The Metropolis as a Giant Hall of Mirrors

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Abstract

Until the late 19th Century, European metropolises used to be identified by the shape of their landmarks (the town hall, the cathedral, the opera, the railway station), and their depiction (and remembrance) was restricted to a few fixed viewpoints. Identity was created through typification. Moving in the city and producing pictures of it were regarded as separate activities. This situation changed in the 20th Century: a new medium of image production emerged, which now comprises the thousands of sign vehicles literally passing through the city every day in the form of motor cars. Since the 1930s, an average car has consisted of a glossily painted metal body with chrome parts and glass windows covering a dark interior, and all of these have been functioning as mirrors reflecting the city quarter in which the car happens to be. Cars have become inverse mirror chambers and cities, giant halls of mirrors. Pedestrians standing at a street corner regularly experience beams of light flashing distorted images of their surroundings over them. When the sequence of cars passes by with high speed, this is intoxicating like the stroboscopic effects of a disco ball. The city as a whole and its landmarks are visually deconstructed by their reflections on car bodies. As an example, the present contribution shows how the acknowledged perspectives of a particular postwar building in Berlin are being replaced by a multiplicity of appearances through the mobile mirror chambers passing by.

1 Introduction

In the late 19th century, the inhabitants of the world’s growing metropolises began complaining that their cities had become so large that they could no longer be experienced as such, nor be seen as a whole from any single vantage point (see Riha 1970, Scherpe 1988, and Hilgers 2004). They tried to overcome this problem with architectural innovations (such as building monuments as symbolic embodiments of their city) or with engineering solutions (such as the Ferris wheel, a hot-air balloon, or a Zeppelin above the city, and a radio tower in its center). However, all such devices proved too static to capture the restless urban life and to make its unique sense comprehensible (see Hauser 1990). In order to find a perspective from which they could see the entire city, beholders had to move so far away from it that the details of the city’s life became unrecognizable.
It was the 20th century that developed a more appropriate means for the self-comprehension of the metropolis. This consists of the millions of mirror images simultaneously produced by the motorcars, trucks, buses, and trains, which incessantly move through a city’s traffic spaces. Night and day their metal bodies with chrome parts and glass windows reflect the urban surroundings they happen to be in—doing so casually when passing through the big thoroughfares or purposively when moving on boulevards and plazas. Instead of frozen gestures of mythical figures standing on memorial pedestals, they present mobile pictures of other vehicles, people, and buildings. Only certain means of public transport, such as cabs and subway trains, produce nearly no reflection, having been painted with pale colors or moving through poorly lit areas, respectively. In this way, each metropolis now has its own medium of self-presentation available, making use of the urban infrastructure and expanding over its whole area.

Being multiply individualized, accessible to everyone, and functioning largely without administrative patronage, this medium deserves to be called “democratic”.

Even when its perception is so highly automatized that it is no longer noticed, as is the case with many inhabitants, it nevertheless remains responsible for their feeling of missing something when they go to the countryside: the impression of a dense life with abundant opportunities (see Marsh and Collett 1986).

This medium not only reflects, but also processes to a certain degree what it shows: it dyes, brightens or darkens; distorts, divides or multiplies; reduces or enlarges; contracts or expands; implodes or explodes in what is otherwise accessible only in an unprocessed form. And it is this processing which molds what is taken by inhabitants and visitors to be their city (see Hüppauf 2006).

When reflecting the city’s life, shop windows, busses, and cars intensify this life by deconstructing it (see Culler 1982 and Norris 1982). The material configurations of the buildings, people, and vehicles directly perceived and the virtual configurations of their reflections perceived in buildings and vehicles equally contribute to the urban experience (see Westerbeck and Meyerowitz 1994 and Roskothen 2002). Construction and deconstruction merge inseparably into a fascinating whole.

This characterization of city life at the turn of the third millennium AD might be rather surprising for some readers of the present essay. So let me present just one building and show how the surrounding city integrates it into its everyday life by means of shadows and reflections. The building is known as “Telefunken-Hochhaus” and was the first high-rise constructed in Berlin after World War II (see Photos 1 and 2).

2 The Telefunken-Hochhaus, its purpose and location

This building was constructed by the architects Paul Schwebes and Hans Schoszberger between 1958 to 1960. With its 22 floors (including the ground floor and the technical
level below the roof) it is 80 m high and was Berlin’s tallest office building in the 1960s. Its 15,000 m² of floor space were used for offices and laboratories by AEG-Telefunken until 1975 and then taken over by the Technical University of Berlin, where it now functions as an office and lecture building for the humanities. Since then the building has carried the latter institution’s name, “Technische Universität,” as a vertical chain of capital letters on the south edge of its east and west fronts (see Photo 1).

Informally still called “Telefunkenhaus” today (which is a shortened version of its original name), the building owes its existence to the efforts to reconstruct parts of Berlin-Charlottenburg in the 1950s according to plans that had originally been developed for Alexanderplatz in Berlin-Mitte in the 1920s (see Photo 3). The result was a gigantic traffic roundabout (named “Ernst-Reuter-Platz” after the first post-war mayor of Berlin) with one dominant high-rise that was to be visible 4 km to the West (from Bismarckstraße) and 4 km to the East (from Straße des 17. Juni) as well as 1 km to the Southeast (Hardenbergstraße), Northeast (Marchstraße), and Northwest (Otto-Suhr-Allee).

The sights to be offered to the users of these streets determined the design of the building. It consists of an oval-like ground plan with two identical broad sides looking East and West, respectively (see Photo 1), and with three additional show sides, each combining a narrow side (see Photo 2) with a broad side and thus visible from Hardenbergstraße, from Marchstraße, and from Otto-Suhr-Allee (which all enter Ernst-Reuter-Platz diagonally in relation to the orientation of the Telefunkenhaus).

Between the 1960s and the 1980s, other buildings were added around Ernst-Reuter-Platz in order to form an open space occupied by an ensemble of detached high-rises, which could be experienced as a counterpole against the more conservative style of city reconstruction practiced in East Berlin (see Gausmann 1992).

This ensemble includes the university faculties of architecture and of mining and metallurgy to the North and South of Straße des 17. Juni, the U-formed Pepper office buildings, the West Berlin branch of Deutsche Bank between Marchstraße and Otto-Suhr-Allee in the North, as well as the Kiepert, Telekom, Iduna, and IBM buildings between Bismarckstraße and Hardenbergstraße in the South.

Although all the buildings are box-shaped, they are individually recognizable by their house fronts. The Telefunkenhaus is carried by a reinforced-concrete construction with a façade of fair-faced concrete. The floor plan of the building accommodates five elevators in the center and two emergency-exit stairwells, which occupy the narrow sides in the North and the South. What is unique in this building is the structure of the broad sides, which are marked by four white pillars—20 floors high, slightly tapering towards the top, and thus creating the impression of an ocean liner floating on the central lawn of Ernst-Reuter-Platz between the other buildings bordering it.

This impression is confirmed by the lowest two floors with their big show windows and by the fact that there is no prominent entrance annex, but only a hardly noticeable
horizontal roof thrusting out from the central hallway in the middle of the building. A more showy entrance complex would have spoiled the boat allusion.

So far I have documented the Telefunkenhaus only with photos directly taken of the building and presenting its two main show sides: the Eastern broad side (to be seen from Ernst-Reuter-Platz and Straße des 17. Juni (Photo 1)) and the Southern narrow side (to be seen together with the Eastern broad side from Ernst-Reuter-Platz between Bismarckstraße and Hardenbergstraße (Photo 2)).

Let us now turn to the first two photos of motor cars reflecting the Telefunkenhaus (Photos 4 and 5). Each of them combines a street view of the Telefunkenhaus with a mirror image reflected by a car. Photo 4 shows the Eastern broad side with an upright mirror image reflected by the vertical windows of a minibus. Photo 5 shows the Southern and Eastern side from a diagonal perspective with an inverted mirror image reflected by the horizontal hood of a passenger car. Uprightness and inversion are caused by the different angles of the mirror surface (vertical versus horizontal; see below). In addition, both photos show parts of the surroundings of the Telefunkenhaus. Photo 4 mirrors most of the Telekom building in the bus window and directly presents the pavement of Ernst-Reuter-Platz, including a streetlamp, traffic signs, and other cars as well as trees. Photo 5 mirrors marginal parts of the Deutsche Bank building on the hood and directly shows its original together with other cars, flags, and trees.

What one can see mirrored in a car is rarely an isolated entity, but mostly a dominant object with its surroundings. And, of course, the car is itself surrounded by other vehicles, pedestrians, and buildings. This constellation produces two types of contexts: the surroundings of the car seen directly and the surroundings of the mirrored object seen reflected beside it on the car. In this way, car reflections select objects, create connections between them, and deconstruct their relations.

This is also true of Ernst-Reuter-Platz as a whole, as can be seen in Photos 6 and 7. In Photo 6, the vertical rear window of a Smart car parked at the Southern roadside of Ernst-Reuter-Platz reflects the Telefunkenhaus together with the Northern part of the ensemble of detached high-rises around it. Functioning as a mirror, the car window presents the buildings in a horizontally inverted order, starting on the left with the Easternmost building—the U-shaped Pepperhaus,—continuing with the Deutsche Bank and an apartment block on the two sides of the Telefunkenhaus, and finishing with the Telekom building, which is in fact situated to the Southeast of the Telefunkenhaus. In Photo 7, the diagonally positioned front window of a small car parked at the Northern roadside of Ernst-Reuter-Platz introduces a complication by reflecting vertical objects in a horizontal position. The East-West sequence of the Kiepert, IBM, Iduna, and Telekom buildings, which is seen directly in the right half of the photo, is shown mirrored on the left as a heap of horizontalized high-rises next to (i.e., seen on top of) the Telefunkenhaus.

These two photos exemplify two alternative strategies of looking at car reflections.
In the first, the beholder is so fascinated by the dominant object mirrored on the car that he or she disregards the car’s directly visible environment (see Photo 6); in the second strategy, the beholder is interested in the contrast between real (i.e., directly visible) urban structures and their more or less distorted counterparts which are virtual (i.e., visible only as reflections, see Photo 7). Both strategies can be highly rewarding from an aesthetic point of view.

3 Shadow and mirror images on cars and their optical conditions

We have so far looked at reflections produced by cars parked at the roadside. Let us now analyze some of the visual effects which cars achieve when they are moving. As we have seen in the case of immobilized cars, each position change of the beholder leads to a new mirror image. An even stronger effect occurs when a car moves in dense city traffic and is carrying several passengers (see Photo 8). Each of them will see different reflections, and when they try to discuss what they see on the surfaces of other cars moving simultaneously, they will have some difficulty, because their fellow passengers cannot see the same mirror images at the same time. Each of them will fail to perceive what the other is speaking about.

Equipped with a reflective hood, roof, trunk and side parts, including windows, every car carries a multiplicity of mirror images which continuously undergo modifications as the car moves (see Photo 9, which shows mirror images of Deutsche Bank and the Telefunkenhaus directly in front of the actual Telefunkenhaus and Telekom buildings). Such images create fascinating compositions when they are distributed over several cars. An example is the triangular structure jointly carried by two cars simultaneously driving in a parking lot near Otto-Suhr-Allee (see Photo 10, which shows two partial reflections of the Telefunkenhaus and one of Deutsche Bank). A moment later (see Photo 11), the same cars occur at a slightly different angle, resulting in a considerably different image composition—which now includes a further reflection of Deutsche Bank on the metal between the door handle and the side window of the second car, tinted red by the metal color. This is how car traffic creates moving mirror images, just like the cinema has created movies (in the sense of moving photos), and in both cases this effect is rendered more potent when the people and objects shown on the moving mirrors/photos are themselves involved in movements of their own.

Of course, this double movement effect can also occur on a single car body when its metal surface is sufficiently articulated. Photo 12 shows the hood of a Mercedes where the streamlined metal encasement of the two left headlights reduces the Telefunkenhaus to two virtual canoes, framed by an inverted normal image of this building and an even more distorted image of Deutsche Bank.
Figure 1: The image-producing capacity of shadows: a screen showing the silhouette of an object. The sunlight falling on a bus is partly blocked by a building, which creates a shadow occupying the space between the building and the lower part of the bus, while its upper part remains in the sun. The cross-section of the shadow on the bus is a two-dimensional silhouette. It corresponds to the contours of the building. No other details of the building are indicated on the bus.

How do such images arise and what determines their forms? Images on a car that vary with the car’s position are produced by two very different kinds of processes: shadows leading to another object’s silhouette and reflections leading to another object’s mirror image. In fact, this is not surprising since all human cultures tend to trace the origins of visual representation back to the image-producing functions of shadows and reflections. Within the European tradition, this knowledge has been passed on for thousands of years in the form of Plato’s myth of the cave and the myth of Narcissos. The first (see Plato, Politeia 514a–517a) describes cave dwellers making inferences on the size and shape of objects outside their cave by looking at the shadows which these objects throw on the cave wall when moving past the cave entrance. The second (see Ovid, Metamorphoses 3, 339–510) describes how Narcissos discovered the forms and colors of his own face when looking at its mirror image reflected on the surface of a lake.

Both shadows and reflections result from light interacting with objects, but they produce images in opposite ways (see Molle and Hennebicq 1985: 85–99 as well as Brauner and Kickinger 1982).

Described in optical terms, a shadow is a dark area occurring on the surface of a medium when the latter’s illumination by direct light from some source is partly blocked by an opaque object. The borderline between the dark and illuminated areas on the medium corresponds to the contours of the opaque object and is therefore interpreted as its shadow image (its silhouette; see Figure 1).

A reflection occurs when the light rays coming from some illuminated object arrive at the surface of a denser medium and are thrown back by it. The distribution of colors and forms thrown back corresponds to their distribution on the surface of the
Figure 2: The image-producing capacity of reflections: a vertical mirror reflecting a vertical object. The glass windows (with dark background) and the darkly painted metal on the right side of the bus in the shadow form a flat surface which reflects the upper part of the house front (illuminated by the sun) into the eyes (or the camera) of the beholder. Details of the house front such as the relative size and position of windows reappear on the side of the bus. The vertical position of this mirror leads to an upright specular image; its flat surface avoids distortions.

illuminated object and is therefore interpreted as its mirror image (see Figure 2).

These definitions explain why a shadow image does not reveal any details about its object except for its contours, whereas mirror images show both the contours and the surface structure of their object; in addition, shadows can only differentiate between degrees of darkness and lightness, whereas mirror images can reflect the entire spectrum of colors.

What is responsible for these differences between shadow images and mirror images is the relative location of the light source, the object, the image field, and the beholder. In the case of shadows, the object lies between the light source and the image field, which makes its dark side face the image field, whereas mirroring requires that the reflected side of the object be illuminated to some extent, which means that the light cannot all come from behind the object. This entails that mirror images normally involve two reflection processes: the incoming light is first thrown back from the object onto the image field and then thrown back from the image field into the eyes (or the camera) of the beholder (see Figure 2).

The position of the beholder can vary in both cases as long as it rests on the side of the image field on which the object lies. However, a position change of the beholder never alters the shadow image on the image field, whereas it always leads to a change in the mirror image seen (compare Figures 1 and 2).

While shadows can occur on all opaque objects, reflections of light presuppose the existence of an interface between two media with different refraction indices, in particular air versus glossy wood, stone, metal, or glass in front of a metallic coating. A reflection of light occurs when light rays change their direction at the interface and
Figure 3: The image-producing capacity of reflections: a horizontal mirror reflecting a vertical object. Seen from the opposite side of the car in the shadow, the house front reappears on the hood in an inverted form. While the top of the building is mirrored near the beholder, its lower parts are mirrored on the far side of the hood. The horizontal position of the reflecting hood leads to the inversion of the mirror image. The curvedness of the hood leads to distortions of the building shape in the image.

Figure 4: The law of reflection: At a mirror, the angle of incidence $\theta_i$ of an incoming ray equals the angle of reflection $\theta_r$ of the outgoing ray.

return to their original medium. Perfect reflection (mirroring) occurs when all light from a single incoming direction is reflected into a single outgoing direction. Such behavior is accounted for by the law of reflection, which states that the direction of incoming light (the incident ray) and the direction of outgoing light (the reflected ray) make the same angle with respect to the perpendicular (the normal) of the reflecting body, in other words the angle of incidence equals the angle of reflection (see Figure 4).

In the urban context, the law of reflection has interesting consequences. When a vertical mirror (e.g., the side of a bus) reflects a vertical object (e.g., the front of a high-rise), we see an upright image (e.g., the house front) mirrored in the bus (so that the house front seems to start traveling; see Figure 2 and Photo 4). When a horizontal mirror (e.g., the hood or the trunk cover of a car) reflects a vertical object (e.g., the front
Figure 5: Curved mirrors: In a convex mirror parallel beams of light diverge after reflection. In the eyes (the camera) of the beholder they produce a virtual image, which is upright and diminished.

of the same high-rise), we see an inverted image (e.g., the house front turned around so that it seems to stand on its roof; see Figure 3 and Photo 5).

Variations such as these are multiplied when the mirroring interface is not a flat surface, but curved. Curved mirrors may either be convex (bulging outward, like the fender of a car) or concave (bulging inward, like the place where the fender merges with the car body and the places where the hood and the trunk cover meet the front and the rear window, respectively). The effects of these metal shapes can again be easily understood on the basis of the law of reflection (see Figure 4).

After reflection from a convex mirror, parallel beams of light diverge (see Figure 5). The effect is a diminished upright image: everything appears smaller in the mirror. The mirror covers a wider field of vision than a flat mirror does. The image makes the impression of being compressed. The passenger-side mirror on a car is typically a convex mirror. This has a distorting effect on distance perception. Objects in this mirror appear further away than they really are.

After reflection from a concave mirror, parallel beams of light converge (see Figure 6). Regular concave mirrors reflect inward to one focal point. Unlike convex mirrors, concave mirrors show different image types depending on the distance between the object and the mirror.

1. If the object lies very near to the mirror, i.e., so that it is located between the mirror and its focal point, a virtual image is created, which is upright and appears magnified (see Figure 6 again).

2. If the object lies between the focal point and double its distance from the mirror, the image is real, but vertically inverted, and again appears magnified (see Figure 7).

3. If the object lies further away from the mirror than double the distance of the
Figure 6: Curved mirrors: In a concave mirror parallel beams of light converge after reflection. Where the object lies between the focal point and the mirror, they produce a virtual image, which is upright and magnified in the eyes (the camera) of the beholder.

Figure 7: Curved mirrors: In a concave mirror where the object lies between the focal point and double its distance from the mirror, the image is real, vertically inverted, and magnified.

...focal point, the image is real and vertically inverted, but appears diminished (see Figure 8).

If one takes all these prototypical ways of molding the glass, chrome, and metal parts of a car body together, it becomes obvious that every car being driven today is a highly refined optical instrument for the multiple representation of its environment. Vertical side windows reflect the surroundings at an angle different from the windshield and the rear window. The metal panels of the hood, the roof, and the trunk cover, although mostly horizontal, tend to be elaborately curved and folded. And, of course, the horizontal and vertical variability of the observer’s position relative to the car and its surroundings is an independent parameter which provides competing ways of optimizing each component mirror’s reflections.

Thus every contemporary car moved into the appropriate constellation of light and shadow vis-à-vis the urban context offers a firework of mirror images of the surround-
Figure 8: Curved mirrors: In a concave mirror where the object lies further away from the mirror than double the distance of the focal point, the image is real, vertically inverted, and diminished.

ings—be they buildings, other cars, or pedestrians doing their business, sitting in cafés, or strolling through the city (see Photo 13). And these images compete with the direct vision of their objects in making citizens and visitors interpret the situation they are in.

A good example of how direct vision, shadows, and reflections interact is documented in Photo 14. On it we can see a car sitting in front of a multilevel garage in a garden which seems to have been inserted into floors 5 through 8 of the Telefunkenhaus. This car appears as though it may roll forward at any moment and fall out onto the photographer standing next to a parking sign in the street underneath. Only a small fence and a pole holding a young tree seem to keep the car from doing so.

This is a highly improbable constellation, and anyone confronted with it will tend to explain it by assuming that the picture is a collage, the result of multiple exposure, or the outcome of some digital editing (Photoshop) or analogical manipulation (painting on the camera lens or on the photo paper). But this is not so. The photo shows exactly what the photographer saw when he pressed the shutter release button of the camera. (The reader can be sure of this because I myself was the photographer of this and all other photos shown in this essay.)

So how could the photographer really see what we see in this photograph? The key to solving this riddle lies in the relationship between the parking sign and the license plate: why is the image of the parking sign in the street mirror-inverted whereas the license plate of the car is readable in a straightforward way? Does a double mirroring take place in the case of the car? The answer is no: despite the confusing context, the photographer sees the car, fence, trees, and garage directly by looking from outside into one of the left side windows of a red bus; the view passes through the bus’s interior, goes through the window on the right side of the bus, (crosses a sidewalk) and finds the car standing on the pavement of a parking lot behind a small piece of flowered lawn; behind this car other cars are directly visible, standing below the three white
levels of the garage next to a red office building (see Figure 9 for a sketch of the special constellation of objects shown in Photo 14).

If so, how do all the other details come into the picture? Well, they are jointly reflected on the glass of the left window with the help of the shadow on the inside wall around the right window, which provides the dark background necessary to make the left windowpane function as a mirror. This is why the images of the parking sign, the photographer, the Telefunkenhaus, and the Telekom building on the right are mirror-inverted whereas the images of the car and the garage including the red office building in the middle are not (see Figure 9 again).

Interesting are the silvery pipes (as well as other small objects apparently hovering in the air on top of the Telekom building). Among them are carriers of headrests
happening to be located in small pockets of sunlight inside the bus, which are directly visible, just like the red office building which lies far away outside the bus. It is their brightness which makes them outshine the strong and coherent reflection of the broad side of the Telefunkenhaus and the Telekom building.

4 The appearance of the Telefunkenhaus in car reflections: an account of people’s responses

What happens when direct vision interacts with shadows and reflections that do not occur on a bus with its rectangular design, but on cars with more elaborately designed bodies? This is illustrated in Photos 15-18, which all present the metal area between one of the back side windows and the rear window of a subcompact car.

Photo 15 shows how the slight torsion of the metal surface gives the Telefunkenhaus a slim shape, elegantly bent in the style of the 1950s. However, such a metal surface can undergo stronger vertical modulations which put more stress on the building’s visual appearance: the car shown in Photo 16 has a horizontal fold in the metal which gives the building an abrupt bend to the right, and it seems that the concave area above the fold makes the building return to its original orientation in a sweeping curve which is continued vertically in the upper levels. However, this is a misinterpretation: what we see on the car is not one Telefunkenhaus being bent, but three Telefunken Houses piled on top of each other.

The proof for this claim lies in the fact that the building’s white top floor can be seen three times in this mirror image: once on the top and twice in the curvature. This means that the lower portion of the top half of the image is an inverted form of the upper portion of the bottom half. The concave metal area evidently has the effect of producing both an upright and an inverted image of the Telefunkenhaus, and the flat metal area above it creates the upright image located on the top, which blends with the inverted image at the bend. The inverse duplication of the Telefunkenhaus which we find here is an effect of the first two cases of concave mirroring described in chapter 3.

This analysis is confirmed by Photos 17 and 18, where the camera position with respect to the metal fold is lower, which tears the current building conglomerate apart, resulting in a duplex high-rise in the air virtually departing from a simplex high-rise on the ground.

Narratives such as the formulation that some position of the beholder or his camera “tears” a virtual building “apart” are problematic. However, they offer themselves to any observer who interacts with the images on the car by slowly walking along the car body. Such an interactive approach also stimulates imaginations of other types: the building in the air can be conceived as a flying saucer (Photo 19), or a boomerang (Photo 20), or even a fan (Photo 21). This makes one wonder which principles people
use when trying to make sense of the configurations of colors and shapes which they encounter when looking at car bodies.

To answer this question, more than 500 adults (pedestrians as well as drivers who had parked their cars) were interviewed on the sidewalk near the Telefunkenhaus at Ernst-Reuter-Platz in the summer of 2008. The interviewees were randomly selected from among the persons passing by; their attention was drawn to one of the cars parked at the roadside, and they were confronted with the following question: “We are making an inquiry on the role of cars in the city. May I ask you: what do you see on the body of his car?” This setup led to the following results:

1. Nearly 20% of the individuals addressed opted against entering a dialogue and typically said: “What do you mean? This is a car. I don’t see anything else. Bye-bye.”

2. Others (i.e., 25%) took more pains to look at the car’s surface and typically responded by saying: “I see some pattern of light on the hood”, or: “The hood is covered with parallel lines bent in several ways” (see Photo 22). Quite a number of them became more involved and tried to give an overall description of the pattern they saw, typically using structural terms to characterize it. Often they alluded to the shapes of letters and said: “I see a bunch of parallel ‘S’s’ on the front part of the hood” (see Photo 23), or: “On the left front door there is a letter shaped like a small alpha (‘α’)” (see Photo 24), or: “The left back corner of the hood carries a ‘U’” (see Photo 25), or: “Next to the air inlet below the windshield one can see a ‘V’ and an ‘A’”(see Photo 26). Such descriptions reveal that their authors’ perception is confined to the syntactic level: the pattern is not taken as representing anything except its own form.

3. A considerable number of the interviewees (i.e., 40%) went further than that. What they saw suggested a certain object to them, and they formulated that by saying: “On this bus I see a shadow of that car”, or: “On this car I see a reflection of that building”. This was usually explained by saying: “The car throws its shadow on the bus”, or: “The building is mirrored in the car”. Such a response is, of course, easy to achieve when the object in question is visible together with its image on the bus or car, as is the case with the Telefunkenhaus in Photo 5. The response highlights an interesting sign relation: whether shadow or reflection, the image on the car is taken to denote that by which it is produced. We have to do with both a causal and a semantic relation between the object and its image, and the former determines the latter: the object is denoted by a light pattern which is produced by it (see Posner 2009).

However, often the situation was not as simple as that and the interviewees were in doubt as to what it was that produced the shadow or the reflection they were
confronted with. For instance they would say: “The light pattern on the hood shows the Telefunkenhaus, but at the same time it has the shape of a church. How can that be? Everyone knows that the Telefunkenhaus is not a church, it’s an office building!” Some went further by making the following point: “On this car the Telefunkenhaus is mirrored in several places; on the hood it is a church (see Photo 27), on the transition between the trunk and the rear window it is an astronomical observatory (see Photo 28), on the roof it is a holiday resort hotel (see Photo 29), and between the left back window and the rear window it is a couple of pyramids (see Photo 30).” These sentences all contain a definite noun phrase as subject and a local adverbial as well as a copula combined with an indefinite noun phrase as predicate. They subsume the object denoted by the subject noun phrase under the class designated by the predicate noun phrase (for the terminology see Morris 1938). What is disturbing here is the fact that one and the same object is being subsumed under several classes which mutually exclude each other, and that class membership is made dependent on the place where the object is reflected. To solve this problem, most of the interviewees that had taken a semantic approach to the car reflections claimed that car reflections do not give a true image of their denotata but offer possibilities of seeing them. Many of those who made that claim emphasized that the vision of the Telefunkenhaus was less determined by the place of its reflection or its silhouette than by the way the car surface was formed at this place. Without necessarily using this terminology, they systematically differentiated between the object shown (i.e., the denotatum) and its appearance (i.e., the designatum) on the surface of the car body showing it. Such was the essence of the deliberations held by the semanticists among the interviewees.

4. Only 15% of the people interviewed went beyond the questions of light patterns, objects denoted, and object classes designated, and thematized pragmatic aspects (concerning the possible levels of picture analysis see Posner 2003). They agreed that silhouettes and reflections are no matter of individual intentions: for cars moving in cities of our time there are rarely drivers or photographers who intend them to move in such a way that they show particular types of shadow or mirror images of certain landmarks or environments. Nevertheless, surprisingly many of them were prepared to conceive of the light patterns they saw on the body of a car as imagined intentions of some fictional sender. Here are some examples of how they phrased this:

- “The car (Photo 15) praises the design of the Telefunkenhaus by emphasizing its slimness, elegance, and maritime character.”
- “The car (Photos 27–30) proposes an alternative role for the Telefunkenhaus.”
• “The car (Photo 31) problematizes the Telefunkenhaus’s façade.”
• “The car (Photo 25) ridicules the simplistic form of the Telefunkenhaus’s side front.”
• “The car (Photo 32) provides the Telefunkenhaus with the missing porch.”
• “The car (Photo 33) equips the Telefunkenhaus with the corporate sign of BMW.”
• “The car (Photo 34) suggests a rural environment for the Telefunkenhaus.”
• “The car (Photo 35) highlights the Telefunkenhaus’s progenitive capacity in the sense of ‘let us create one, two, many Telefunken Houses’.”

Once the interviewees had devised such imputations as a possible procedure of interpreting the expressive potential of the Telefunkenhaus, they were also disposed to apply them to other buildings reflected in the cars at Ernst-Reuter-Platz. Some of them thus described the Deutsche Bank building (see Photo 36) as “observing the cars’ comments about the Telefunkenhaus from high above with folded arms” and the Telekom building (see Photo 37) as “making pointed observations and sarcastic remarks”, while “the gas station (see Photo 38) responds with horror”, upon which “the Telefunkenhaus pulls up its mouth and stares at Ernst-Reuter-Platz with innocent eyes” (as in Photo 39).

All interviewees who chose wordings such as these were aware that they were personifying cars and buildings, characterizing physical processes as acts of communication, and resorting to metaphors where they might have given more precise explicit descriptions of the expressive messages they were receiving. However, they enjoyed giving the interviews the character of a game with quite strict rules and with standardized ways of verbal expression.

As input this game requires selecting the following:

- some urban environment;
- some car reproducing it in a silhouette or reflection;
- some visual angle on that car;
- a time of day and a season with certain light conditions.

As output the game leads to an image discovered on the car, including:

- a light pattern discovered on its glass, metal, or chrome body parts;
- a segment of the city life denoted;
- a designatum under which it appears to be subsumed;
- a fictional intention attributed to the car or the denotatum in order to characterize the expressive value of the image.
The winner is the player who points out the most convincing image on the surface of the car.

The ludic character of this activity is evident in the verbalizations that accompany it. In the full version of the game,

(1) one begins by describing what one sees (e.g., “On the hood of this car there is a light pattern of parallel lines/concentric circles/dark patches . . .”);

(2) one then refers to what it denotes (if anything) by using a definite noun phrase (e.g., “This pattern shows the Telefunkenhaus/the Berlin Marathon/the people sitting at Café Kranzler, the sky above Berlin; see Photo 40”);

(3) one characterizes its surprising designatum (if any) by using an indefinite noun phrase with an equating preposition (e.g., “However, it appears as a church/observatory/hotel/couple of pyramids”);

(4) one gives a pseudo-explanation of what one sees by inventing some fictional intention of the car or the denotatum (e.g., “The car evidently wants to suggest an alternative role for the denotatum”, or “The denotatum tries to show itself in a special mood”).

In this discourse the quality of the interpretations proposed is assessed on each of these four levels. It can be determined by some extraordinary light pattern and/or some unexpected denotatum and/or some bizarre designatum and/or some well-chosen metaphor for the expressive value of the image in question.

Apart from extraordinary light patterns and unexpected denotata, the players tend to have the greatest fun in finding bizarre designata and coming up with thrilling metaphors for what they see on the car. It is this utopian aspect which makes the game interesting for people living in a metropolis. They become more aware of their urban environment, get involved in considering both positive and negative aspects of it, and are inspired to reflect new solutions for what bothers them in the present state of the city. Irrespective of the level of the game which players reach, it helps them to understand their city better and to develop new options for its future development.

In conclusion, one might say: what the city’s cars reflect helps the citizens to reflect about their city. However, this brings up the question why so few (less than 15%) of the persons interviewed fully engaged in the game and why nearly 20% even refused to see any perceptual basis for it.

The answer is two-fold. Of course, the interview may have disrupted a person’s business and there might simply not have been enough time to answer. This could also explain the more general observation that very few people seem to be aware of what cars reflect when they themselves participate in the city traffic. Becoming fascinated by an image one sees on a car while crossing a street or while driving could distract...
one’s attention from the traffic and become very dangerous. Thus the unawareness of car reflections might be due to a cognitive mechanism that blocks the interpretation of perceptions that are irrelevant to the task at hand.

However, this does not explain why the usual presentation of cars in showrooms and in advertisements of all kinds has always been such that car reflections are generally faded out or retouched. In sales brochures, car reviews, as well as TV and newspaper ads car reflections are generally reduced to abstract light reflexes which are only shown to emphasize the car design—a means of presentation that developed during the era of streamlining in the 1930s (see Frankenberg and Neubauer 1933, as well as Heimann and Patton 2009).

References


Wilhelm Blum (2005), Höhlengleichnisse. Bielefeld: Aisthesis.


Susanne Hauser (1990), Der Blick auf die Stadt: Semiotische Untersuchungen zur literarischen Wahrnehmung bis 1910. Berlin: Reimer.


