The Making of Design

Gerrit Terstiege (Ed.)

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From the First Model
to the Final Product

Models with a Cause

If shape is the opposite of "matter", then there is no design that can be called "material": It is always informative. And if shape is the "how" of matter, and "matter" the "what" of shape, then design is one of the methods of giving matter shape and making it look thus, and not different.
Vilém Flusser, "Form und Material", Vienna, 1991

⎯⎯⎯⎯The look behind the scenes, which we are daring to take here, illustrates the erroneous, errant and roundabout paths designers took before coming up with shapes that subsequently seem to be so obvious and self-evident. When presented, perfectly lit and brand new in showrooms, displays, and shelves there is not a single trace of the effort that went into their creation. However, any designer familiar with the doubts, and setbacks that go with any creative process, will very much appreciate the work of their colleagues who, on the following pages, grant an insight into their projects. Design, as becomes clear in every single one of these process reports, is concerned with details, proportions and perforations, combining materials and subtle finishes. Methods and strategies can accompany and steer this process, but no more – they cannot necessarily make it any faster. Perhaps it is comforting for some of them to see that even such experienced designers as Ronan and Erwan Bouroullec had to conduct numerous studies before coming up with the ultimate shape of the Vegetal Chair: a whole four years of development were needed before they and their partners at Vitra were convinced by the result. The magazine form was the very first publication to feature the Vegetal Chair's design process. The same applies to many other products, i.e. Konstantin Grcic's cantilever chair MYTO, which was included in the MoMA design collection practically straight from the factory.
⎯⎯⎯⎯ In the sense of Flusser, the material in this book, its form and its content, is intended to be informative: after all, it collates a selection of the

best design process reports, which have been a firm feature of the magazine form since 2006. It is not without reason that the claim of the magazine has been chosen as the title of this compendium: The Making of Design. Without the protagonists being prepared to open up, to expose design steps, it would have been inconceivable. Of course the extent to which alterations to a model might be staged as "nice mistakes", while much from the bumpy initial phase of a project is kept quiet about, cannot always be checked. But that is, as it were, in the nature of things. Nowadays, in the movie industry, "making of" features, in other words commentaries by actors and directors together with outtakes, stunts and dialogs gone wrong are now part and parcel of the marketing chain of major Hollywood productions. With regards to design, a background report of this nature can be hampered or even prevented by several factors: The client company can oppose the publication of sensitive information, the designer might not have had any decent photos made during the design process, models and sketches were not archived and simply thrown away …

_____ Without doubt, also the journalistic preparation of design studies using photos, drawings, renderings and prototypes is a process that can also go wrong. That this was not so in the case of these essays I would like to thank the renowned authors such as Andrea Eschbach, Karianne Fogelberg, Kristina Raderschad and Oliver Herwig, my colleagues Katharina Altemeier, Karen Bofinger, as well as Markus Zehentbauer, who, as our Chief Text Editor, edited a great number of these essays. My thanks also go to Silja van der Does, who as Art Director of form was not only responsible for the layout of many features in the magazine, but also came up with the design of the book. My great thanks go to all of them – and of course not least to the designers and photographers who were willing to take us on the at times adventurous journey from the first model to the final product.

_____ Gerrit Terstiege

Dieter Rams: "The Design Process Still had no Form"

The long-standing chief designer at Braun, Dieter Rams, talks about the development of the Kronberg-based company's design processes. The interview was conducted by Gerrit Terstiege in February 2009.

Terstiege Since 2006, form magazine has reported in detail on the development of the design of current products – and it is hard to conceive of such processes today without thinking of computers. Looking back, do you regret working as a designer at a time when computers did not have the possibilities they offer today?

Rams ⎯ Yes and no. Of course, computers make working as a team in a network far easier these days. Yet on the other hand people often get up to a lot of mischief with computer renderings and they sugarcoat problematic areas wonderfully. I have always loathed renderings and regularly fought against them. My drawings and sketches were generally intuitively to scale and, even if they were really abstract, the team of model builders was able to make them without any problem. Although they were less set-in-stone, less precise, they showed exactly what I wanted. I worked a great deal with sketches.

Terstiege How did you actually find your own particular drawing style, characterized by a great simplicity?

Rams I had a good drawing teacher at my school, the Werkkunstschule in Wiesbaden, his name was Mr. Rotfuchs. He taught illustration, and we aspiring architects regularly had to practice figurative drawing. When I started cross-hatching, as everyone does when they try out freehand drawing for the first time, Mr. Rotfuchs said to me: "Forget that nonsense, you just need to make the line a bit thicker, you can achieve spatiality that way, too!" Essentially my mode of representation culminates in as simple a line drawing as possible.

Terstiege New products are generally created in and by a team; at the end of the day design and technology must go hand in hand. How was the development process at Braun structured under your direction? How did you proceed when you had to find a new form for a particular device?

Rams When I think back to my early years at Braun, in the mid-1950s, I remember lots of problems resulting from insufficient cooperation between designers and engineers. Back then, we first had to explore and develop the types and means of cooperation.

Terstiege Can you give me an example?

Dieter Rams, born in 1932 in Wiesbaden, was chief designer at Braun from 1961 until 1995. His multi-award-winning designs have influenced generations of designers and been the subject of international exhibitions and publications. He lives in Kronberg near Frankfurt, Germany.

Rams ___ For example when Hans Gugelot from the Hochschule für Gestaltung Ulm was at the Braun plant in Frankfurt, he spoke to brothers Erwin and Arthur Braun, the company owners, and Dr. Eichler, who was responsible for the company's design-strategic orientation. Thus Hans Gugelot discussed issues on a level which had nothing to do with the technical side of product development. This could only work as long as all that was required was pure redesign: giving existing technology a makeover. And as we all know, that was not what Gugelot had in mind. He wanted to beat a completely new path. He was not happy that the exterior of these first devices he repackaged promised more than the interior delivered. This deficit had to be corrected. Erwin Braun quickly realized that design at Braun had to take place in house.

Terstiege That must have been a decisive point for you, 1955, since Braun originally hired you as an

Editor Gerrit Terstiege, who first interviewed Rams in 1997 while still studying design, in the studio of Rams' house.

architect and interior designer not a product designer.

Rams ___ That's right. It soon came about that one of my tasks in the design department was to harmonize the relationship between the designers and engineers, to build trust. To an extent, the design process still had no form then. For example, there was no briefing. Later we formed teams, consisting of designers, marketing people and engineers, who worked together on a product right from the start. Overall conditions like these have a tremendous effect on the design process. The design projects then followed the tasks set by the relevant business areas, i.e., hi-fi, body care, healthcare etc. There was a business director, who was on equal footing with the technical director and design director. I was the only one, thank God, who reported directly to the CEO. That helped a great deal. My successor's situation was different, by the way.

Terstiege When did these structures really establish themselves at Braun?

Rams ___ That was in the course of the 1970s. It was necessary, owing to continually increasing sales, to design for international markets and also to always work on a number of different projects simultaneously. You could say that what we now call globalization started very early at Braun. Also with the help of Gillette AG, which had taken over Braun in 1967.

Terstiege Is there a product that proved to be a particular headache for you in organizing its development?

Rams Yes, that would have to be the Atelier system, which would become the "last edition", and which heralded the end of the hi-fi era at Braun. I visited our engineers in Japan several times, because a number of Japanese companies fitted the Atelier components with the corresponding electronic internals. The tuner came from one company, the amplifier from another, the technology for the record player from yet another. Fortunately they were all based in Tokyo, but I couldn´t see everything fitting together at the end. Some of the Japanese firms, in turn, had part produced in Singapore, which didn´t make things easier. But in the end it all came together.

Dieter Rams and Terstiege in conversation. The stereo, the table and the table lamp shown here were designed or at least co-designed by Rams. This also holds true for many of the objects in his house.

Terstiege And in the mid-1950s, when Braun design was taking shape, were there no structures or guidelines for the design process?

Rams Back then there was quite simply no definable design process. A great deal was created based on emotion, the result of certain facts, including a consideration of what was actually possible in terms of production etc. An idea came from here, and one from there. Personally I always acknowledged the value of technical innovations suggested by my team.

Terstiege The word emotion is surprising in this context. So how is it the decision came to be made in the early 1960s to create such a complex and costly device as the T1000 multi-band radio? I bet that wasn't based on a gut feeling?

Rams On the one hand the first small portable radios very quickly faced competition: the Japanese rapidly adapted the transistor technology and then launched similar-sized radios onto the market at half the price. We couldn´t beat that. Yet on the other hand the transistor technology offered possibilities we wanted to make use of. So we decided to make a multi-band radio with a build quality and features that could not be copied so easily. Considerations such as these definitely played a role, but the strategies of marketing teams didn´t. Incidentally, when marketing started to rule the roost at Olivetti in the late 1970s, Ettore Sottsass quit the company and turned his attention to creating free designs and experiments. And that then led to the foundation of Memphis. However, this step was easier for
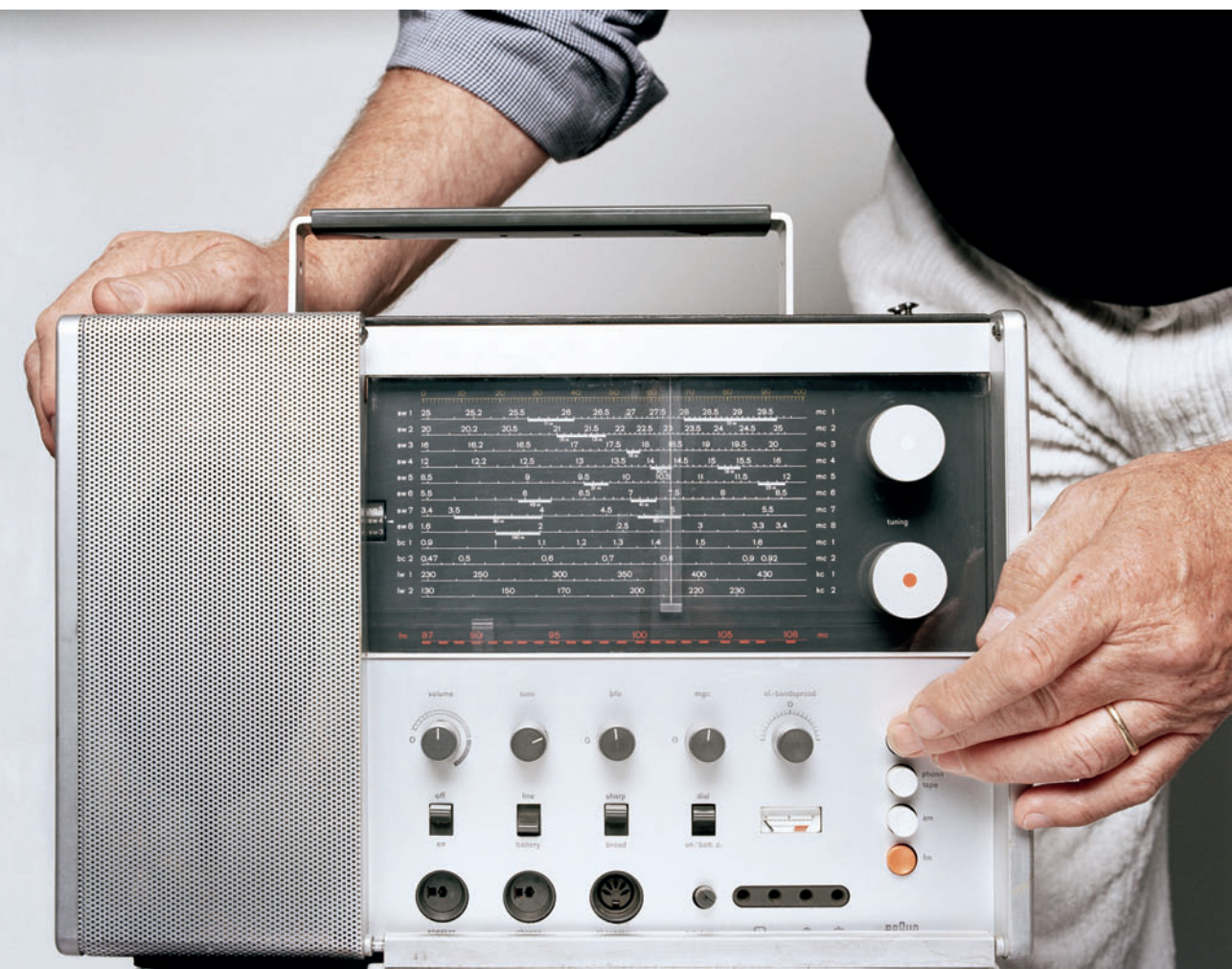
him, because he was never what one might call a permanent employee at Olivetti. My situation was quite different.

Terstiege At that time, around 1980, you had been employed at Braun for 25 years and were heading a large team as chief designer. And we can't imagine you suddenly leaving to paint vases and exhibit them in galleries… But how was it that marketing at Braun was able to gain such an influence? After all, you and your design team had shown that you could create outstanding products without input from the marketing department.

Rams ___ It had to do with the ever-larger quantities we had to produce. And following on from that, that a more complex production technique also requires big investments in tool making and production facilities. In the late 1970s, marketing had more influence because it was its responsibility to ensure competitiveness and a return on investment.

Terstiege Marketing people started paying more attention to what the competition was doing.

Rams ___ Not only that. Innovations in design and technology suddenly had a more difficult time of it, because they always involve risks, including precisely economic risks. Without fully automated production there came a point when things simply couldn't go on, because without it you couldn't produce the expected quantities. Huge production facilities like these were masterpieces in themselves, but they were just so investment intensive that the question increasingly loomed: when will we get back the money we invested in this or that facility? As a consequence, we were increasingly reluctant to give new ideas the green light.

Terstiege A huge number of photos and drawings have appeared in recent years of Braun products that were never realized. This was how, decades later, we learnt of the concept of a portable television from the early 1960s which was related to the T1000. Why did it never see the light of day?

Rams ___ Here too, the general consensus was that we would not be able to sell enough of those small televisions. Brionvega and others later showed that portable televisions can be a great success on the market. Yet perhaps

The Beatles' LP "Abbey Road" rotates on the 1962 record player called PCS5. Left page: Rams with the T1000 world receiver he designed for Braun.

Opposite page: Today, this Braun SK4, better known as "Snow White's Coffin", stands in Dieter Rams' basement workshop. The black-and-white photograph on the wall was taken by his wife Ingeborg who was employed as a photographer at Braun.

this is precisely the reason for the current problems: no-one wants to admit that at a certain point they have reached the end of the line. You can't always make yet another new shaver, yet another new coffee machine without there really being something new about it – except a slight change in form or a different color. And then you think you can further increase sales with it. It's an illusion! But obviously, most managers still seem to believe that it's just the sheer volume of products sold that counts. The automobile industry is currently experiencing the same problem: For years, the car manufacturers' goal has been to push ever-more cars onto the market, when it's obvious that there are too many cars, that the markets have long been saturated. Yet it is precisely objectives like these that still shape the design process in the design departments of major companies today. But I am sticking with my maxim: Less, but better – that's the way.

_____ www.braun.com
_____ www.sdr-plus.com
_____ www.vitsoe.com
_____ Fotos: www.dieterschwer.com

Konstantin Grcic: "The Beauty of Paper is Dangerous"

Terstiege Few people know that you created the shapes of your most famous designs almost exclusively using paper, scissors, scalpel and adhesive tape. I would be interested to know whether you resort to the simple material of paper because it essentially suits your design language or is it even the case that paper influences the final shape of your products?

Grcic ___ I am quite sure that relying on paper models for so many years has influenced my design language. It is not necessarily a conscious thing – but I am always open to it happening. Paper simply offers me the means of working three-dimensionally very quickly on a 1:1 scale. You could say they are 3D sketches. And, just as it is easy to rework certain parts of a pencil sketch, it is easy to make alterations to paper. We build these models, destroy them again, replace parts and so on. After all, they are not meant for presentation, but are working tools intended to achieve an initial result quickly. At any rate, paper fits wonderfully into our work: we can realize everything ourselves on the spot in the office, which means we are not reliant on an external workshop at an early design stage.

Terstiege But you do not manage entirely without a computer, do you?

Grcic ___ No, in fact we even start out with a rough digital rendering. We then use Rhinoceros to generate a version of the surface, after which we build the first paper model. Next we check the result, make some modifications, and then go back to the computer to record these steps. After which the computer gives us another variation from which to make another model and so on.

Terstiege In other words, there is a constant interplay between traditional and digital renderings. But don't you limit yourself by opting to use paper for model building? After all, it is not possible to make all the shapes you could create with great precision through hard foam milling or laser sintering.

Grcic ___ Yes, you could certainly describe that as limiting yourself. Though we always have the option of moving on to more complex shapes. But the limitations paper imposes also help you not to waste time on unimportant details. It speeds up decision making, quite irrespective of whether you are dealing with a chair or a kitchen appliance. The tasks are always the same, designing something, evolving the statics and volumes of a product, integrating technical components or finding the ideal shape for a seat pan. And paper models are simply ideal for all of these things. But sometimes you experience real surprises when using paper and cardboard for design. Take the Mars chair that Classicon manufactures. First of all, we created a very rough version of it with cardboard and tape. I just wanted to visualize the

Konstantin Grcic prefers to work with paper models – he says the material influences his formal language.