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Design Research in the East – at Universities and the Board of Industrial Design of the GDR between the 1960s and 1990

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Abstract: This paper focuses on design research in the GDR. There, the Board of Industrial Design (*Amt für industrielle Formgestaltung*, AIF), a commission reporting directly to the government, promoted and subsidized design research that was adequate to the policy of the board. Besides, the (state-owned) industry, universities as well as art and design schools closely cooperated on design research projects. The economic design policy of the GDR has largely been developed in the PhD thesis of the board's head Martin Kelm, who pursued his functionalist approach to design at different levels. On the other hand, there was critique and a public debate about the design approach in the GDR and in the Soviet bloc in general, accompanied by constant exchange between designers and design researchers of the GDR and the Federal Republic of Germany. With the recurring interest in functionalism, the East German design approach is getting more attention. Furthermore, teachers and academic approaches of design research survived the political (and economic) turnaround of 1990 and are now part of the pan-German design landscape.

Keywords: design history, design research history, GDR, functionalism

1. Introduction

Germany has a long tradition in design and design research as well. After 1945, the professionalization and institutionalisation of design in both parts of Germany was largely based on the heritage of the inter-war modern movement and the confrontation with the devastating consequences of the NS era.

Whereas *Bauhaus* and *Werkbund* or *Ulm* and *Braun* as modernist icons have received enormous interest in the sub-disciplines of architectural history and theory or art history, East German design after 1945 still remains a marginal topic for some specialists. East

German designers took part in an East-Western functionalist debate and considerable efforts were being made at giving the GDR a modern appearance, which were informed by a close look at contemporary precedents from Eastern Europe, Scandinavia, Great Britain or Western Germany and which could draw on the legacy of the modern movement in Dessau, Halle, Magdeburg or Weimar. Parallel developments with Western design as well as divergences related to the politically intended integration of COMECON states and the construct of a specific socialist modernity demand an explanation and call for further research.

This is why we conceptualize design as an integral part of the modern project. It was part of the modernist vision of technology-driven endless social and economic progress that transcended political borders. The search for a new, an "organic" or a fair society characterized various high modern concepts of how to deal with permanent socio-economic change from the 1880s to the 1970s. Design, more precisely the design of industrial goods, can be seen as a specific answer to challenges of the industrial society. Designers claimed a "healing" function as a profession with technical and creative competencies and with organising power. The term "Functionalism" served as a keyword in East and West Germany, implying hopes and dreams of a better future with functional and aesthetic products serving the needs of people from all social classes and improving their quality of life from the spoon to the city.

This particular design approach connected designers across borders and was deeply rooted in modernism as a cultural movement originating in the late 19th century. Early ambitions to reconcile the potentials of mass production with product quality and aesthetic value led to the formation of the *Werkbund* in Germany in 1907, where substantial issues such as social and cultural consequences of the machine age or the relationship of usefulness, a rational use of materials and beauty had already been discussed. Principles of functional design and a social commitment were central to the self-understanding of its members linking it to a strong belief in science, technology and social progress that was fundamental for Western and Eastern high modern societies. The claim of functionalist designers, to create products for the common good and the development of a modern society mirrored this belief in progress and development in both German states. Design was part of that modernity project as a profession concerned with how (good) things for a new society should be and involved in the "aesthetic coding" of future worlds.

Design in the GDR was furthermore understood as being part of a political project to build up a modern socialist society superior to capitalist competitive struggle and consumerism. However, as in various economic and societal domains, there was a clear gap between political ambitions and the reality of design. Especially in the late GDR, the "modern socialist society" turned out to be an ideological fallacy. And those few remaining designs which could be implemented were intended for export to Western markets. Design was part of the economic system of the GDR, hence its aspirations largely failed due to economic realities in the 1980s. However, industrial design in the GDR had some impact during the early years of

reconstruction, when visions of a peaceful society, raising cultural standards, or "good design" for a better society inspired designers, consumers and politicians alike. On that basis, the foundation for a differentiated school and university system, advanced training programs, employment opportunities as well as support and funding structures had been laid in the 1950s and early 1960s and these structures had an influence on how some actors in this field thought about design and design research until the 1990s.

In sum, we argue that Eastern and Western design research built on similar traditions and developed in parallel for a certain period of time, promoting a science based and systematic design approach with a strong social and technical determination. However, in contrast to Western debates on functionalism and postmodernism that started in the late 1960s, East German design research did not experience such a deep rift with functionalist design. Consensus was maintained that functionalism was best suited to meet the needs of a socialist society even though it needed modification and advancement. West German or Italian postmodern experiments failed to win general approval and were regarded as formal games or "formal noise" (Hückler 1996: p. 69). Thus, the subsequent fragmentation (and weakening) of the West German design research community had no equivalent in East German design research.

2. Design in the GDR between reconstruction and the Formalism Campaign

Young designers in the late 1940s and early 1950s were inspired by a post-war optimism and at the same time there was a deep-seated uncertainty. They felt that it was on them as designers to create new and better products for the reconstruction of a largely destroyed country. But after the moral collapse and total breakdown of civil society in 1945, a simple recourse to role models of the *Bauhaus* and *Werkbund* in the German interwar period seemed unthinkable. Hence, Heinz Hirdina[1] described these designers as restless seekers, seeking for valid reference points and an appropriate position in times of change.

The post-war landscape of industrial design had to be built from scratch and a handful of designers established new degree courses and business relations. In Weimar and Dresden actors of the pre-war modern movement started with first attempts to develop industrial design for the East German economy (e. g. Gronert 2012). In Weimar, the Professor of industrial design and interior design Horst Michel and his students mainly focused on furniture design and in Dresden, the former *Bauhaus* guest lecturer Mart Stam tried to revive pre-war efforts to establish close connections between academic design and the industry. These early beginnings lost their importance in favour of institution-building in Berlin and Halle in the 1950s. East Germany's first industrial design curriculum had been developed by Rudi Högner, architect and wood carver, and colleagues at the college of art in

[1] Heinz Hirdina: One of the most renowned experts in East German design, long-standing chief editor of the East German design journal "form + zweck" and author of the 1988 standard reference "Gestalten für die Serie. Design in der DDR

Berlin-Weißensee since 1953. The first class graduated in 1958. One of them, Erich John, later became assistant and professor at the same college. The three remaining, Martin Kelm, Horst Giese and Jürgen Peters later became influent in the the *Board of Industrial Design* (*Amt für industrielle Formgestaltung*, AIF) and its predecessors, as designers for the industry and as design officials. Following graduates had a great impact and responsibility as designers working for the industry because companies reported a rising demand for well-designed products and the developing design schools could not yet meet the needs. It resulted in student designs being implemented and mass produced or young professionals being responsible for an entire product range. Most prominent was Högner's graduate Karl Clauß Dietel, who worked as a freelance designer and was honoured with the design award of the Federal Republic of Germany for his lifetime achievements in 2014 as one of the most important product designers of the former GDR[2] (cf. Kassner 2010, see figure 1).

Starting in July 1950, design had to face the implications of the notorious debate on formalism therein following the Soviet attacks on the freedom of the arts. The underlying consideration was to force back American influences and to stress the subordination of artistic expression to political interests. According to the party ideology, formalist art (and design) did not meet the needs of a socialist culture (e. g. Pugh 2014). Political hostilities were directed against modernism and a “decadent” Western art market. Even though ideological attacks against formalistic furniture or ceramics marked the late 1950s and early 1960s, functionalist design remained the dominant design approach. In contrast to architects and artists, designers could point to the economic relevance of “good design” especially for industrial goods and Western exports.

figure 1: left: car body, designed by Karl Clauß Dietel under supervision of Rudi Högner, plaster model, ca. 1960. The design had been developed at the college of art in Berlin-Weißensee and essentially specified the shape of the later Wartburg 353 car body. Right: Wartburg 353, designed by Fischer and colleagues, followed a rather functional design approach and has been produced from 1966 to 1988 (sources: SLUB/Deutsche Fotothek; Wikimedia).

[2] Karl Clauß Dietel: Professor and 1988–1990 chairman of the Association of Fine Artists of the GDR (*Verband Bildender Künstler der DDR*, VBK-DDR), that also served as a professional association of industrial designers since the 1960s.

3. Design, research and education – institutional set-up 1965–1990

As one of the first industrial design graduates, party member and convinced socialist, Martin Kelm was being sent by the *Socialist Unity Party* (SED) to restructure the arts and crafts school (*Werkkunstsschule*) Halle *Burg Giebichenstein* into a University of Industrial Design (*Hochschule für industrielle Gestaltung*) according to the educational approach of Berlin-Weißensee. The aim was to provide the industry with skilled design experts to meet the growing economic need (a problem that existed until the late 1980s). With Kelm as the leader of the Institute for Research and Development (*Institut für Entwurf und Entwicklung*) of the *Burg Giebichenstein*, the team developed hundreds of products mainly for the rapidly growing plastics industry around 1960. That decade generally experienced a high level of acceptance of new technologies and product innovations. This applied especially to plastics as a new material opening up a number of great opportunities to designers. A whole new world of objects within the reach of all people could be developed due to low prices. Heinz Barth, Günter Reißmann, Horst Giese, Manfred Heintze, Albert Krause and Martin Kelm designed numerous products for public and domestic use that had been produced until 1990 (in some cases beyond 1990) and could be found in literally every household. Thus they were highly influential on bringing new materials and modern design into the material culture of the GDR. They focused on cheap, but simple, useful and stackable products in a friendly and lucid colouring, therefore utilizing a functionalist design approach.

Similarly, at the colleges in Dresden, Weimar and Berlin, industrial projects were part of the developing design education. As early as 1950, the Institute for Industrial Design (*Institut für Industrielle Gestaltung*) had been outsourced from the college in Berlin-Weißensee due to tensions within the college. This institute, founded by Mart Stam, was the nucleus of the later AIF and primarily conducted industrial design projects.

Following the debate on formalism, the institute was renamed and reoriented towards folk art under the leadership of Walter Heisig. In 1962, Martin Kelm had been appointed as the new leader of the institute, being politically rewarded for his work in Halle. Step by step, Kelm reorganized and strengthened this institute as the central design authority in the GDR. Besides the cultural value of design, Kelm began to emphasize the importance of design as an economic factor. He managed to bypass the largely cultural debate on formalism by transferring his institute as *Zentralinstitut für Gestaltung* into the economic sphere, joining the board of standardization and quality assurance (DAMW) for nearly a decade.

Eventually Kelm managed to establish the *Amt für Industrielle Formgestaltung* as the central design authority directly subordinated to the government of the GDR in 1972 (figure 2). As such, the AIF as well as the VBK (see footnote 1) had been part of the centralistic and totalitarian political system. This organizational integration led to difficult conflicts within the design community regarding the relationship between innovativeness and central planning, self-employed and employed design work or creativity and bureaucracy. Like any

institution in the GDR, the AIF had been observed and to some extent been infiltrated by the Ministry for State Security *Stasi* (e. g. Sorg 2014). As a peculiarity, the AIF and some designers were under surveillance by two divisions of the *Stasi*, one dealing with economic affairs, the other one observing dissident movements in arts.

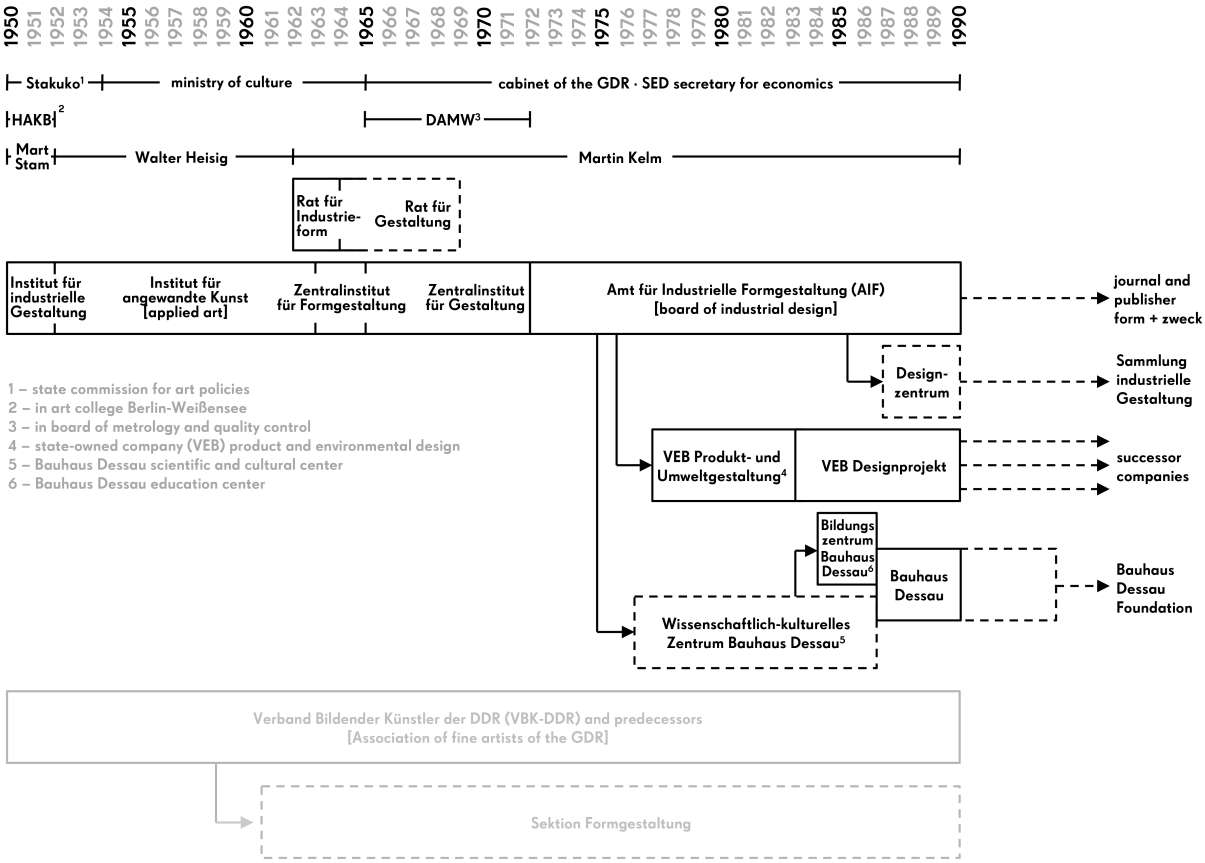

figure 2: Institutional development of non-academic state institutions for the promotion of (industrial) design.

4. Functionalism and beyond – objectives and practice of design research in the GDR

In his PhD thesis, Martin Kelm (defended in 1968, published in 1972; for a detailed historical analysis cf. Sudrow 2014) illustrates the contemporary design approach of the 1960s with a strong focus on a functionalist understanding of product quality and practical value (*Gebrauchswert*). In coherence with functionalist approaches in general, the design approach of Martin Kelm and the AIF denied styling, a rapid adoption to trends or planned obsolescence. These factors were perceived as an American or capitalistic way of design focusing on generating new or unnecessary consumer needs. Instead, an emphasis on longevity, the practical value, utility and reparability of products was considered as desirable and suitable with respect to the limited financial and material resources of the GDR. In an official brochure the East German AIF referred to this context and listed “objectives for

design quality and valuation criteria for various commodity groups and environment spheres according to the following principles", which reflected the functionalist design approach:

- "Optimation of useful values according to the aspects of envisaged use and the relationship of investment and use,
- Compliance of forms, colors, surface effects, material combinations comprising the complex design of housing [private] environment and work environment and other spheres, with cultural and aesthetical requirements
- Consideration of psycho-physiological demands of commodities, i. e. favourable operation, sight, precision indication of machines and implements, maintenance and safety aspects, etc. [sic!]" (AIF 1976)

While industrial design in the GDR still had its close affiliation to fine arts, the official approach also stressed the scientific character of design. Hirdina characterizes the 1960s and early 1970s as the scientific design era in accordance with industrial standardization, concentration and specialization processes (Hirdina 1988). To master the so-called scientific-technological revolution, engineering but also design processes had to be analyzed and systemized to provide the possibility of teaching and learning. In this context, there was a strong emphasis on ergonomics. In coherence with the official design approach of the Soviet Union, promoted by the AIF pendant VNIITE, ergonomics were seen as the scientific basis of design (Azrikan 1993; Cubbin 2012, Soloviev 1973/1980, cf. figure 4). Since 1974, a COMECON joint research program tried to develop a scientific foundation for ergonomic standards and requirements and in 1978 the development of a scientific foundation for standards and requirements of technical aesthetics (Soviet term for industrial design) complemented this framework program. Key elements were the advancement of a coherent terminology, a basic methodology of complex design tasks, scientific principles of standardization, methods for the assessment of consumer products and principles for the design of working environments. Hence, socialist cooperation in design issues particularly referred to the scientific and technical dimension of design with ergonomics at the center. Technical aesthetics in this narrow perspective should primarily identify and exploit considerable rationalization potential regarding the simplification of product ranges, the application of standards and types or modular principles on an industrial scale (*Formgestaltung im RGW*, 1980; Soloviev 1980).

Key political driver to promote industrial design as a rationalization and modernization factor was the aim to catch and overtake the West in terms of production and consumption figures. Design should help to build up a modern socialist country with "good design" for the home, public spaces and working environments. But, referring to western standards contained risks. Due to multiple transfer processes, the population of the GDR permanently compared Eastern and Western standards of living, with Western products defining the norm (on East West exchange of designers see also Höhne 2011). The Western, more precise, the American way of life set the standard for a "good life" from the 1950s onwards. In consequence, the definition of a specific "socialist culture of consumption" was an

ideological construct of a “rationality of human needs” that did not meet the needs of many East German consumers and failed at the consumption junction in the light of Western abundance.

However, the AIF functionalist design approach had at least some impact on the material culture of the GDR and on the general orientation of the design (research) community. As the leader of the AIF, Kelm was able to shape design policies according to his functionalist and political convictions in the political and economic system of the GDR. One of the supervisors of his design PhD thesis was Günter Mittag, the powerful leader of the economic commission of the SED party. Accordingly, Mittag was Kelm's principal in the political hierarchy of the GDR for many years. In the 1950s and early 1960s, design still needed powerful advocates and intense lobbying to explain the effect of design and to legitimize governmental support.

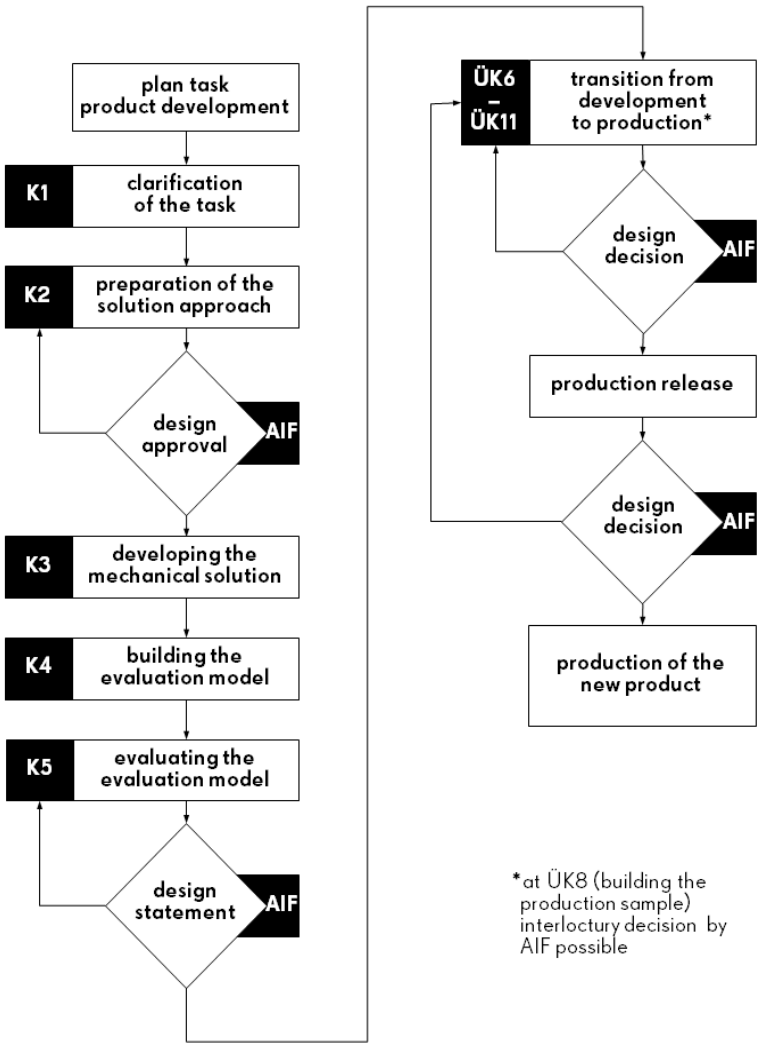

figure 3: “Guidance and Control” – this scheme of design evaluation in any product development process within the state-owned industry of the GDR has been developed in Martin Kelm's PhD thesis and later became policy of the AIF. Translated from Wölfel et al. 2014, p. 14.

Kelm rapidly expanded the board to a network of institutions with more than 200 employees that should “control and guide” design in the economic system of the GDR. One of the core duties of the AIF was to implement design issues in any product development process within the state-owned industry. Industry and trade managers as well as leading engineers were more likely to be skeptical about design as an innovation factor and acceptance increased only slowly. The corresponding scheme regarding the integration of design in product development is shown in figure 3. Not only from a review standpoint, this scheme had been criticized for being overly bureaucratic and rigid. However, many designers working in the industry remembered the involvement of the AIF as helpful for asserting design quality in product development and convincing technical experts of the usefulness of design (e. g. Roeder 2014).

Although universities and schools of design had no direct dependencies with the AIF, there were also collaborations in the field of design research. The AIF subsidized academic design research especially when it promised impact on the aims of the AIF. These research projects were characterized by close interdisciplinary cooperation between designers, psychologists, ergonomists and others. At the *VEB Designprojekt*, a state-owned design studio subordinated to the AIF with more than 100 employees in six regional studios, there were facilities and competences for design research on an academic level (figure 4).

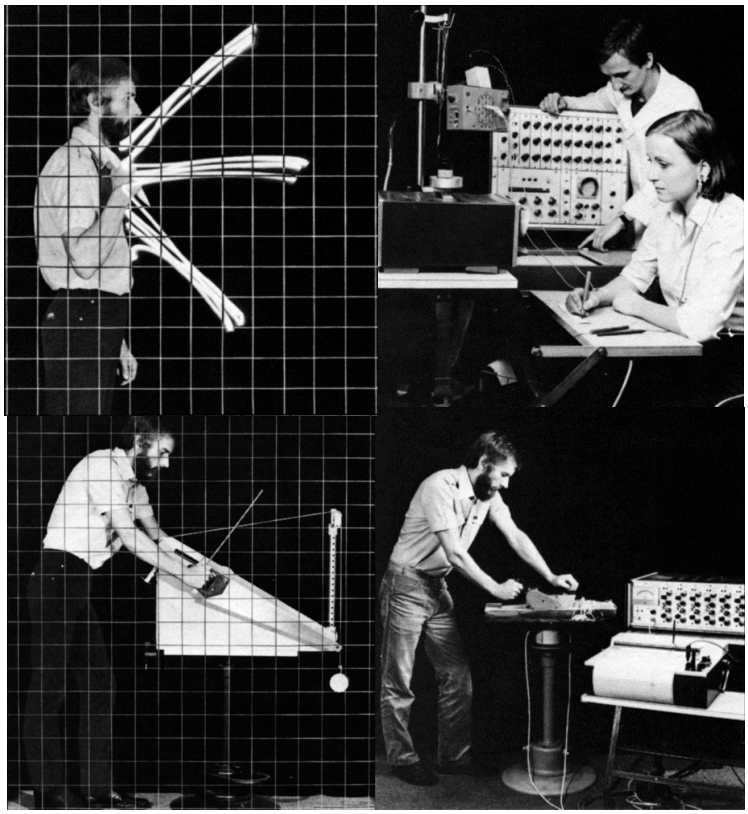

figure 4: design research at the VEB Designprojekt Dresden – an interdisciplinary approach involving designers, psychologists, ergonomists and others. Source: Archive of Designprojekt Dresden GmbH

Besides the orbit of the AIF, design research had been conducted at art colleges and universities, e. g. in Halle, Berlin or Dresden. At the University of Industrial Design in Halle, international symposia took place on theoretical and methodological issues of design. Also, academic institutions were involved in design research and development for the industry. Figure 5 illustrates the involvement of various universities in transportation design projects. As with the work of professional designers, the outcome of academic design research was more likely to end up in the drawer than to be implemented especially since the deteriorating economic situation of the late 1970s. These developments led to a high level of frustration and intense debates on the state of design in the 1980s. The AIF carried out surveys that showed the level of dissatisfaction with actual working conditions on the one hand and the great commitment of many professionals to their work as designers on the other hand (Kahl et al. 1987).

Figure 5: A snapshot of design research at a university. Car and caravan design models are tested in the wind tunnel of TU Dresden in the 1980s. Source: Archive of TU Dresden.

A large number of designers still agreed to consider functionalism with a strong social determination, a focus on usability and a careful use of natural resources as being a key element of their professional self-conception. Proof of this was a series of articles in the East German design journal “form + zweck” in the 1970s and 1980s with contributions by Karin Hirdina, Horst Oehlke, Clauss Dietel, Heinz Hirdina, Chup Friemert or Bruno Flierl. In answer to Western debates on postmodernism, the AIF had also organized a seminar on

functionalism in 1982 to discuss whether functionalism should be seen as a (then dogmatic) theory or as a (rather flexible) approach on design methodology. Some authors reflected a possible neglect of the aesthetic dimension in product design and whether design had ignored its roots in arts and craft while overemphasizing science and technology. However, amid all the criticism on functionalism as a style (grey, square and stockable), they opposed the postmodern project as superficial styling and adequate philosophy for affluent societies. The postmodern accusation of "technicism" was rejected as the dismissal of the socio-political program of functionalism to design products of high quality for all. Karin Hirdina stated that functionalism meant the utopian anticipation of a non-capitalistic order of relationships between man and his material environment (K. Hirdina 1975). Broadly speaking, postmodernism had been criticized as reactionary and antisocial, as a subjection to a capitalistic logic of exploitation.

5. Across the wall: pan-German exchange before 1990

East German industrial design has always been integrated in international design debates and institutions and cannot be explained in an exclusive national framework. It operated in an area of tension between the tight framework conditions of the GDR as part of the socialist Eastern bloc and the transnational dimension of design discourse and design development. The formation of functionalism as the prevailing design approach in the GDR was based on an intense and lasting interest for (among others) Scandinavian functionalism, the policy of the British Design Council, the influential Ulm Design College or Austrian, Italian, Polish and Czechoslovak product design. Despite all political measures to stress relations with Eastern European partners and to emphasize the leading role of the Soviet Union, Northern and Western influences were of particular relevance. Scandinavian, especially Finish and West German industrial design remained central reference points for designers in the GDR until the late 1980s.

Due to a lack of substantial research, we would describe working relations within the COMECON only with all due caution as more selective than systematic. Especially Czechoslovakian, Hungarian, Yugoslavian or Polish design knowledge and design methods were highly appreciated in the GDR and there has been a lively exchange of objects, technologies and knowledge at congresses, exhibitions or fairs in the Eastern bloc. But the Soviet design authority VNIITE did not achieve the status of a leading design institution and cooperation remained on a rather theoretical level. Soviet design officials considered East Germany to be one of the most developed industrial countries within the socialist sphere. East German industrial design expertise concerning quality assurance or range streamlining was thus appreciated whereas little is known about collaborative design projects with Soviet involvement and tangible results.

Design as a specific field of activity has enjoyed a remarkable degree of communication, mobility and cooperative work and at the same time it was faced with travel restrictions, political paternalism and surveillance for those considered politically unreliable. Only

selected designers were able to travel to the West, some of them on behalf of the AIF, others on behalf of the VBK-DDR, which was regarded by designers as the more liberal institution. Also, in product development an international state-of-the-art analysis (*Weltstandsvergleich*) was part of the required design briefing (detailed documentation published by the AIF (Ed.) 1984). Due to the need to export products to Western markets, any newly designed product had to compete with Western standards. This also fostered an intensive evaluation of Western design developments (even though only a small number of competitive design concepts eventually went into series production).

The Bauhaus building in Dessau can be seen as another space within the GDR for exchange between Eastern and Western designers. Retarded by the ideological debate on formalism until the late 1960s, the Bauhaus and its heritage had only been rehabilitated in the GDR of the 1970s. By then, the AIF was pushing the reconstruction of the Bauhaus building in Dessau, later using the site for international workshops and exhibitions and selling the GDR as the legitimate inheritor of the Bauhaus idea. Scandinavian, Dutch, American or West German designers took part in international and inner-German Bauhaus seminars. In 1978, an international seminar in Dessau was led by American designers with the slogan “Industrial Design Education in the United States”. In return, Erich John, Professor in Berlin-Weißensee, was invited as Visiting Professor to the US and selected students of the college of art Berlin-Weißensee were allowed to study in the USA.

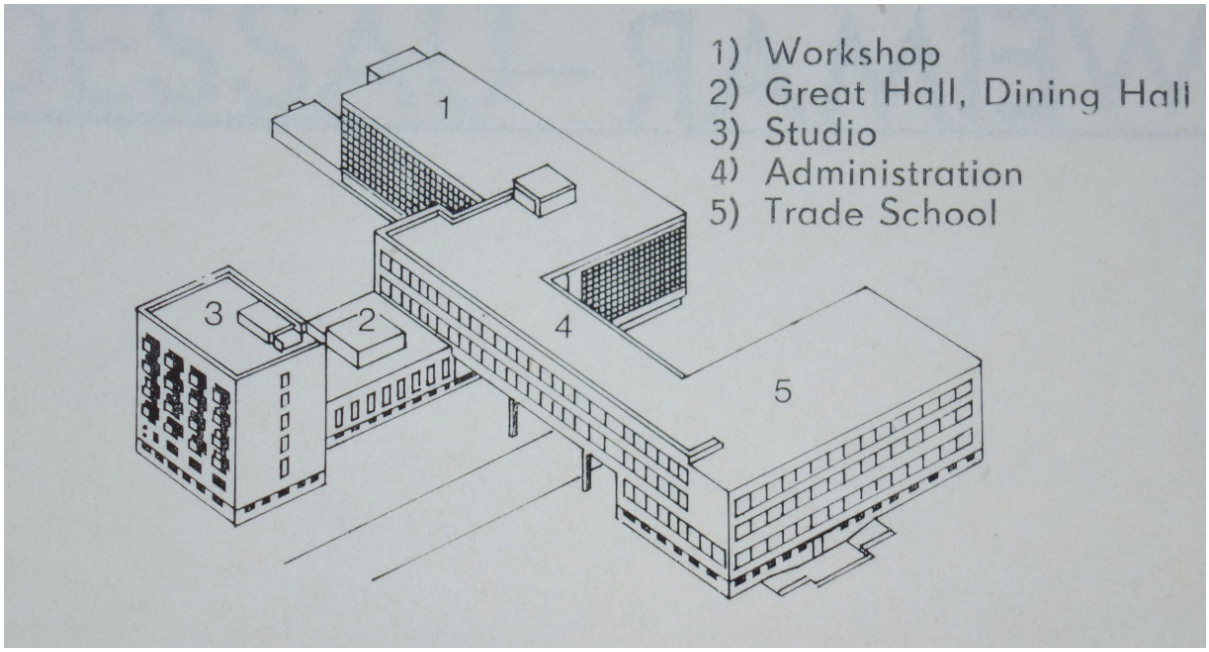

figure 6: the Bauhaus Dessau building in a 1980s English leaflet of the AIF, illustrating East West Exchange in the field of design during the cold war.

Especially the International Council of Societies of Industrial Design (ICSID), founded 1957 in London, became an important international stage for East West exchange. In the 1960s,

ICSID grew to include design societies from non-capitalist countries and the AIF joined ICSID in 1967, two years before the Soviet counterpart VNIITE. As a member, the AIF enjoyed equal rights at a time when the diplomatic status of the GDR was still contested by West Germany. Design was seen as a profession that could transcend political borders and build bridges between East and West. Martin Kelm was elected into the ICSID Executive Board in 1971, entrusted with the subject areas environment and design and design as state policy. Though, the high aiming policy of exchange and cross-border professional cooperation of ICSID in the Cold War period has to be contrasted with travel and speech restrictions and censorship on the Eastern side. Western designers also spoke about a mere theoretical presentation of Eastern design efforts on ICSID conferences, wondering how and when especially Soviet concepts and plans would be realized. On the ICSID-stage, East German design gained some relevance regarding the design of playgrounds and toys, the design of capital goods, the re-opening of the Bauhaus as well as the structure and organization of design funding. Still, there was a huge gap left between theoretical aspiration and claims on one side and everyday experience of designers and the public on the other.

6. What is left

After the wall came down, East German design had to face deep structural changes. New positioning was necessary in order to cope with the meltdown of industrial structures. The AIF and most of its sub-institutions were closed in 1990. Even though East Germany's industry recovered to a notable degree in the following years, there is still little industrial research and development due to a lack of big companies and scarce financial resources of small businesses. At the universities and colleges of art, specific design approaches adopted more slowly to the new situation. As explained above, design research in the GDR was not disconnected to western developments, accordingly many designers and design researchers were able to continue their work under new market conditions.

Today, there is a co-existence of empirical design research and design research inspired by cultural studies. The roots in the specific East German functional design approach can still be traced in departments focusing on the design of industrial goods. The University of Industrial Design in Halle has been renamed to College of Art, accompanied by a shift to more artistic approaches of design. However, there is an increasing interest in functionalist design approaches, which might provide a useful framework for actual challenges. Here, the adjusted functionalism of the late GDR may be of interest, since it had been developed in order to cope with critique against functionalism or to merge different views into one (centralistic) holistic functionalist design approach, while a strong shift to postmodernism more or less stopped the development of comprehensive functional design approaches in West German design research. The legacy of design and design research of the GDR may provide considerable material for further investigation, since a large number of the documents, photographs and even design objects, models and prototypes are preserved in the archives of federal institutions, museums and universities.

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