The following text is part II of a threefold string of lectures I was honoured to deliver at the Academy of Art named after Kamoliddin Bekhzod in Tashkent at the occasion of our short termed affiliation to this school. In September 2000, Ros and I stayed at Tashkent for three weeks in order to instigate the Design department of the academy for a stronger integration into the enormous history of art and craft of Uzbekistan. This second lecture is an introduction into German types of design education. It is reprinted here without images but with no alteration to the form presented.

Design Education in Germany

Methods, Schools, and Curricula

Design and media professions in Germany are trained basically on four different levels, and it is possible to ascend from a lower level to one higher up, if necessary two or three up by passing one after the other. After introducing the four levels to you and after presenting you the example of students who went through several levels I will give you a short account of the historical development of design curricula in Germany in the 20th century. The third part of this lecture consists in a typical curriculum of a German design study. The end of my lecture is dedicated to proficiencies possible for foreign students in Germany.

The slides I have chosen for illustration may not obviously be the ones you might expect for this theme. They form a comment slightly off the record of what I am telling you. This comment to a dry theme – curricula are basically boring and only come to life when used in a face-to-face communication between teachers and students – should encourage you for own associations of ideas and images. Do not take them too serious! There is a certain emphasis on photography as, again, this is the basal technology of what I teach in Krefeld.

Just one word on linguistic definitions: When using the term 'student' the English language normally attaches the male form to it (as does the German language). Despite this fact anything I will express here is meant for students of both sexes. In Germany roughly 80 % of all design students are female. But if you count the results: Only 20 % of the famous designers are female!

As described in my introductory lecture the fundament of art and design is craft. Most design professions have a crafty background still accessible today in one or the other way: advertising or graphic assistant, art or copper printer, photographer, reprographer, camera or video assistant, and – relatively new – media technician. Other crafts, like type-setting, have died in the last decades. All crafty professions in Germany have a similar way of education whether you are becoming a baker, a butcher, a car mechanic, or a designer: You work as an apprentice with a master in his workshop for three or four years, and then you pass an exam as a journeyman. After another five years (at least) you will be abler to pass another exam and be allowed to settle as a master yourself. This is the way it went for the last 800 years in Central Europe – and this form of education is rapidly eroding.

Any European language has a number of proverbs telling that being an apprentice is the toughest time of your life, maybe except for military service. You start with pumping water, cutting pencils, carrying tripods, cleaning workshops and apparatus. If you are lucky you grow into daily practice by watching the master and the journeymen and trying to do the same yourself. In Germany apprentices have to visit

schools as well, either one day a week or several weeks en bloc in a year. Apprentices' wages are low, more or less a form of pocket money. Masters are no more allowed to take money from the apprentices which they did up into the 1950s if they were famous enough for doing so. Officially, all of the craft professions within design lost their status when in 1998 the European commission launched a common law on education – since then only professions with security and nutritional regulations are crafts. In all other fields masters are freelancers now, and the apprentices are interns. Although you still may pass an exam as a journeyman in graphic design, photography, or media technique, it does not mean necessarily that you are well trained. It all depends on the master's quality, and with the end of the official status of these professions an end to mastership is clearly foreseeable.

The quality problem is as old as the craft education, and therefore for at least 400 years schools existed to either accompany or replace the workshop training. In the 18th century a number of spare time schools arose with a special training in drawing, printing, wood-carving, and other crafts. Meant for the apprentices of minor workshops or sub-proletariat children these schools eventually became important bases of training after the invention of newer technologies in reproduction or communication. Lithography was taught this way and photography, too. Around 1900, the European feminist movement was successful in establishing professional schools for women which concentrated both on design and science, with classes in fashion and photography, but micrography and chemistry as well.

Some of these schools still exist and offer a professional training with a crafty flavour. Two schools of graphic design in Stuttgart and Hamburg, two others of photography in Berlin and Munich, another in Munich with courses in typography – these schools have became famous troughout the 1920s in being important parts of the avantgarde movement in art and design alike. With the rise of media technology throughout the 1990s a number of private professional schools established themselves in Germany. They charge quite a lot of money from their students but they offer a perfect and modern technical equipment with an equally perfect settings of available material and software. Their main problem is the lack of good teachers, so relatively young practitioners are engaged [some of my students teach in those schools while I would not let them be tutors in my classes for being unsafe in their judgement]. But as there were not enough places for students in state universities in the 1980s and early 1990s these new schools gained a lot of acceptance by the public.

In 1972 the German government released a major law on university education and installed the Universities of Applied Sciences [the German name of these universities is Fachhochschule]. These had been engineering schools and schools of art and craft before. All of them were now blended under a mutual administration including a common regulation of examination and curricular schedules. Most important to this installment was the idea of a study near to practice in order to assure the students of a future in job and economy. There were two background ideas to the release of the curricula in Applied Sciences. One was the practice of the precedessors of these schools to give students a chance who had a practical training but not finished the full curriculum necessary for the university application. Thus these schools offer ways of social and practical ascension to the students. The other reason for founding Universities of Applied Science lay in the fact that the German universities had lost their ground in science and could no longer guarantee any graduate to be successful in finding a professional position afterwards. Only within the last four or five years the German university system as a whole is recovering from a politic that had rated economy higher than science or art. The curriculum of Universities of Applied

Sciences was designed in a strict manner only allowing relatively small derivations for their students. The average study lasts for four years – in some curricula (but not in design) only for three years – and it is packed from the first to the last day with courses and workable projects.

The fourth level of professional training in art and design is represented by academies and universities. From the definition of art academies by their founders in the 19th century there is no way to teach art, and consequently there is no curriculum for it. After finishing preparatory classes the students join the class of one professor and stay with him until they themselves become masters or get famous. Some academies, though, have changed their profile into a modern conception of design and applied arts. All universities and level-like schools offering curricula in design (named Hochschule fuer Gestaltung in German) have more open and experimental course of study. These include the preliminary courses and the work in projects as the average curriculum. I will also talk about the application possibilities for foreign students at the end of today's lecture but can yield the hint here that it is a lot more difficult to apply for studies in these schools than in universities of applied sciences. The three schools named here offer a number of post-graduate courses to those who have finished the other school types successfully. Let me give you three examples of students and their educational careers:

Karl-Heinz Fischer has had a professional training as a reprographer before he began to study at the Hochschule fuer Gestaltung in Karlsruhe. He started with taking courses in drawing after nature and in photography, then proceeded into type-setting and computer graphics, took part in all kinds of projects offered to him by the institution, and when he prepared his final exams he recognized the importance of his basic crafts for all he had done afterwards. So he decided to produce two well-printed, well-bound books with a wealth of material from two preliminary courses. He wrote a theory of the importance of the simple to it, and he presented the results in a multimedia show with slide projections, computer animations, and a small exhibition. Karl-Heinz Fischer already as a student became an associate of an advertising agency and now runs his own office with a number of assistents.

Thomas Mayfried even more stuck to his beginnings when he finished his long line of educational proceedings. After a short period of internships with several advertising photographers he visited the professional school of training in photography at Munich, worked for a decade as a freelance photographer, and the decided to study one more time at the Hochschule fuer Gestaltung in Karlsruhe. His examination project consisted in the most simple concept of literal and photographic practice: an alphabet of photograms, formed by tools. This alphabet was presented in the finest printing technique available in Germany [three colour black & white with an extremely high dissolution of dots]. Each of the professors was handed a small black box with these images, and there was a small exhibition on the studio walls in Karlsruhe. But all was done in such perfection that he was honoured best student of the year. Despite still being successful as advertising photographer Thomas Mayfried is now freelance consultant to companies like Siemens in the interiour decoration of their offices.

Susanne Bruegger started her career studying photographic journalism at the Dortmund University of Applied Science in the early 1980s. After several years of working as a professional journalist, as a gallerist for photographic arts and after signing in on various theoretical workshops she decided to study at the Cologne Kunsthochschule fuer Medien (Academy of Media) and finished with a work which won numerous prices within the last two years. I will describe this work and its main

emphasis on mixed media within my next lecture. But Susanne Bruegger who now works as a freelance media designer in Essen and recently became Professor of New Media at the Dortmund University of Applied Science is a good example of a typical female career in late 20th century Germany as instigated by modernism in the Western world. The same can be said in general about Germandesign curricula.

The average curriculum of design studies in Germany is still derived from most of the practice installed by the famous school of art and craft named Bauhaus in the 1920s. Here, for the first time in curricular history, a preliminary course of its own was set up differing entirely from all those copying, drawing, etching, and printing practises that had hitherto formed the academic training. The preliminary course at the Bauhaus as installed by Johannes Itten concentrated on important elements of visual reception like line, colour, and pattern. When Oskar Schlemmer took over the preliminary courses at the Bauhaus he designed his instruction around this conception named "The Human in the Circle of Ideas". These comprise not only the five senses, physical exercises (each hour of instruction began with breathing exercises) and food instructions (the Bauhaus cantine only served vegetarian food) but included a complex system of thoughts on social relations, public welfare, and the importance of the example given to mankind by the better knowing. Other teachers at the Bauhaus, like Wassily Kandinsky, stuck more directly to the practice of their own art - Hans Thiemann's definition of lines in colour show the average method laid out in Kandinsky's book "From point to line to plane". The same mya be said about Georg Knoblauch's sketches for Kandinsky's course in 1932, even if they look a little more abstract and conceptional.

When László Moholy-Nagy left the Bauhaus in 1928 his design courses were devided into several branches. One was Joost Schmidt's class in advertising. Here, like in his own example of nine different surroundings of the letter P, students were introduced into effective strategies of stimulating visual awareness, even sentience. This class included modern mass media into its curriculum, like photo, film, photomontage, typophoto etc. Schmidt called up Walter Peterhans to install a class of photography at the Bauhaus, and his curriculum is basically orientated to the technical quality of this medium: first tests in light sensitivity, then the photogram as a cameraless technique with a differentiated gray scale, after that testing the quality of lighting at simple situation like being in a basement, showing material qualities in photography as with the example of stones, and the same with glass and its different transparent and mirroring effects. All of these examples come from Peterhans' class in 1931 and were made by the graphic designer Herbert Schuermann who later became a renowned designer for the Nazi government.

The only media curriculum of modernism did not come from the Bauhaus but from Hans Finsler's instructions at the art school Burg Giebichenstein at Halle near Leipzig. Finsler was an art historian by training, worked as the librarian in this school and gave preliminary courses in photography as well. When he left for Zurich in 1932 he was to become the most influental teacher in photography in continental Europe – literally dozens of famous photographers emerged from his class. On the occasion of his 80th birthday friends instigated him to lay down his teaching principles in a tiny booklet with 30 images. Finsler also starts with photograms and proceeds to a clear object photography which is consequently printed in either positive or negative. For choosing eggs a motif Finsler urged famous anthropologists of the 19th century to explain the importance of a natural but mathematically complicated form and volume. Finsler is convinced that the media quality of photography is laid in its detailed exactness, but gives examples of setting into scene as well. When photographing this

bridge in Halle designed by the sculptor Gerhard Marcks Finsler advised the rower to move in the river and the pedestrian to walk over the bridge by shouting at them, and he waited for trams, trucks, and cars to cross the bridge. This image is one out of seven published but it is the one considered best by Hans Finsler. One of the last examples in Finsler's booklet is the advertising image of an Osram bulb combining exact object photography with an element of the photogram – the shadow gives the name, the image the information of form and function.

The third historical curriculum in German media design training I like to mention was executed at the Hochschule fuer Gestaltung in Ulm – a school that drew its own tradition directly from the Bauhaus and existed from 1951 to 1969. When Albrecht Hufnagel was asked by his teacher Guy Bonsiepe to take a photograph of an apple he was as well asked to show the different contexts in which apples appear in everyday life, too. So, the result is not one image but a set of them which has to be accompanied by a number of words, too. A further step of abstraction in the same course was obtainable by not giving one's own photographic interpretation but using pre-visualized material and leaving words behind as well. What Norbert Kurtz tried to achieve with samples like this was the interpretation of rhetorical figures used in any communication as, e.g., convincing or retreat.

The next step is the forming of complex word classes like the weather as did Ursula Wenzel in Alexander Kluge's course in 1964. She not only photographed all kind of weather conditions and symbolic images for them but arranged these pictures in linear orders like in a storyboard for a documentary film. The whole set was mounted on a leporello type display. Typical for this third curriculum in the 20th century was the idea – and I still stick to it – that it is not at all enough to conceive and realize good designs but to present them to the public as well. This was and still is part of any design education since Ulm, no matter which level the university blends in.

Proceeding to next part of my lecture I will present a typical curriculum in design by showing the course given to my Krefeld students in the second year of their training. The first year mostly consists in basic courses plus an introductory project (I will tell you about projects as part of a curriculum in a minute). In the second year the Krefeld students start to gain practice in the application of media into their personal program of choosing matters and methods. With the help of a laboratory assistant, I set up a course program and wrote a handbook which all of my students receive by downloading a ZIP file from my homepage (for those of you who read German: you find an explanation of my courses under the button 'Lehrveranstaltungen' and the ZIP file in between the text there. Beware: this file unzips to more than 10 MB of data as it includes a number of illustrations.

The first work done in this course is the production of a gray scale with either 7, 9, or 11 fields. Thus the students learn the importance of gradation for any photographic print – a crafty term with media implications. The object photograph on the right side of this presentation represents the first attempt to a sort of cataloguing, documentary, or reproductional photography. The gray scale is, in fact, a form of a photographic method used heavily in early curricula like the one at the Bauhaus or Hans Finsler's: the photogram. [Do you know how it is made] Subsequently I let the students produce a number of photograms which include a certain amount of free creativity but follow technical aspects as well: here the gradation ist changed, here you see the difference of exposure times and their quality of lighting through objects (or allowing light fractions at the side). By the use of different materials and by using different light sources students look for effects interesting for their own creation, and after producing the photogram you can give it a different meaning by framing it in special

ways or collaging it with other material. Very often the collage technique is used in combination with object photographs.

Despite its boring appeal to most students the object photograph is an important part of this curriculum as it shows how far photography has become an input medium to all computer aided methods. Scanning is, at least, half the work students usually do when preparing a CD-ROM or web production; and if the quality of the photographs scanned is not absolutely perfect the rest will never be. Object photography does not necessarily mean that the results are simple. Of course, details and aspects of interest can be separated in order to be highlightened for advertising etc. Besides object photography, certain forms of photography can be experienced by the students when choosing a subject for a journalistic picture series. Just for training I often send them to the Kindergarten next door and let them try to capture a group of kids with the camera.

After these first experiences and a number of talks on different subjects students like Heike Meyer chose their idea for a reportage, in this case on people doing their workouts in athletic studios – she saw the comparison of the body building studios with the hard labour in steel mills or with medieval chambers of torture, and such she fixed her subjects. When working on one subject the technique often follows the ideas (and not the other way around): inside the agricultural transparent structures very common in the Niederrhein area there is a flurry light, and thus the photographs are made. One part of this curriculum is the self-portrait. Often done in the way of a 24-hour reportage (slightly boring as all of us have to get up in the morning, have breakfast, move to school etc.etc.), some students use this subject for ironic or serious self-tests or for changing of social roles by letting oneself be represented via media.

As mentioned, the Krefeld design department has a large sub-division dealing with textiles, and so most of these students choose fashion as a subject for a free series in their second year. Mostly they are their own models, so the like to overcome natural inconsistencies (compared to the ideal of fashion models) by humour. Others, like Patricia Otte, use their personal advantages: she had been a successful dancer by sport, and her father owned a motorcar workshop, so it was easy for her to combine both for a series of images on self-designed clothing. Most textile designers are tending not to conceive wearable fashion but new forms of weaving with the result of fabrics well stretching or falling weakly. So they ask for a formal solution of representing the material's qualities, and results like these are likely.

Returning to early experiences in collage and photogram, students often experiment with cutting and pasting images – a photographic practice that leads directly to the work with computers (and is nowadays mostly done there before any work with paper prints) - you will see a number of samples in the lecture on multimedia. The last two images of this round-up of the first term in photography show a conceptual approach typical for students reflecting their own means while studying. Klaus Kuenen, now scientific assistant to our school, in his first photographic work produced a series of images showing him and a white plane in several relations to each other and to the room which he presents as an open space as well. Conceptual methods are important for those students who want to be open to any new development in technique or assessment. If a student ends his first term in this curriculum by a conceptual work it is easy for me to determine the next steps in his studies: the work in projects.

Project work is a sort of magic word in today's curricula since it allows an alliteration of total freedom to both teacher and student. In fact, this is not true. Projects, in the first instance, are assignments run as if they were real jobs. Sometimes they are but in most cases they are simulations of work in real circumstances. On the contrary to the curriculum displayed so far which is carried through in one term while the second year of studies, the project work in photography and multimedia starts in the second part of the studies, with the third year. Normally a project is conceived by the student after either receiving an assignment or after planning a set of projects with a teacher; he writes down the proposal and gives an exposée of the forthcoming work; often enough even a sort of plot or screenplay is arranged to make sure that the project can be carried out. This image of a dog belongs to a series of images made for a poster campaign again the ownership of harmful dogs in Germany – we did not take exactly this one for a poster.

Another project can be a reportage which has to be planned as well. As this student wanted to be very near to the covering of the Berlin Reichstag by the artists Christo and Jean-Claude in 1996, and as the costs for a journalist's accreditation were too high for him, he applied for becoming a member of the team hanging the cloths and serving as guards for three months. In this time he produced hundreds of photographs nearly unobtainable for others. He not only was able to sell these images to newspaper and stock photography agencies but worked with the artists' couple on later projects, too. Other students had to use means on the corner of being illegal: A long reportage on closed-down steelmills in the nearby Ruhr district ended in views of a mill at Duisburg-Rheinhausen which was closed against loud protests of politicians and people alike. So the company decided not to have this place photographed – do not ask me how this image and a series of others were made... Germany is a country on the edge of conversion: the old industrial production is left behind for the introduction of software industries and service enterprises. So any view on industrial architecture becomes a look back. In 1986 my students produced a calendar with former industrial buildings of a nearby district – and with signs of new uses of these old sites. Interesting enough: the more invisible new technologies become the more interested the people investing in it look at these old production sites.

As a last example of project curricular work in Krefeld I show you a few lines of Mireille Schellhorn's work cleverly situated between several media. Frequently travelling in a train along the Rhine (supposedly the most photographed tourist area in Germany) she re-constructed an old camera so that she could manipulate the film transport system. These images, taken on long strips of middle format film, were copied by a modified film scanner to a digital work station and reprinted on to long strips of photographic paper again. The sizes of these images differ from one to eight meters length. Other parts of these films were later animated by copying them on digital video streamers and reworking them with a musical background (she then was part of the Cologne techno scene). The printed versions were sent to a contest - and this guides me to the next stage of project work.

Competition is an important matter in education, and contests are set up by almost all companies that deal with design somehow. By contests one can define the state of the art, one can fix the level of quality in a given year, and so on. The number of competitions is so high that there are internet services giving accounts of running or projected competitions. Thus contests are good methods of designing projects for a term, and as there is a chance on winning the students are eager to cooperate on this type of work. I have brought you three samples of a book documenting a contest

two years ago, and I will leave theses books her for the academy's library as I asked the company Zander to donate them to you! In 1998 this paper manufacturer launched a paper smooth and mat as silk, named it silk, and therefore designed a contest for a book on silk. So this is the book of books of silk – and it, of course, has a lot to do with the silk road (that is the reason why I nagged the nice people at Zander's to send these books to me).

Equally important to company's contests are those of professional associations in design. The Association of Freelance Photo-Designers in Germany BFF not only runs an annual competition on the best exam productions but as well a pixel award for the best electronic photomontages. The winners of these contests are offered good jobs in industry or agencies (more important) and, in the case of the BFF, are made junior members of this club which is otherwise only difficult to reach. The same applies to the Art Director's Club of Germany and to a number of other associations or groups. Being a member of those does not mean anything in terms of an official status (although some meberships can even reduce your tax account) but it is extremely helpful in your early years as a social context for growing into the designers' society. Finishing my lecture I will just drop a few sentences on the possibility of studying in Germany. First of all, and despite to what you may have read in some papers, Germans are open to welcome any foreign student in their universities and academies. Besides the formal accounts to pass in your own country, there are some important restrictions in the openness of our educational system. As you are already inscribed to an academy you will not start studying in Germany, and therefore my advices will go along two different lines:

The first one is simple and easy. If you want to expand your own studies and stay for one term at one German institution you just have to apply for that. In most cases there should be no problem – except for the fact that you will not be allowed to pass any sort of exam there. Most of our teachers speak a more or less fluent Englsih so you will manage to jump over the language barrier. Anyway, I would rather suggest that you earn a basic knowledge of German beforehand. Things become a lot easier if two institutions fix a contract of exchange, with some of the professors on both sides taking the responsibility of selecting engaged and encouraging students.

The other way may sound more rewarding to you but is a lot more difficult to follow: a post-graduate study in Germany means that, after you finished your studies here in Tashkent, you apply for one of the larger academies like, e.g., Karlsruhe or Cologne, or you apply for a complete new study at one of the many Universities of Applied Science, like my institute in Krefeld. For this application you have to pass a test in German language which is not easy at all. These tests are either prepared by the Goethe institute here in Tashkent or by special courses in Germany. And you have to apply singularily at the institution where you want to study.

In this case you follow the same laws as German students: Each academy and each design institute in Germany can decide by itself which student to take and which not. The initial tests consist in presenting a folder of your own work so far and, at least in some institutions, of a personal examination at the institution's place. If you cannot pass this exam in the first instance you are allowed to repeat your attempt in the next year (all design institutions take students only once a year). Until this time you are allowed to stay in Germany and to try to pass the necessary tests in German, and you may well receive the guest student status. If you have any plans in future studies at a German institution, do not hesitate to ask me.