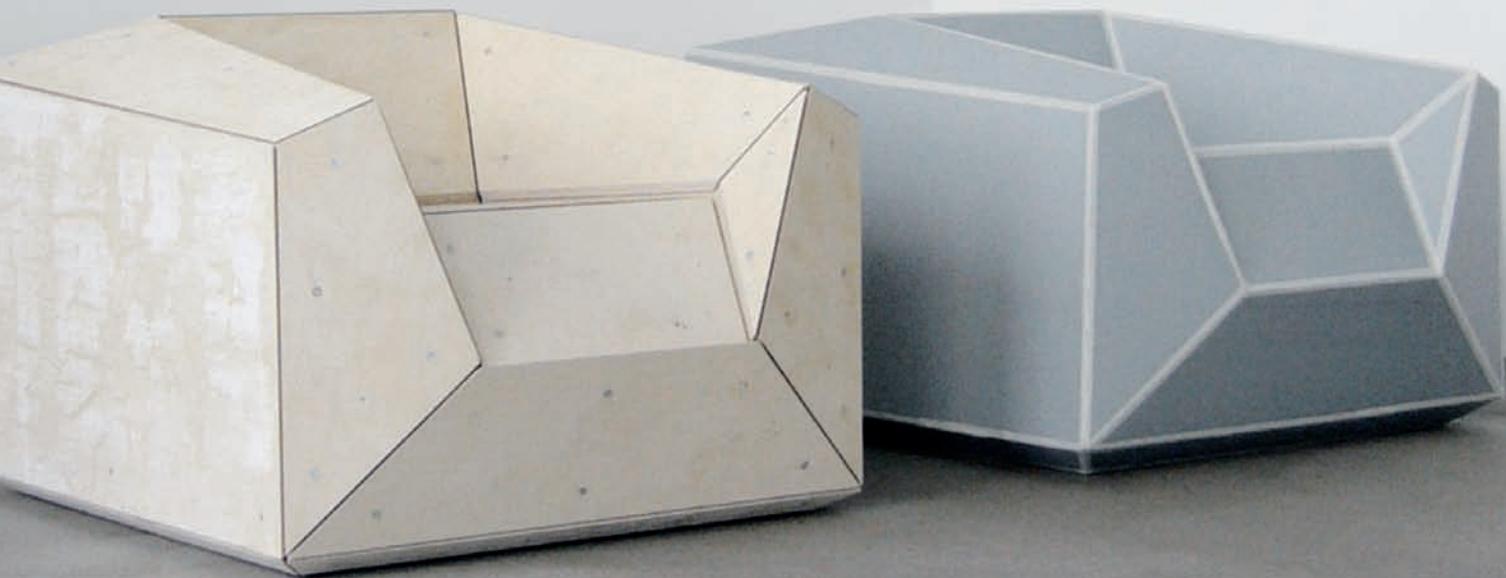


BIRKHAUSER

# THOMAS FEICHTNER EDGE TO EDGE

Experimental Design  
*Experimentelle Gestaltung*



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Applied Arts | Contemporary Art

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Experimental Design  
*Experimentelle Gestaltung*

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## EXPERIMENTS IN DESIGN

In the past several years of design, few terms have been used as often as “experiment.” To me, however, it seems that there’s hardly any design that is not somehow experimental. Students, especially, frequently use the term, since the word “experiment” suggests a moment of failure, but of course also occasionally a moment of success. It thus contains both positive and negative connotations. I’d like to express straight away that Thomas Feichtner is one of the very few current designers for whose work the word “experiment” can rightly be used, with surprisingly many positive – i.e. successful – examples. I’d like to take this as an opportunity to explore the notion of “experiment” more closely.

From design’s history, we know that Leonardo da Vinci<sup>1</sup> (1452–1519) was the very first designer. He conducted countless scientific studies (experiments), in disciplines including anatomy, optics or mechanics, but he also designed and created numerous objects. For him, knowledge was based on visual perception and mental recognition: he developed, for his time, a kind of coherent synthesis between the arts and sciences. Leonardo designed individual constructions, urban planning concepts, palaces, gardens, and much more. He also invented many technological products, such as engines or parachutes, and developed such transport systems as cranes, bicycle-like vehicles, military equipment, etc.

Leonardo can be attributed with innumerable successes, but, like all creative innovators, not all of his experiments were spot on: the results of his research on human anatomy, for example, were recently revealed as astonishingly erroneous: “As a sex researcher he was a failure. Leonardo drew people having sexual intercourse,

but his images were full of errors: in one, there is a canal that leads from the uterus to the breast and supplied it with milk.”<sup>2</sup> Such notions do not really represent a break in his design-related complete works, however, as is impressively obvious in Milan’s Museo Nazionale della Scienza e della Tecnologia (National Museum of Science and Technology). Here replicas of the models that make Leonardo’s work so vivid are exhibited next to his drawings. He did not differentiate between the “low” and the “fine” arts, thus his importance as a truly universal artist. And whether he created artwork (his paintings, for example), or developed musical instruments, he was always concerned with making the invisible (the works) visible, therefore also revealing an interaction between mind and hand. Thus seen, Leonardo is still “modern” in the best sense of the word.

Martin Kemp<sup>3</sup> describes this modernism very clearly in his biography on Leonardo: “In some respects the modern Leonardo is a product of concrete evidence from the likes of Vasari. Yet, he is ‘modern’ in a time-specific sense. His science and technology, especially, were part of a meshwork of assumptions that drove the modern age. He became a ‘man ahead of his time’, a pioneer of flying, the horseless carriage, the submarine, the bicycle, the weapon of mass destruction, fluid dynamics and no doubt, somewhere, even the refrigerator.”

Leonardo was also one of the new era’s first major experimenters, as Kemp asserts.<sup>4</sup> “Knowledge was worthless if it didn’t derive from ‘experience’.” Leonardo therefore placed great value on experiments even if they were not in the systematic sense of modern ‘experimental sciences.’ He was just as happy with ‘proving’ by observing phenomena in

their natural conditions, as he was with the results of thought experiments and controlled tests, which followed a definite, predetermined test method. Sometimes, when he actually conducted a test that he’d planned in advance, he wrote ‘experimentata’ next to the drawing in question to indicate that the observed result made sense.”

Shortly before World War II (in 1939) a major Leonardo exhibition was on display in Milan. This, however, was quickly closed due to the political conflict that was just beginning to erupt (Italy joined the war on Germany’s side). The reconstructed machines on display, the models created according to Leonardo’s drawings, as well as thousands of photographic reconstructions, were separated and drifted to various locations around the world. The only thing that remained was a weighty documentation of the exhibition,<sup>5</sup> which can serve as a source to explore Leonardo’s notion of the experiment in detail.

Born on April 15, 1452, in the Tuscan village of Vinci and officially listed as Lionardo, da Vinci became a model of the modern age through his universality. He was not only an ingenious engineer but also a brilliant draftsman, painter, master builder, military architect and weapons engineer – as well as an exceptionally gifted instructor. In this area, a significant aspect is that he was always concerned with highly exact statements. Thus, he explored, for example, the relational dimensions of the human body on himself: “He began with the measurement of the lips, which corresponded to the 12th part of the size of the face but also the 14th part of the length of the head and the 112th part of the length of the body, which equals, in the decimal system, a medium build of 1.69 meters.”<sup>6</sup> Leonardo

was a scientist and artist in one person, and he graciously succeeded in uniting these two, namely on the one hand to augment knowledge and learning and on the other to find new creative forms of expression.

Leonardo’s scientific explorations addressed questions of mathematics, astronomy, physics, philology, music (creating and building instruments), architecture, construction, weaponry and much more. Especially notable is his attitude that “nothing is certain, except when one can utilize one of the mathematical sciences”.<sup>7</sup> But he was not dogmatic: “while Galilei is so logical that he at times becomes pedantic, Leonardo sees and observes without agonizing over theories too much. He also very often determines facts without even attempting to find an explanation (that is one of his merits: if you can’t come up with a good theory, it’s better to leave it well enough alone)”.<sup>8</sup> Thus, completely incidentally – although this is not at all questioned here – this principle can be used for any number of design-theoretical efforts.

In his role as an architect, Leonardo was always concerned with creating a connection between research and experiment, so that his scientific approach could be designated as empirical: “thus, for example, he incorporated statics into his studies of curves and arches, geometry into the symmetrical development of proportional masses, and physiology to the sensible and ethnical design of urban planning and street construction”.<sup>9</sup> Looking at this approach from another perspective, Leonardo was concerned with “hypotheses”, for example which curved shapes could be built and how, and then was concerned with an empirical examination of these hypotheses.

<sup>1</sup> Bürdek, Bernhard E.: *Design. Geschichte, Theorie und Praxis der Produktgestaltung*. Cologne 1991, p. 15

<sup>2</sup> “Rätselhafter Sex”, in: *Der Spiegel*, No. 9, 21. February 2009, p. 50

<sup>3</sup> Kemp, Martin: *Leonardo*. Munich 2005, p. 280

<sup>4</sup> *ibid.*, p. 70

<sup>5</sup> *Leonardo da Vinci. Das Lebensbild eines Genies*. Wiesbaden–Berlin 1972 (6th edition)

<sup>6</sup> *ibid.*, p. 11

<sup>7</sup> *ibid.*, p. 201

<sup>8</sup> *ibid.*, p. 209

<sup>9</sup> *ibid.*, p. 240

10 Franck, Georg: *Ökonomie der Aufmerksamkeit*. Vienna 1998, p. 71

11 see also: Bürdek, Bernhard E.: *Vom Mythos des Funktionalismus*. Brakel 1997 (FSB – Franz Schneider Brakel); or also: Dorschel, Andreas: *Gestaltung – Zur Ästhetik des Brauchbaren*. Heidelberg 2003 (2nd edition)

12 Bürdek, Bernhard E.: *Design. Geschichte, Theorie und Praxis der Produktgestaltung*. Basel 2005 (3rd expanded edition), p. 17

13 Leonardo da Vinci, *ibid.*, p. 249

14 *ibid.*, p. 483

15 Rheinberger, Hans-Jörg: *Experiment, Differenz, Schrift – Zur Geschichte epistemischer Dinge*. Marburg 1992

At this point we could make a reference to the “experimental design” in which, in many cases, no hypotheses are recognizable at all, let alone those we could speak of as a scientific empirical examination. To express it somewhat ironically, this examination consists of whether interested people can be found at endless design exhibitions (in galleries, at fairs or design events) who pick up ideas and then perhaps follow up on them. But even in the environment of international furniture fairs in Cologne or Milan, young designers stick simply to attracting attention. The fact that this is important in the medial age may remain uncontested, and an entire theoretical school has emerged that follows this phenomenon: “Without advertising, PR, cultivating an image and product design, the economy would stand still. Just look around: Our entire world is mutating into an advertising carrier. Wherever we go, wherever we are, we encounter things whose entire purpose is to tug on our shirtsleeves and say: look over here!”<sup>10</sup>

But back to Leonardo. In his work, we can very clearly see that he understands himself within an historical continuity, for example in that of the legendary Roman master builder Marcus Vitruvius Pollio, otherwise known as Vitruvius.<sup>11</sup> With his *Ten Books on Architecture*, Vitruvius laid the foundation of creation and construction that could also be considered the basis for design. In the third chapter of his first book, Vitruvius states that all constructions must fulfil three categories: fixedness (*firmitas*), usefulness (*utilitas*) and beauty (*venustas*). Incidentally, he did not speak of art – a debate that currently occurs so inflationarily in design – but rather essentially created the fundamentals for a notion of functionalism. This actually only had an effect in the 20th century and determined the modern era in design.<sup>12</sup>

Leonardo very carefully and thoroughly studied the logs of Vitruvius and implemented his statements on the proportions of the human body and also the Attic (Athens-based) building accounts.<sup>13</sup> Leonardo was generally very keen to adopt design fundamentals and continue to develop them; he was thus very aware of his position in history. This, too, is a moment that utterly departs from “experimental design.”

And to speak – for the last time – of Leonardo, since he is often designated as the forefather of today’s design, in the sense of an inventive draftsman, we should again illuminate the connections in his work: “Thus, for Leonardo, theory is a sure path toward practice. It has to show the inventor and technician the methodical way: it must be the certain guide into the zone of experience ...; otherwise this inventor or technician would be incongruous to the experimental activity of Leonardo, who soon calls himself ‘the man without science,’ ‘the son and pupil of experiment.’”<sup>14</sup>

At this juncture, it would of course be interesting to more deeply explore the development of the term “experiment” through the following centuries. And although I must refrain from doing so here (not least because of this essay’s length) here are a couple of thoughts on the current debate as it is conducted by scholars like Hans-Jörg Rheinberger.<sup>15</sup> He is considered one of the most important representatives of scientific history and has explicitly delved into the history of experiments. He represents a discrete role of the experiment as a “method of creating knowledge.” In contrast to earlier concepts – as they became visible also with Leonardo da Vinci, who saw the experiment as a confirmation of a theory – he pleads for the

experiment’s independence. Rheinberger is not only concerned with the exact mathematical calculability of hypotheses, but also stresses the equal importance of experiments’ social and material conditions. Today, experimental sciences represent the apex of natural-science research. We will henceforth explore whether the term “experiment” is also meaningful in design.

Here we need to have a look at how the term “experiment” is understood in the creative, artistic disciplines. In contrast to the natural science approaches, the term indicates pushing the boundaries of traditional design methods. It is thus not a defined definition of a project (for example through a corporate brief), but more an independent search, liberated from any clients.

After this somewhat long preface, which seems important in this context, we now move on to the work of Thomas Feichtner – and his experiments. Feichtner can look back on an extremely successful practice as an industrial designer, which the examples in this catalog vividly illustrate. He began to work on new ideas in the early 2000s. He was certainly not tired of his commercial work, but rather saw it, for himself, as a one-way street – there must be more to life and work than the millionth variation on a ski binding. Because he lacked a workshop, he began to leave his former industrial canon behind with the simplest of materials (cardboard, T-square and cutting knife). He defined for himself an approach that was oriented on the elementary themes of points and lines, and the surfaces that result from them.

Feichtner very quickly moved from scaled creations to 1:1 models, still realized with simple materials that allowed verification of his design decisions. What is especially

interesting in this approach is that he does not develop the models to a plan, but the other way around: the plan is developed from the model. In his designs, the form-related decisions always, consistently come before the functional. This is unusual in the classic ideal of industrial design, which was widely influenced by the credo of “form follows function.” Yet in its practical ramifications, it leads to a signature style that truly impresses me.

Feichtner doesn’t work with polygonal surfaces, but rather with the transitions between the two- and three-dimensional. The folded surfaces become angular, constructive objects with a high degree of creative weight – we could even speak of “stubborn design” in the best sense of the word.

Feichtner also explores categories beyond his numerous chairs and other seating furniture. His cutlery set *Cutt*, for example, emerged from the same constructive-artistic philosophy. The folded surfaces transfer very well – and very surprisingly – to a subject area whose supposed ergonomics determined their design credo over a long period of time. From a manually produced unique object (parts bent by hand), it quickly became a limited-lot production, and the required tooling costs for this remain truly moderate.

On the topic of ergonomics, the door handle 5930 (manufactured by the legendary handle company FSB – Franz Schneider Brakel) consciously nods to the tradition of experimental design, as FSB practiced it since the beginning of the 1980s, initiated by Jürgen W. Braun, the grand mentor of design. Fitting door handles to the human hand is a phenomenon that runs through 20th-century design history as it was so descriptively documented

16 Gronert, Siegfried: *Türdrücker der Moderne. Eine Designgeschichte*. Brakel 1991 (FSB – Franz Schneider Brakel)

17 Fischer, Volker (ed.): *Design heute. Maßstäbe: Formgebung zwischen Industrie und Kunst-Stück*. Munich 1988, p. 207f

18 Hochleitner, Martin / Hofer, Gabriele (ed.): *Der Fall Forum Design. Index zu einem Kulturprojekt*. Exhibition catalogue, Landesgalerie Linz am Oberösterreichischen Landesmuseum. Linz 2009

19 Bürdek, Bernhard E.: “Zur Methodologie an der HfG Ulm und deren Folgen”, in: ulmer museum / hfg archiv (ed.): *ulmer modelle – modelle nach ulm*. Hochschule für Gestaltung Ulm 1953–1968. Ostfildern–Ruit 2003

20 Bürdek, Bernhard E.: “hfg ulm – ein erster Rückblick. Von Ulm über Kassel nach Offenbach” in: *hfg ulm. Die Abteilung Produktgestaltung. 39 Rückblicke*, edited by Karl-Achim Czemper. Dortmund 2008

by Siegfried Gronert.<sup>16</sup> Door handles should therefore always be tactile, which is certainly sensible with a tool used so often and over such a long time. But door handles (or simply handles) are used for an extremely short time – open the door, close the door, and that’s it. Feichtner’s handle is therefore not at all an homage to all of the allegedly ergonomic principles, but rather an additional statement relating to his folded surfaces. Form doesn’t really have to follow function. It works the other way around as well.

Feichtner’s teapot design (2008) is similar. One might ostensibly understand it directly in the tradition of moderns that began in Vienna at the beginning of the 20th century. But the design doesn’t exactly represent another example of the zeitgeist-based retro aesthetic that is flooding today’s product market. It is rather the result of an approach that marks Feichtner’s work in general: The folded surfaces mutate into an object possessing a very special design quality: the product’s visual language continues the tradition of the early moderns. It’s no wonder that the Wiener Silber Manufactur manufactures this product. Feichtner’s teapot is now placed next to the designs of Josef Hoffmann and Otto Prutscher. On the one hand, the object conceptually perfectly connects to the Viennese Moderns. But on the other, it establishes a new design line that could be definitive for the 21st century.

Besides these “micro architectures,” as Volker Fischer<sup>17</sup> once called them – meaning accessories whose design dynamic and appearance primarily emerges from architectural thinking – Feichtner also pushes other boundaries, namely that of architecture, in his designs. Maya’s Bed (250 x 250 x 200 cm) for example, is an oversize sculpture whose practical

function is unmistakable. Here we again find the folded surfaces, this time executed in large dimensions, creating a place to sleep with a high degree of symbolic meaning. The “traditional canopy bed” of rulers and monarchy, nowadays on offer in big-box furniture stores on the periphery of every large city (design kitsch says hello) gets a brand-new dimension in Feichtner’s design. One meter high, it offers a kind of generous active and passive surface I’ve never seen before.

On the occasion of Linz, Austria, being European Capital of Culture in 2009, Simone and Thomas Feichtner presented Maya’s Bed as part of the “Pixel Hotel”. Rededicated as a hotel room, Galerie Simone Feichtner became the bed’s showroom. With an anteroom (equipped with Feichtner’s FX10 Lounge Chair and some of his pictures), a bathroom unit and a back room as “bedroom,” the entire ensemble represented an impressive Gesamtkunstwerk that was convincing through its usability. Unfortunately I was only able to view the “Pixel Hotel” in October 2009, but not to sleep overnight in the bed. The mystical overall impression was extremely impressive, in any case.

On the occasion of the exhibition opening for *Der Fall Forum Design Linz*,<sup>18</sup> Feichtner presented his project Linz Hocker (Linz Stool) on October 14, 2009. Here, too, he exemplifies the application and execution of folded surfaces. Made of synthetic material (former beverage crates) processed multiple times by a local synthetics recycler, the Linz Stool could absolutely become a 21st-century icon. In its formal and functional rigor – equipped with three legs, this stool can never wobble – Feichtner perfectly represents the notion of sustainability. He exhibited the current prototype of the stool, which is

stackable and easy to carry via a hole in a seat (through which water can also run, making it suitable for outdoor use). Vitra distributes the product, which bestows an additional honor on its creator. Beyond its practical function, the stool serves as a symbol of Linz’s status as capital of culture in 2009.

This of course reminds me of the legendary Ulmer Hocker (Ulm Stool). More than 50 years ago, a multifunctional stool was developed in the workshops of the then newly opened School of Design in Ulm. Designed by the then-lecturers Max Bill and Hans Gugelot and realized by the wood shop’s director Paul Hildiger, it was a product that was considered a seat, lectern and object to transport books. The first two functions are very familiar but the last I truly don’t remember from the wild years of the 1968 era, when I studied at the School. Nevertheless, the Ulm Stool belongs to the identity of a legendary institution that significantly determined 20th century design.

Feichtner’s Linz Stool is thus a contemporary design answer to a product that has a long tradition and is somehow still necessary. Whether the steel tube stool by Marcel Breuer from the Bauhaus era or the replicas of the Ulm Stool through the Italian firm Zanotta and their integration into Marlboro shop in 1992, the Linz Stool connects to a long tradition of design history. Its color alone concerns me somewhat. This deep, dark grey is a little too strong for me, personally. This color is the natural result of the recycling process and the produced stools vary slightly in their hues. Although I admit I was socialized through the “Ulm grey”<sup>20</sup>, the color’s effect seems, altogether, too “ecological”, and it reminds me too much of the Linz region’s tradition of iron and steel working. Today,

Linz is no longer so desolate. The Upper Austrian Baroque tradition exudes plenty of optimism and lust for life. It would not necessarily have to be the poppy colours selected by Tobias Rehberger for his cafeteria at the 2009 Venice Biennale (for which he had Ikea stools painted), but such a light and fresh color spectrum would very much suit the Linz Stools.

Another aspect also seems worth mentioning: With all of his self-appointed project definition (also called “author design”) Feichtner manages to bring the relevant local industries aboard, thereby generating new added value for these enterprises. This aspect is not at all regarded in today’s design experiments. As mentioned above, experiments must always contain hypotheses, and thereafter, their methodical verifications. For me, Feichtner is one of the very few designers that have at all earned the label of “experimental designer”. Illustrating this here seems to me especially necessary because the term “experiment” has truly degenerated in general language use of and about design. This phenomenon is, by the way, heavily promoted by the media, but that would be another topic.

#### Bernhard E. Bürdek

Born in 1947, Prof. Bernhard E. Bürdek was one of the last graduates of the Ulm School of Design. He has worked as a designer, instructor, author and consultant since 1971. He is a professor at the Hochschule für Gestaltung (School of Design) in Offenbach a. M., where he teaches design theory, design methodology and strategic design in the area of product design. He has been a guest lecturer in Brazil, Mexico, Romania and Taiwan.

He is the author of numerous publications, consultant for *form* magazine (Basel), author of *designreport* (Stuttgart), correspondent of *Experimenta – Revista par la cultura del proyecto* (Madrid) as well as member of the scientific board of *i-com – Magazin für interaktive und kooperative Medien* (Munich). His book *Design. Geschichte, Theorie und Praxis der Produktgestaltung* (Design. History, Theory and Practice of Product Design), first published in 1991, has become a seminal work in the design field. A revised and expanded edition appeared in 2005 (Birkhäuser Verlag Basel) in German and English; in 2006 in Portuguese (São Paulo), in 2007 in Chinese (Beijing), in 2008 in Italian (Rome); translations into Japanese and Korean are currently underway.

In 1990 he was a co-founder of the design office Vision & Gestalt (Obertshausen/Frankfurt a. M.), where projects are executed for national and international clients in the areas of design and communication.