Translational Aspects of Basic Design Exercises

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Abstract: Among other things, translation is defined as “carrying something across”. With this interpretation, derived from the etymological root of the term, translation is not exclusively bound to a linguistic context. Therefore, a comparison between aspects of translation theory and the transfer of meaning in basic design exercises can be justified. Understanding linguistic translation as an act of cultural negotiation, raises the question to what extent basic design exercises reach across cultural constraints in transferring experience between design teachers and students. In other words: are basic design exercises transferring universal design principles or are they culturally determined the way language is? With the close reading of three basic design exercises, we present their diverse goals and intended transfer from teacher to student. (1) Drawing a cube is declared as a schooling of observation and an exercise in representing three-dimensional space in a two-dimensional drawing. (2) The technical aspect of constructing abstract geometric compositions had the declared goal of teaching perfection and craftsmanship. (3) And the graphical exercises followed the declared goal to generate a field of visual variations inferred from a strict set of rules and to learn to navigate within the design process. Based on this archaeology of intended goals described in the course of the three exercises, the paper discusses the implicit cultural constraints of the three exercises.

Keywords: basic design exercises; translation studies; cultural studies; technical drawing; design process

1 Basic Design Exercises and Translation Studies

Basic design exercises are usually conducted at an early stage of design education. In design and, specifically in the context of visual communication, they are regarded as a basis for solving more complex problems at a later stage. They isolate one formal or technical aspect of an applied project such as composition, colour, imagery, or typography. The syllabi of basic design exercises are formulated with clear constraints in order to guide a student through a manageable field of options in due time. The field of visual options is explored by an individual with tools and materials. It is assumed that a student who has managed to develop an aesthetically appealing composition, e.g. with vertical paper stripes, will be able to use this experience also in applied projects such as poster design, publication design, or the design of a man-machine interface. Basic design exercises were understood in the modernist tradition as a tool to teach universal visual principles. This issue will be contested later on in our contribution. Basic design
exercises are conducted with the intent to transfer an experience from a teacher to a student. But what are the experiences which are to be transferred? What is carried across from teacher to student through the exercise?

We can search for a differentiated answer to these questions by a comparison between the transfer of an experience from the teacher to a student with the transfer of meaning in a linguistic translation referring to the field of translation studies.

A straight connection between the transfer from teacher to student and linguistic translation can be drawn by referring to the etymological root of the word translation. According to the dictionary, the Latin term of “translatio” is the participle of “transferre”, which is translated by “to bring something across”, “to carry something across”, “to transfer”, and “to translate” (Langenscheidt, 1967). From the etymology of the term, we can infer that the meaning is not bound to the context of linguistics and, therefore, the attempt to look at the transfer provided by basic design exercises and the field of translation studies is justified (see also Baule/Caratti, 2017 and Renner, 2016).

An early approach to translation studies was proposed by Roman Jakobson, in his article “On Linguistic Aspects of Translation” (Jakobson, 1959). He starts out with a reference to a quote by Bertrand Russel: “no one can understand the word ‘cheese’ unless he has a non-linguistic acquaintance with cheese.” Jakobson argues that no one understands the word “cheese” without a linguistic acquaintance with the word and uses the example of “nectar” and “ambrosia”, which we understand through a linguistic encounter, reading Greek mythology, but without having the experience of tasting, smelling, or drinking the actual beverage. In his continuation of the reflection on translation, Jakobson distinguishes three categories of linguistic translation. He describes (1) intralinguistic translation as the act of rewording within the same language, (2) interlinguistic translation, or translation proper, as the transfer of a text from one language to another language, and (3) intersemiotic translation as the interpretation from verbal signs to signs of non-linguistic systems.

If we try to assess the validity of the three categories proposed by Jakobson for the discussion of the transfer of experiences in basic design exercises, we may have to go back to Bertrand Russel and say that the judgement of the quality of a cheese is only possible if we have experienced a variety of different tasting cheeses. In addition, we can claim that making a tasty cheese can only be learned by exploring how cheese is made. Besides, the creation of a meaningful communication design object can only be achieved by making it. The designer gains experience and constantly learns in every design process – from the first sketch to the perception of the final message by a beholder. Basic exercises help transfer what an experienced designer has learned to students. The language used to formulate the framework of the exercise does not describe the experience itself, but is used as a tool. Since the transfer of experience is the core of basic design exercises, the three linguistic categories do not apply here. Basic design exercises provide neither an intralinguistic, nor an interlinguistic or an intersemiotic translation. In conclusion, we can infer the need for a fourth category in addition to the linguistic perspective of Jakobson’s three categories: the translation from an original experience to its re-enactment in a condensed form – this is what is supposed to happen in a basic design exercise.

With this critical discussion of Jakobson’s famous differentiation of translation, we could give up the comparability of the transfer in basic design exercises and linguistic translation altogether. But this might be too incomplete a conclusion and miss finding an answer to the inquiry of what gets transferred in basic design exercises. If we turn back to the discourse of translation studies, one of the central topics of the discourse focusses on whether there is a core content or not which is possible or impossible to transfer from the source language to the target language. According to Walter Benjamin, information can be transferred, but not the essence of a literary text (Benjamin, 2000, p. 15). He uses the German word “Brot” in comparison to the French word “pain” to demonstrate that both terms point to the same object but are part of a different cultural context which is crucial for the meaning of the word (Benjamin 2000, p. 18, see also Richter, 2010, p. XV).

Continuing this line of thought, Lawrence Venuti contests the idea that there is an invariant which crosses different languages and would make translation easy. He claims that there is more than communication in the act of linguistic translation (Venuti, 2000, p. 470) and that the act of translation is primarily a cultural negotiation. A language is shaped by the collective memory of a society and this is the reason why a text cannot be translated literally.

“Translating is always ideological because it releases a domestic remainder, an inscription of values, beliefs, and representations linked to historical moments and social positions in the domestic culture. In serving domestic interests, a translation provides an ideological resolution for the linguistic and cultural differences of the foreign text.” (Venuti, 2000)
With this observation in mind, we can go back to the transfer basic design exercises provide and ask if there is also a cultural aspect which is transferred by basic design exercises. In opposition to the above-mentioned positions, questioning the existence of an invariant crossing different languages, Jacques Derrida’s understanding of the term translation can be employed to argue for an invariant meaning (Davis, 2001, p. 18). For Derrida there is no philosophy without translation.

“What does philosophy say? Let’s imagine that it’s possible to ask such a question: What does philosophy say? What does the philosopher say when he is being a philosopher? He says: What matters is truth or meaning, and since meaning is before or beyond language, it follows that it is translatable. Meaning has the commanding role, and consequently one must be able to fix its univocality or, in any case, to master its plurivocality. If this plurivocality can be mastered, then translation, understood as the transport of a semantic content into another signifying form, is possible. There is no philosophy unless translation in this latter sense is possible. Therefore the thesis of philosophy is translatability in this common sense, that is, as the transfer of a meaning or a truth from one language to another without any essential harm being done [...] The origin of philosophy is translation or the thesis of translatability, so that wherever translation in this sense has failed, it is nothing less than philosophy that finds itself defeated.” (Jacques Derrida, 1982/1985, p. 120)

The idea that meaning is “before and beyond language” claims that there is something before language which can be translated into a different culturally determined linguistic system. For the discussion of basic design exercises and their translational aspect, it is plausible that there is meaning before and beyond language. But before we draw any conclusions, a close reading of basic design exercises will help us to challenge the ideas of translation studies described above as a field of cultural inquiry.

2 The Transfer in Basic Design Exercises

2.1 Analytical Drawing: The Cube

Drawing was, and still is, considered one of the most basic processes to develop visual ideas. As we can see in the archived student portfolios of the Basel School of Design¹, drawing was the major focus in the education of graphic designers in the middle of the 20th century. Landscape drawing, figure drawing, nude drawing, portrait drawing, drawing of animals, drawing from memory, light and shadow drawing, etc., all these diverse areas of drawing occupied a major part of the schedule and were based on object drawing taught over two semesters in the preparatory year (Maier, 1977; Bollin, 1995).

The introductory class of Object Drawing followed a canonical sequence of drawing man-made objects. The students had to represent these objects with soft pencils (3B to 6B) in a linear manner on large sheets of paper (42 x 59.4 cm) mounted on the board of an easel. Starting point of the class was the representation of a physical cube with a 15cm-long edge, which was placed close to the drawing board on a stand. The transfer of the students’ observations was achieved by large freehand gestures on paper. The first challenge consisted in the transfer of the lines describing the square the cube was resting on (Figure 1). As soon as the two visible angles of the square and the relationship of the two sides of the cube facing the drawer were determined, the square was completed as the basis of the drawing (Bollin, 1995, pp. 6-7). The dissection of this basic square into quarters and the addition of the two diagonal lines connecting the corners, was executed in a second step. To confirm the correctness of the drawing, an ellipse was drawn into the square in a third step. If the drawing was correct, the ellipse inscribed in the square was precisely in a horizontal position. In other words: the largest extension of the ellipse had to be parallel to the horizontal edge of the paper (Bollin, 1995, p. 14). If it was not, the representation of the square had to be reconsidered and revised. Once the ellipse was fitting the square in a horizontal position, the drawing was continued. The vertical lines in the corners of the basic square were drawn as parallel lines to construct the cube (Maier, 1977, Vol. 1, p. 13). The top square of the cube was developed by observing the angles and the foreshortening of the four visible edges. In the final stage of the drawing, the important and visible lines were worked out. The lines follow a spatial logic. Visible lines and lines close to the beholder should be darker, lines towards the background lighter. Imagined lines are faded but follow the same spatial logic as the visible lines. After mastering the representation of the cube, additional basic geometric solids such as the cylinder, the cone, or the sphere were drawn into the cube (Figure 2, left). With the ability to draw these solids, more complex objects were drawn by dissecting them into basic solids. The representation of bottles composed

¹ Archive of the FHNW Academy of Art and Design, e.g. student portfolios Peter von Arx, Georg Staehelin, Rudi Meier.
of cylinders, ring cylinders, and spheres was an intermediate step (Figure 2, middle) towards drawing objects with more complex shapes such as pliers, wrenches, scissors, etc. (Figure 2, right).

In the preparatory year, parallel to object drawing, a drawing class focusing on the representation of sculptural objects was conducted in front of plaster casts from gothic cathedrals (Maier, 1977, pp. 42-71). The spatial representation experienced in the object-drawing class was applied in a third drawing class focusing on nature studies (Maier 1977, pp. 72-104).

If we ask what the learning result of the object-drawing class was, we can describe three major issues:
• The drawing of the cube transfers the experience of a method to negotiate the representation of three-dimensional space in the European cultural context.
• The drawing method, based on large gestures, shows that precision in a drawing can be developed through the iterative approximation to a final result.
• Even though the method of representation and the evaluation of the correctness of the observation are rational and follow the aim to objectify the representation of space, the quality of the traces developed by each student in the analytical drawing is individual.

In contrast to the described approximation of a result, the following basic exercises were transferring a different experience to the students.

2.2 Technical Exercises as Aesthetic Training
An early example of basic design exercises was conducted at the Kunstgewerbe- und Handwerkerschule Magdeburg in Germany around 1930. One subject was called “elementare Gestaltungübungen” (elementary design exercises) taught by Franz Fiebiger, but most likely developed by Walter Dexel and Director Wilhelm Deffke. In this subject, the students drew nothing but lines. They drew those lines on large-format paper or cardboard with ink and the help of tools such as pens, brushes, rulers, and compasses. The approximately 90 examples of student work archived in Magdeburg, present the drawing course as undertaken in a purely constructive and abstract manner, excluding freehand methods or depiction as such. The works show multiple lines, either straight or circular, in consistent, increasing, decreasing, or variable thicknesses, mostly black and white, also addressing positive-negative inversion.

In the estate of Walter Dexel, we can find 42 written assignments (see Vitt, 1980, pp. 164-165). Some descriptions in those assignments match the student works. On closer review of the assignments it is noticeable, that these indications could not serve as assignments alone. They only cover certain aspects of the drawing, leaving others out. It is questionable whether they were really formulated beforehand or rather in retrospect of the exercises as descriptions. Nevertheless, it is evident that the student works and those “assignments” belong together as Figure 3 shows.

Figure 3 (left). L. Link (student), ink on cardboard, 46 × 63.5 cm, Magdeburg, July 14th, 1932. Matches with Basic Design Exercise "17. Different line width, same spaces, slope downwards to the right with imaginary joint, slope upwards to the right in a row"². (middle). Anonymous, lithography, 64.2 × 50 cm, Magdeburg, without date. Matches with Basic Design Exercise "24. Compass exercise, same line width, same space, one half positive, one half negative"³. (right). J. Kalinke (student), ink on cardboard, 64 × 45.7 cm, Magdeburg, October 26th, 1933. Matches with Basic Design Exercise "26. Wave line, different line width, different spaces"⁴.

² 17. Ungleiche Linienstärke, gleiche Abstände, schräg rechts abwärts in imaginärer Gehung, schräg rechts aufwärts in Reihung
³ 24. Zirkelübung, gleiche Linie, gleicher Abstand, halb positiv, halb negativ
⁴ 26. Wellenlinie ungleiche Linienstärke, ungleiche Abstände
While the assignments are formulated in a technical language, the student works are executed with a high level of precision. There are no imperfections or corrections visible. This lets us assume, that the students – in case of mistakes – must have repeated the same exercise several times. On the final sheet there were no corrections allowed. To master the tools and the material must have been the declared goal of the exercise.

For Wilhelm Deffke, the Director of the school – a member of Deutscher Werkbund – precision was associated with machines, which he appreciated:

“Far from any idealization of traditional craftsmanship, as it has shaped the early Bauhaus, Wilhelm Deffke understood the machine not only as a ‘miracle of the human mind’, but above all as a means of educating people to precision, both in planned design thinking and in production itself.” (Eisold, 2016, p. 88)

Several works, such as in Figure 3 middle, were executed as lithographs in the printing workshop. It is not clear, whether the basic design exercises were followed by a lithography printing class reproducing the same visuals, or whether those prints were the templates based on which the exercises were executed. The language used in the assignments suggests a purely technical exercise, but their execution and results also imply experiences on an aesthetical level. The large number of works involving optical effects can be associated with Wilhelm Deffkes aesthetic preferences and his special interest in visual perception: “The aim of the education was the training of visual perception, a strengthening of visual thinking as a counterpart of linguistic thinking, a thinking, a thoughtful eye [...].”\(^6\) (Eisold, 2016, p. 91). This analogy to language is also the starting point of a research project conducted but never completed by Deffke: His “Grammatik der Formensprache (Bildsprache)” (grammar of visual language) in which he planned to inquire into “the basic elements of the point, the line, the plane, the symbol or sign, the alphabet, heraldry, the figure, and space” (Deffke, 1948).

Outside of the narrow framework of the assignments, there are additional student works which cannot be attributed to any precise assignment. While the ones connected to the assignments visually focus on the aesthetics of specific visual effects and decisive compositions, the non-attributable ones appear more tentative. Some of them fall behind in their visual quality, e.g. a circular spiral of which the stroke ending in the centre appears unsolved (Figure 4).

\[\text{Figure 4. René Döring (student), ink on paper, 46 x 59 cm, Magdeburg, July 26th, 1933.}\]

From the starting point of given assignments, the students were most likely free to apply or develop their own line-based compositions. If this is true, the experience that the teacher wanted to transmit must have been not only a technical, but also a visual or even a creative one. The freedom here lies in the still tight frame of what has been experienced so far and its free combination or rearrangement. But the gap between the consistent sheets of instructed exercises and the tentative, more individual solutions appears quite large.

\(^5\) “Fern jeder Verklärung traditioneller handwerklicher Arbeit, wie sie das frühe Bauhaus noch geprägt hatte, begriff Wilhelm Deffke die Maschine nicht nur als ‘Wunderwerk menschlichen Geistes’, sondern vor allem als Mittel der Erziehung zur Präzision, sowohl im planenden entwerferischen Denken als auch in der Produktion selbst.”

\(^6\) “Ziel des Unterrichts war das Training der visuellen Wahrnehmung, eine Stärkung des bildlichen Denkens als Pendant des Begrifflichen, ein denkendes, ein nach-denkendes Auge [...].”
The learning result of these exercises can be described as follows:

- The ability to create a neat and technically precise large-format ink drawing, suppressing the slightest human touch or expression.
- The visual vocabulary of shapes and line compositions limited to construction and visual effects provides the student with an understanding of modernist aesthetics.

2.3 Creativity or Planning

One exercise, which has been continued for several generations, is what Manfred Maier and his colleagues developed for the course “grafische Übungen” (graphical exercises) at the Basel School of Design. Maier taught there from 1965 till 2000 at the Vorkurs (preparatory course) and the Fachklasse für Grafik (Graphic Design Class).

In contrast to the previous example, focusing on technical precision, technical challenges were reduced to a minimum in this exercise. In an early version of the exercise, the students were asked to start from a black and a white paper square, of which the first was cut into four equal bars. In a first step, the students arranged the four black bars in different ways on a white square. A specific set of interventions was allowed: tearing, folding, shifting, and cutting (see Figure 5). Despite these interventions, the formal character of the four equal bars should have remained visible. The more solutions the students could find, the better. Solutions with pictorial character in any sense (including abstract basic shapes such as a cross, circle, triangle, etc.) were rejected (Maier, 1977, Vol. 4, pp. 42-72).


The second step was to choose one solution as a theme and to develop more variations of it. The resulting variety of solutions were, in a third step, analysed and organized according to appropriate, but self-defined, graphic qualities such as dark and bright, vivid and calm, full and empty. Maier describes these qualities as “qualitative criteria” (Maier, 1977, Vol. 4, p. 42). With their own set of criteria, the students developed their individual criteria matrix, a chart with two axes, which allowed them to place each solution within it (see Figure 6).
In the last step, gaps in the matrix were filled in with more variations. According to Maier, the goal of the exercise was the variety itself – a quantitative criterion – and the awareness the student gained of the design process. In his publication on the preliminary course, Maier also discussed less successful student works. He emphasized how difficult the seemingly simple exercise is and describes failure as part of the design process.

In a later version of the exercise used in the preparatory year of the Basel School of Design in the 1980s, the criteria of evaluating the compositions became mathematical in order to minimize the aesthetic judgement. Here, the black square of 8 by 8 centimetres was not cut into four bars, but remained a square. The black square had to be transformed by a sequence of actions of ripping, cutting, or folding. After the actions were executed, the black square had to be placed within the format of 8 by 8 centimetres. The parts of the square extending over the format had to be eliminated. The solutions of this exercise were only valid, when it could be visually proven that the black shape originated from a square after the actions were executed. A combination of conditions such as original right-angled corners, edges in original length or the original relationship between the edges of the square had to be visible in order to explain how the sequence of actions led from the original square to the final composition. Part of the exercise was to define a set of conditions that guarantee the conclusion to the square: “A solution is clearly legible if the square appears in the original format with at least two full side lengths or its angles or different combinations of both elements.”

(Quote from the documentation of the exercise, Figure 7. Archive of the FHNW Academy of Art and Design.)
Once again returning to the question of what the learning result of this exercise has been, we can define the following points:

- The method proposed in this exercise helps students to conduct a design process from the first sketch through a productive and goal-oriented practice, developing both intuitive and analytical skills. The variations are generated in the first phase with an experimental exploration. In the second phase, the variations are created systematically.
- The students learn on an abstract example to define criteria in order to a) create and b) evaluate variations of solutions to a design problem. The criteria are not based on an aesthetic judgement but on the consideration of the constraints given in the description of the exercise.

3 Conclusion

In consideration of the above described exercises, we can go back to the question of linguistic translatability and the transfer of the debate to the translational aspects of basic design exercises. Despite the above-mentioned difference between linguistic translation and the transfer of experience in basic design exercises, we can find a surprising parallel in the cultural constraint of a language and the cultural constraint underlying a basic design exercise. The cube exercise trains the eye and the ability to observe, but in the transfer to the two-dimensional drawing, cultural conventions of the representation of space are becoming apparent. The depiction of the vertical lines describing the vertical edges of the cube as parallel lines is a convention which is underlying the representation of space ever since the Renaissance masters and their understanding of perspective. In this sense, the exercise transfers more than the training in observation from teacher to student. The cultural constraints are the underlying schema of the pronounced goals of the cube-drawing exercise.

Also, in the basic exercises conducted at the Kunstgewerbe- und Handwerkerschule Magdeburg in Germany around 1930 presented above, a cultural component is transmitted. Next to the training of the hand in the precise use of the tools and the training of the creation of visual effects derived from an open description of the exercise, the underlying message is the ideal of a mechanical production in the machine age. The designer has to be able to develop results which could be done by a machine as the quote of Wilhelm Deffke emphasizes.

In the third exercise on the design process, we once again encounter an underlying cultural schema. The systematic approach to the design process and the development of a field of visual variations based on rational criteria implies that the development of a creative result is plannable and inferable from rational criteria. With a critical analysis, the suggested plannability is transferring a biased conception of the design process: to strictly follow established structures in varying solutions excludes the development of a surprising, intriguing, or shocking visual message.

In conclusion, we can claim that, as language is determined by the cultural context it is used and transformed in, basic exercises carry clear constraints which are culturally determined in the transfer from teachers to students. As to the existence of an invariant meaning reaching across languages, the exercises described above suggest that a basic experience can be transmitted across cultural contexts. With other words: the cube drawing can also be taught in a cultural context outside the Western hemisphere, but the perception of analytical drawings in a non-Western
culture carries an inherent notion of domestication. It is a specific interpretation of the world which is not shared globally but to a wider extent than a specific language.

Derrida’s claim that there is meaning before and after language, is key to understanding basic design exercises as a translational act. As mentioned before, the linguistic description of the basic design exercise is not describing the experience which has to be transferred, but the framework in which the experiences are most likely to be re-experienced by the student. In this sense, language is a tool to transfer meaning experienced by a teacher to the re-experiencing of meaning by a student’s exploration. Since experiences can only be guided intentionally to a certain degree, basic design exercises as language also depend on the individual interpretation of the respective student or reader. Both of them are bound to their cultural context apparent in the constraints of visual schemata or the structure of language.

References

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