observe that these operate as a hinge to the relation of twenty-first-century spatial computation and the world-building principle of cabinets of curiosity such as that of the Kunstkammer.

Exhibit of camera obscura. Paintings which can be seen only with a ..., from one angle



Figure 4. Mont Blanc Seen from the Massif, Les Aiguilles Rouges Eugène-Emmanuel Viollet-le-Duc 1874.

presenting one picture, from another, quite a different one, like that of a certain Mons. a l'isle, v.d.-farms as at Versailles on the edge of a Canal. Public diversions (such as) pictures on oiled paper and burning lamps or lanterns. There could be figures who could walk, with a little illumination inside them, so as to show whatever might be printed on the paper. For magic lanterns, there would be not only simple objects painted on something transparent, but also detachable moving pictures of very unusual and grotesque objects, which it would be possible to make. Ballets of horses. Races round a ring and Turkish head. Artificial machines, such as I have seen in Germany. (Leibniz 1675)

## A pataphysical journey

Between the twinned, mirrored and miniaturized mountain figures of Cache and Viollet le Duc there also lurk the possible worlds of Leibniz and of Jarry, as well as those furnished arithmetical machines there are those furnished by the pataphysical machines of Faustroll to which we will turn next: amidst the devices of Lebiniz's exhibition of inventions, for example, in the extract of Leibniz closing the first part of this article, lie the lands of Jarry's fictionally furnished worlds of possible universes—those 'supplementary to this one' (Jarry 1996, 21).

In Cache's obsessions with wall-furnishings in *Earth Moves* (1995), we might also imagine design fictions such as those of the seventeenth century furnishing of *An Apartment with Only One Room by Cornelius Meijer* (Middleton 1983), or those of A Journey Around My Room (de Maistre 1794) or, as if the mountainous thickness of a library's bookcase, could be imagined to house Faustroll's equivalent books, the Livre Pairs (Fisher 2013) a set of books mentioned by Faustroll as paralleling the journeys Jarry has Faustroll undertake.

It is not too difficult to imagine on these shelves, a book describing the marvellous<sup>2</sup> devices of Leibniz amidst those works of Faustroll's Livres Pairs, amongst which list of remarkable scientific inventions would be, of course, Leibniz's own arithmetic engine, Desargue's work on geometry and so on. The list within the book by Leibniz is itself too long to provide in full here, but its intent will be familiar to speculative designers:

[I]t would open people's eyes, stimulate inventions, present beautiful sights, instruct people with an endless number of useful or ingenious novelties. All those who produce a new invention or ingenious design might come and find a medium for getting their inventions known, and obtain some profit

from that. It would be a general clearing house for all inventions, and would become a museum of everything that could be imagined. A Menagerie. Simple machines. Observatory. Anatomical theater. Museums of rarities. (Leibniz 1675)

One of Faustroll's journey's involves his own miniaturization and disappearance into other dimensions beyond optics—of the translation of three dimensions onto a plane-from the fourth dimension into the third; as if these were inhabitable by more than the imagination and extend from the pre-history of cinema and augmented realities into universes figured in Deleuze's analysis of the higher dimensional spaces of cinema:

There are crystallized spaces, when the landscapes become hallucinatory in a setting which now retains only crystalline seeds and crystallizable materials. (Deleuze 2000)

My drawing of lines between Deleuze on cinema and the literature on possible worlds is predicated upon the furnishing of higher dimensional spaces of fiction, which exceeds its literary bounds and keeps moving to traverse even disciplinary bounds and thereby contribute to design research and the designing of diegetic prototypes.

### **Pataphysics**

Pataphysics will examine the laws governing exceptions, and will explain the universe supplementary to this one; or, less ambitiously, will describe a universe which can be-and perhaps should be-envisaged in the place of the traditional one .... (Jarry 1995)

Pataphysically speaking then, we can talk of a supplementary universe furnished by Klee's Twittering Machine (1922) and by the machines of Heath Robinson and Rube Goldberg. I single these out for the ways in which they figure in the joint writings of Deleuze and Guattari. Klee's Twittering Machine is used as an epigraph in their work A Thousand Plateaus (1996), this machine seems to depict a piece of avian furniture or an imaginary design of a hybrid perch-bird device. The critical designer Anthony Dunne, in his book Hertzian Tales (1999), notes the device suspended in the imaginary space of the drawing, suggesting an artificial realm with its own pataphysical laws. The artificial realm of artist-inventors such as Klee and that of pataphysicians such as Faustroll, the inventor of the time machine to which I will shortly turn, is in contiguity with many others. Another such realm that I wish to include here is furnished by the contraptions of the eccentric English illustrator and inventor of imaginary machines, Heath Robinson. More specifically, these designed fictional machines are of a kind with those named after the similarly inclined American cartoonist and inventor, Rube Goldberg and it is a Rube Goldberg Machine which furnishes, also epigraphically, Deleuze & Guattari's Anti-Oedipus ((1977) 2000).

The Rube Machine is one of a number of machines listed in the citation within Anti-Oedipus, of an essay by Michel Carrougues, through which pataphysical ideas enter philosophical discourse. Carrouges's essay shows how bachelor machines (indeed all machines) are first of all pataphysical. From this, I infer dependencies upon scientific thought on the fourth dimension and its territorializing implication in the objectile concept (Hales 2015). I find it helpful to imagine such interdimensional designing to occur within the thickness of a primed canvas or subjectile, a technical term Cache used in further developing his objectile idea:

[...] when one primes the wall before painting it means preparing the subjectile. It is a technical term, mostly used in industrial painting.

However, the subjectile also refers to a redefinition of the subject. If one would consider the subject as a surface, then one precisely has the relationship between the specific technical meaning and the philosophical ... . (Cache 1999)



Figure 5. Aion: A pure becoming of proximate past and imminent future Je T'aime Je T'aime (1968). Alain Resnais. (Still 01:31:51).

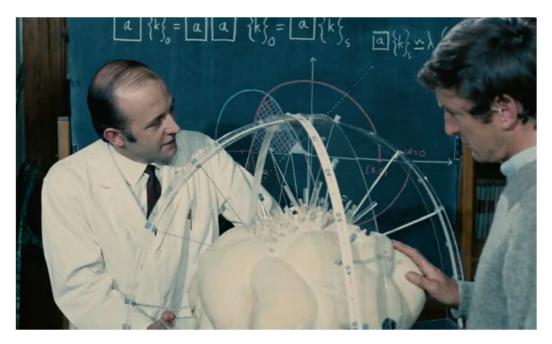


Figure 6. Deleuze's 'Hypersphere' and The Pataphysics of time. Je T'aime Je T'aime (1968). Alain Resnais. (Still 00:12:54).



Figure 7. Interfacing Subjectile and Objectule. Je T'aime Je T'aime (1968). Alain Resnais. (Still 00:18:11).

Deleuze, with Guattari, writes on pataphysical 'bachelor' machines, but provides little access to thoughts on design, perhaps leaving furniture design and architecture for Cache to develop independently. There is though, in their joint work, Anti-Oedipus an antipathy or even negativity of Deleuze & Guattari towards design as a discipline. They see designers making false claims about creating concepts. The only positive comment reserved for designers relates to those of the early twentieth-century psychiatric patient of the Rosegg Institution, Robert Gie, hospitalized due to hallucinatory disorders and '[a] very talented designer of paranoiac electrical machines'.

It is in such material-energetic systems that we might consider the machines, or the world, of Gie to comprise what Cache terms a 'cinema of things' (1995, 21) in which territories are surfaces, images mobile centres, and architecture the interlocking of frames and 'where characters are flattened as the same stories are told over and over and become interchangeable' (Cache 1995, 21).

I want now to turn to the 'topological spaces' of cinema through which dimensions of time travel are relayed by Deleuze. Deleuze and Cache share this concern with cinematic images, each depending on Bergson's model of memory in this, and as such can strongly be related to Jarry's Time Machine.

Whilst Deleuze does not make this observation in his writing on Jarry, an exemplary and pataphysical time-machine is diegetically prototyped for Resnais's (1968) film Je T'aime Ie T'aime and we can see this in Deleuze's work on Cinema:

It is in this sense that we can talk about Riemannian spaces in Bresson, in neo-realism, in the new wave and in the New York school, of quantum spaces in Robbe-Grillet, of probabilistic and topological spaces in Resnais [...]. (Deleuze 2000)

Resnais's time-travel film (Figures 5–8) is a collaboration with scenarist and science fiction theorist Jacques Sternberg. What is significant in this, is that Sternberg's sense of science fictional is in direct relation to the pataphysical.



**Figure 8.** Equivalent apparatus of Cyberneticians and Pataphysicians *Je T'aime Je T'aime* (1968). Alain Resnais. (Still 00:41:29).

This is imaged in Sternberg's extraordinary scenography for the film in which a variety of cybernetic equipment and domestic furniture figure the passage of time as it is rendered in loops, grafts and splices in a time-travelling cabinet vehicle described by Deleuze as a hypersphere, a 4-dimensional Euclidean space.

Deleuze contrasts Chronos, the time of experience, with Aion, the paradoxical time of the combination of all pasts and futures. It is through such paradoxes as that of Aion, and that of nonsense and sense being co-present, through Aion's precursory and premonitory anachronism, in micro-movements of pasts and futures, that Resnais constructs this pure becoming of proximate past and imminent future through furnishings and postures to reveal passage or flow of time-travel. This is diagrammed through two pairs of horizontally linked frames in the chalk drawings (Figure 5)—perhaps one catastrophic the other anastrophic with the pataphysician advising on the science of time travel in the future coming together in the present.

In Figure 6, a diegetic prototype of a hypersphere furnishes the territory of scientific research. The paraphernalia of storage, piles of paper, and shelving with books are off-camera and out of frame. The prototype is framed by a chalkboard. Systems of measurement and calibration furnish the model in doing so confirming its performative status as test site or subject. Formulae of a working hypothesis on time travel are inscribed on the chalkboard, beneath which diagrammatic displacement of the hypersphere is illustrated, this explanation extends the diegesis through the science of imaginary solutions.

The time machine control room depicted in Figure 7 provides prototypes of electronics interfacing with the opaque hyper-sphere of the time-travel cockpit. The terms subjectile and objectile are interfaced between probabilistic and topological spaces. This interfacing is of the same order as those characterized by complex networks of cables that penetrate the figures, crossing through them and extending

into others-protocols and the pataphysics of industrial patents.

pataphysician finds equivalencies The between furniture, apparatus and equipment. The cybernetic form of modulatory control is helpful here at least in clarifying the objectiles's mediality. However, the nature of its modulatory power is not limited to the extent to which objects (and it follows, subjects too) are no longer designed but calculated as Deleuze suggests and as seems to be the case for the operatives using the numerical control functions of next-generation machines depicted in Figure 8. Subjectile-objectile relations are evident here in the field of operator readouts, operator chairs and the modulatory operation of control rooms and control surfaces. This eccentric cybernetics is that of anti-oedipus where everything in the world is a factory of regulative fictions and numerical control functions through a cybernetic generation's machines and one of the fourth dimensions.

## How to pursue the objectile by design fictional means

The above article claims objectile concepts for the philosophy of design fiction and suggests two exemplars for further topological analysis, the prototype of a scale-shifting device involving toy universes and the prototype of a time-shifting hypersphere itself—the designs for which, one in an imagined Montreaux apartment overlooking a mountain from the point of view of its miniature, and another within a cavernous interior set for Resnais' film should be seen as an exemplar diegetic prototype of the 4th dimension worthy of study by design fictionalists as well as pataphysicians. I will end by returning to the inversion of Cache's pursuit of philosophy by architectural means by posing, without any intention to answer, the following question: How do you pursue the objectile by design fictional means? Behind such a question lurk the refurnishing of territories with conceptual devices, abstract shifts in scale and time where the pataphysician's time-travel machines and objectile concepts of the baroque house furnish the territories of the best of toy universes. Is this the one with an imaginary Montreaux apartment, housing a fictional mountain-table and its borrowed scenery, and an interior furnished by a hypersphere? It seems to me to be more than a coincidence, what pataphysicians might name a syzygy, that Gie's drawings of influencing machines, now form part of the Collection de l'Art Brut, Lausanne. It has always been clear that these drawings resemble designing bodies inextricably connected to energetic, temporal and material systems, and that these sometimes figure in drawings of designs involving the instrumentation and cabinetry housings of machines. I have never visited the museum to view the collection but when I do I hope to view them from a room overlooking Lac Leman and to view on the horizon a distant Mont Blanc.

#### Notes

- 1. There are 27 books listed in Exploits and Opinions of Dr Faustroll, Pataphysician (Jarry 1996, 10) including a translation of Baudelaire by Poe, books by Bergerac, Coleridge, Lautreamont, Peladan, Homer, Rabelais,
- 2. I use the term marvellous here in the medieval sense in relation to mechanical arts of wonder.

#### **Disclosure statement**

No potential conflict of interest was reported by the author(s).

#### Notes on contributor

Derek Hales is a Research Fellow in Transdisciplinary Practice with The New Centre for Research & Practice, and a researcher with MediacityUK Innovation Accelerator & DevLab in Immersive Technologies. He contributes to the fields of philosophy, architectural practice, construction

innovation and futures studies, and was the guest editor of the Special Issue of Digital Creativity Journal on Design Fictions (2013) and the Special Section of Digital Creativity Journal on Speculative Hardware (2015). A registered architect with a background in innovation, literature and abstract culture, Derek's research prototypes technical and philosophical virtual worlds by colliding the sciences of the artificial with the science of imaginary solutions. Derek undertakes philosophical R&D in strategic foresight, horizon scanning, scenario development, and speculative design with a particular focus on the emerging technologies and future practices of split-sites and reflexive architectures. His research and development practice has been supported by various Innovation and R&D funds including the EU Framework Programme, the Engineering & Physical Science Research Council, the Art & Humanities Research Council, Arts Council England, TechUK, InnovateUK and the Royal Institute of British Architects.

#### **ORCID**

Derek Hales http://orcid.org/0000-0002-0635-

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