

Paper for Ignacio Farias & Thomas Bender: Urban Assemblages. Routledge forthcoming, 2009

Mutable Immobiles. Change of Use of Buildings as a Problem of Quasi-Technologies

Keywords: Architecture, change of use, quasi-technologies, zoning law

Mutable Immobiles. Change of Use of Buildings as a Problem of Quasi-Technologies

Introduction

In 1992 the administrative court of the Canton Zürich in Switzerland had to decide, whether a former industrial building now rezoned in a zone for habitation, should be allowed to be turned into offices (Verwaltungsgericht des Kantons Zürich, 1992a). As such, the case is a variation of a typical case of gentrification and urban renewal turned into a legal problem. A city changes and thus in certain city parts the structure of habitation, uses, buildings and residents changes too. Owners of buildings loose their tenants or force them out and have to find different kinds of tenants to replace them. In the above case, as in many others, an industrial area suffered from de-industrialisation and the authorities subsequently changed the designation of the zone from industrial to habitation. The owners of the building sought to make a few changes such as inserting internal partitioning to turn the building into offices. The lower building authorities deemed these changes illegal, because they did not conform to the changed zoning. The administrative court of the Canton ruled that a change into flats could not be enforced because such a change would require “considerable construction expenditures” that would not even lead “to satisfying solutions” (Verwaltungsgericht des Kantons Zürich, 1992a, 21). The court also denied the argument of the authorities that various examples of former factories that were converted into flats would prove the feasibility of a conversion. The court stated that these were always made with “the voluntary cooperation ... of the owners within an integrated concept”, neither of which were given in the case (Verwaltungsgericht des Kantons Zürich, 1992a, 21).

The above case highlights the precarious role of buildings in processes of urban renewal and gentrification. For the municipal authorities the building is a blank slate that can be used for anything and should thus be used as flats according to the zone. For the owners and the administrative court, the building is a technology that allows only specific uses. It resists being used for habitation and can only be made to be to do so by the unlikely combination of huge expenditures, an integrated concept and the cooperation of the owners. The case is not only about a specific building but has become a setting to negotiate what buildings can do.

In this article, I wish to analyse this precarious role of buildings from a theoretical and empirical point of view, by analysing change of use as a test case. As we have seen in the

above example, change of use is a test case because it challenges two opposing but prevailing notions of buildings. On the one hand side, many in urban studies assume the identification of buildings and uses. Ethnographies and historical studies of specific building types routinely describe use patterns and building forms as being interrelated (Foucault, 1979). By doing so they assume that building forms affect or even control the uses. Thus they describe the uses as shaping the building types. On the other hand, studies on gentrification processes, housing renewal and urban development often do not consider buildings to be a factor in these processes (Smith, 1996). They often simply ignore them and treat them as mere material strata for social processes.¹ However, as I will show in this article, the relationship between buildings and uses cannot be described in either of these ways, neither on a theoretical level, nor an empirical one.

The problem for a theory of buildings is thus to explain the specific notion of a building type in terms of a more general theory of objects and technologies. I would like to show in this article that buildings can be considered as technologies in a double sense: They are technologies as buildings, but they are also considered to be technologies on a second level, as building types. But as building types, they are unstable technologies, or what I call quasi-technologies. More specifically, since buildings occupy a stable location and are singulars they are open to different uses at the same time, which turns them into what I call mutable immobiles. This feature of being quasi technologies and mutable immobiles creates the problems of accounting for change of use – as we have seen in the opening paragraph. Change of use presupposes building types as a form of classification that conflates the use of buildings with their materiality. Change of use then, demonstrates that a building type is not a proper technology, since it can be easily circumvented and turned into another building type, even by keeping the building intact.

In the first part of the article I establish the theoretical basis by first discussing whether buildings can be considered technologies and I highlight the classification as building types as a specific feature of buildings. Then I introduce the notion of quasi-technology to account for the fast changes of buildings. Finally, I explain how change of use can serve as a test case to analyse the problem of buildings as quasi-technologies. In the second part, I use several court cases related to issues of zoning and change of use of buildings to demonstrate the theoretical perspective laid out in the first part. I first discuss cases of the privilege of continued existence. These refer to buildings that were built before a change in zoning took place and

should be adapted to the new zoning. Second, I discuss cases of changing uses that violate existing zoning. In all of these cases the courts struggle with conceiving of buildings as technologies only to find out that they are not, and vice versa.

Buildings as Technologies?

For an analysis of the design, production and use of buildings it seems fruitful to me to ask in what sense buildings can be considered to be technologies. Bruno Latour's early work established against the mainstream of sociology the idea that "technology is society made durable" (Latour, 1991). He showed these stabilising effects of technologies in several case studies such as doors or sleeping policemen, some of them related to architecture. Whereas actor-network theory has not shown much interest in differentiating different *types of objects* my task here is to look at the specificity of buildings. I am interested here in *whole buildings as technologies* and therefore it is important to clarify whether buildings are comparable to other technologies such as door openers.ⁱⁱ

A working definition of technology would be that technology is a black-boxed actant-network (Latour, 1987, 81) or a strict coupling (Luhmann, 2000, 370).ⁱⁱⁱ The important feature of these notions that sets them apart from other definitions of technologies is that they do not necessarily understand technologies as material or high-tech, but as *procedures* with specific features. Parts are assembled in such a way that they are not changed during use and cannot be changed, or only by dint of considerable work. Such technology speeds processes up, because it always accomplishes the same output with the same input. This is so, because no consensus is needed to make technology work: the consensus is already part of the black box. Second, it is possible to calculate the resources needed to operate technology, and third, failures become visible as irregularities that can be diagnosed and repaired. A door opener is a technology, because he/she/it always opens the door when somebody approaches, no matter whether the door opener is a human being or a machine (Latour, 1992).

Following such a definition, we can ask whether buildings are technologies. Clearly, they are composed of technologies, such as door openers and walls and roofs. But, as I would like to claim, they are also technologies with regard to specific uses. As such they are technologies that locate specific interactions. The emphasis here is on "locate": Buildings are technologies for the location of interactions because buildings occupy *permanently* a specific location and are designed with respect to functional aspects (with respect to society). These locational

technologies work as classifications, as building types, such as bank, church or office building. A type is a classifying word such as “bank” that is tied to a use and a form. A building type is a classification on a secondary functional level and specific for buildings. Such secondary use classifications do not exist for other objects.^{iv} Buildings as building types thus coordinate interactions by providing interactions with a location and resources. In other words: Building as building types are generic black boxes with respect to specified uses. For example, banks permanently locate and facilitate money transfers and credit lending by assembling black boxes such as teller’s windows, bullet-proof glass, prestigious facades, sign systems, separate rooms for meetings and back offices.

So far, I have established buildings as technologies in a way compatible with ANT. The perspective of ANT is to explain how things hold together and how they have the capacity to delegate actions. Buildings and specifically when seen as building types are technologies to locate interactions. That is, they are assumed to be stabilisers of society. But, as I would like to show, building types are a very special kind of technology and their role in society poses specific problems for the theory.

As I said above, buildings seen being part of a building type are technologies as wholes. The notion of forming “a whole” is important, since building types cannot be defined by providing a list of requisite parts, as it is possible for e.g. an air pump.^v None of the aforementioned individual black boxes (teller window...) are necessary to build a bank. It is not even possible to give a minimal list of items necessary; however, without any of these black boxes, a bank-building becomes unlikely.

Note that all of the above refers to the building type bank, not to the organisation called bank. For analytical reasons it is thus important to separate the building type from the organisation or type as form from type as use. For sure, it is possible to declare a container to be a “bank” and operate a bank-business therein. Thus an actor-network “bank” may consist of none of the above-mentioned black boxes. But when we see a building, which we attribute to the building-type bank, we immediately attribute all its parts to be part of the building type. The formation of a whole is thus a process in which a process of attribution and of Gestalt-perception or rather Gestalt-construction takes place, rather than a process of seeing and naming its precise constituents. In a building type, the semiotic aspect is thus much more

important than in most of the actor-networks known from ANT studies. A building classified as type works as technology because we recognize it as belonging to a type.

Historically, the codification of types and therefore the fact that buildings as types became technologies dates back to the spreading of a huge variety of building types in the early 19th century and the need to teach architects how to build these types in design books (Markus, 1993). Thus historically, building types had to be made technological. The codification became increasingly standardised and technologized with building types as a very complex assemblage of technologies, as can be seen in the transformation from early design manuals such as Durand (1821) through the different editions of the best-selling “Neufert” now in its 38th edition (Neufert, 1998).^{vi} Not only architects but also historians and sociologists have interpreted buildings classified as building types as technologies, when they termed hospitals “machines” (Foucault, 1976) or endowed prisons with the faculty to “fabricate virtue” (Evans, 1982).^{vii} Building types became thus extremely complex actor-networks, assemblages of material-semiotic parts forming a whole. However, once buildings were made technologies, their status was contested, and they were unmade as technologies again, because they did not always perform what they were supposed to do.^{viii}

Buildings are Quasi-Technologies

The historical construction and deconstruction of buildings as technologies is due to the fact that they are not always technologies. This is because buildings are composed of many parts, some of them technologies and some not. As building types, they are themselves black boxes, containing other black boxes. They are manifold on their “inside”. With their inside, I would like to describe everything that is not normally accessible by the user, the black-boxed part. Just like CD-players, and unlike for example stones, the inside of buildings is manifold in the sense that it contains too many black boxes, independent of each other, to make it predictable.

But like stones, and unlike CD-players, buildings are also manifold on their outside, the parts that are accessible to users. They lack a clearly specified interface, such as a play button, but contain a scattered array of interfaces that neither specifies an order nor a hierarchy of use. The windowsill is here to prevent the rain from dripping onto the façade, but you can use it to sit on and drink a coffee in the sun or to dry your wet clothes.

This double manifold makes the use of buildings unpredictable. This is further aggravated by the fact that once built, the creators of these networks, the architects, usually lose control to the users. “Nobody is really in charge” (Star, 1999, 382) and nobody can really be in charge, because the manifold interfaces simply allow too many starting points for different uses by different people at the same time.

The double manifold of buildings turns them into what I would like to call quasi-technologies. The term quasi-technology derives from Michel Serres’ concept of the “quasi-object”, a mixture between a subject and an object (Serres, 1987, 352). Quasi-technologies, as I define them, are objects that are sometimes real technologies, functioning as black boxes, but at other times they lose this quality. They are turned from technologies, in the sense of black-boxed procedures, into “mere” masses of materials. They become *materialized* as I would like to call it. To materialize in this sense means that an object is freed from its actor-network and reduced to its material qualities.

“Quasi-technologies” are not objects that prefigure actions, but objects that are sometimes technologies and sometimes not, depending on who is using them and how. At some point in time and under certain circumstances, buildings as building types work like proper black-boxed actor-networks, where an actor (the architect) controls the network, but this can shift quickly and the building loses its properties of a black box. Quasi-technologies depend thus much less on the pre-programming of designers and inventors than other technologies do.

The concept of quasi-technologies allows us to look at objects not only from the perspective of how they are turned into technologies or black boxes, but how they are made *not to act* at the same time. The concept of quasi-technologies asks us to look at those procedures and circumstances that turn objects into technologies and those which turn them into mere material. Other than what classical ANT would propose, such a turning of an object into a technology or merely material is not necessarily related to creating long networks involving many actants and a lot of work. It is sometimes a matter of a single sentence.^{ix}

ANT stresses that we are surrounded by mixtures of Humans and Non-Humans and that a proper description of the world necessarily and always requires us to include and mix social and material aspects. In contrast, the notion of quasi-technologies requires that their descriptions vary according to their state. While some descriptions may be ANT-descriptions,

others may be much more physicalist or socialist. ANT–descriptions rest on an algebra where the addition of further actants necessarily results in a strengthening of the network. With quasi-technologies such an algebra does not work. The outcome of a procedure cannot be calculated from the number of actants, because it relies very much on situational categorizations that can easily override existing networks. In the case of building types too, as I have shown, the number of actants that constitutes a type is unknown and situational.

Why Buildings Are Mutable Immobiles: Singularity and Locality

We may now ask why buildings are specifically likely to be quasi-technologies as opposed to other objects, since being a quasi technology is not a matter of ontology. The answer I propose is found in two specific and interrelated features of their *use* – and not of their production. The use of buildings differs from most other objects in two respects: they occupy a fixed location and they are singulars and for this reason I call them *mutable immobiles*.

These two features turn buildings into the opposite of what Bruno Latour has called immutable mobiles (Latour, 1987, 226-7): Immutable mobiles are objects that are stabilized as technologies to perform the same actions in different locations. They are technologies that operate independently of their context, because their creators (often scientists) can shield the objects from interfering user groups. Buildings as mutable immobiles do quite the opposite.

First, occupying a fixed location – being *immobile* – exposes them to many different user groups. Buildings cannot be shielded away like other objects into private homes, laboratories, courtrooms or museums, where the respective constituencies can control them. Even if access can be denied to certain user groups, the outside of buildings is open to interpretation and definition of anybody. Furthermore, since the location is fixed, buildings are inevitably bound to their local contexts. This is why buildings are the only type of object for which norms and laws exist how they should relate to neighbouring objects.

Second, as singulars, buildings cannot be standardized, but like biological organisms, each one has its own form. The singularity of a building links its local stability and its openness to users and makes it changeable: parts that were once considered to be necessary for the whole to operate are exchanged, disposed or simply ignored in interactions. Rather than being an immutable and stable technology across contexts buildings are unstable and *mutable*. Once a building is built, by being used in specific ways and by being locally stable and thus connecting to its changing environment, it inevitably acquires a biography that makes it

distinct from all other buildings. This even applies to seemingly identical and standardized buildings as is nicely shown in Philippe Boudon's pioneering study about the changes of Corbusier's houses in Pessac (Boudon, 1969).

A Test Case for Analysing Mutable Immobiles: Change of Use of Buildings

So far I have explained the concept of quasi-technologies as objects that are sometimes real technologies and sometimes not. Furthermore I have explained that type is a specific secondary level of classification that links uses to forms. In a third step I have explained that buildings are mutable immobiles, because they occupy a stable location and are singulars what makes them more likely to be quasi-technologies.

Taken together, these issues amount to the widespread phenomenon of change of use of buildings – the change of building types. Buildings are not only routinely changed and renovated to add certain features^x – some of the changes lead to a change of building type. There can be no change of use, if there has never been a predefined and inbuilt use. If buildings were not classified as types, the problem of change of use could never occur. However, change of use does not necessarily imply many changes of the building itself, since the category of a building type is, as explained above, a category that cannot be linked to any specific building part. But change of uses presupposes that the assumed technicality of buildings can be muted, thereby materialising the building. The change of a building type is thus a Gestalt-switch.

Therefore, change of use as a concept thus already presupposes the concept of quasi-technologies. Change of use shows that buildings are mutable immobiles. For a reconstruction of change of use we have to find out first, how buildings are made to be building types and then how they are unmade and remade as other types. The empirical questions here are thus: What is it that changes the building type of a given building? How many little black boxes have to be changed to get another building type? Are there black boxes that prevent the change to a specific type? Can specific building types overrule the resistance of black boxes that define other types?

The Law of Buildings

For an empirical discussion of the problems of change of use, let us now turn to the law. The following discussion of law cases shall provide one glimpse of the ambiguity and complexity

and contradictions that building types pose for society. The field at stake here are cases where change of use leads to a conflict with zoning regulations. My aim is to show with these cases that the very fact of buildings being quasi-technologies leads to ever-ongoing attempts by the law to relate buildings and their uses. This is not to show the incapacity of courts to unambiguously define types, but to show that it is impossible to define the technicality of building types because they are quasi-technologies. The descriptions of twists and turns of the courts merely reflect this general ambiguity of building types. Analysing court decisions has the following advantage: The courts have to perform exactly those operations of deciding if and why a specific buildings belongs to a type, by relating forms to uses.

For the following analysis I use as empirical material several decisions regarding change of use made by the building appeal commission and the superior administrative court, both of the Canton of Zürich, Switzerland.^{xi} Zoning cases are useful because they allow focusing again on the specificity of buildings as objects – as mutable mobiles. Since buildings are locationally stable, building codes not only regulate security issues as for other objects, they also regulate the use of buildings via zoning laws – a kind of law that only exist for buildings. Zoning laws tie uses to buildings by attaching uses to defined patches of land called zones. Changing a building is thus likely to run into a conflict with zoning law, if a change of a building is considered to be a change of use. Zoning laws define thus the technicality of buildings with respect to building types. They can keep the technicality by stating that a specific building cannot be changed, or they can turn buildings into quasi-technologies by allowing change. The cases also show that *minimal* changes of buildings lead to decisions that *recategorize the whole building* to a new building type.

Before I look at specific cases, let me analyse the definition of zones in the law. The written law in Switzerland is ambiguous because it does not separate materiality and use and therefore already assumes that buildings are quasi-technologies: The federal law says: “zoning plans regulate the admissible *uses* of the land” (Schweizerische Eidgenossenschaft, 1979, Art. 14, emphasis added by the author): The regulation is defined as concerning the uses, not the buildings . One could infer that the law does not hold a technological view of buildings! However, as we will see over and over, this is only partially true. The confusion already starts at the level of written law when it defines specific zones: The building code of the Canton of Zürich, in § 60 reserves a zone for “public *buildings*” – and not public *uses* (Baudirektion des Kantons Zürich, 2005, §60, p. 15, emphasis added). Thus for the law,

buildings are real technologies by assuming that buildings and uses *merge*. Because there are no further definitions of “public buildings” in the law, we can infer that the law knows what a public building is and that this “being a public building” is a use of a certain surface area of land and a building that is recognizable as a public building at once.

Zoning law restricts change of use, because once a house has been built in a specific zone, the owner is not allowed to use the house for another use. Since, in cases of change of use, building form and use are no more co-extensive, it provides a test case to understand how the law deals with the quasi-technicality of buildings. To explore this in detail, I will first start with the question of stability and continuity of the structure of buildings and then move to the other side, changing uses as modifiers of buildings.

The Identity and Stability of Buildings: How Building Parts Become Real Technologies

In this first part I show by going through a succession of cases that the courts indeed hold a technological view of buildings, but this view refers not to whole buildings as building types, but to building parts. They thereby “solve” the problem of quasi-technologies by moving it to a lower level. The stability of buildings is important in cases of change of use because of the so-called “Bestandsprivileg”, the privilege of continued existence. If a building exists before the zoning law was invented, or before the zoning law changed the zone in which the building is located, the building’s use may not conform to the zone. In such a case, the privilege of continued existence permits keeping the building and its uses as before. However, once an owner changes her building, the privilege of continued existence requires her to prove that her building and its use is still ‘the same’ as before. The problem here is thus that the law first assumes that building types are not real technologies but mutable immobles. The privilege of continued existence stabilizes the technicality of the building. But how can the law define that a building is still the same as before?

According to the law, a new building has to meet the following basic requirements to be considered the “same” as the old: It has to be built on exactly the same location, and it has to be equivalent in volume and use – the defining criteria of mutable immobles as I described them above. However, to keep the “identity” of a building, as we will see, this is not enough. Three problems for identity emerge. *First*, the workings of time in the form of decay, repairs and replacements disintegrate the whole. *Second*, if it is not the whole building, classified as a type, that grants the privilege of continued existence, then the question becomes how the law

defines those parts that do so. *Third*, the question is, whether identity means that a building really enforces its use, or whether this is rather an “unwillingness” to accept other uses.

The first aspect, the problem of time, can be illustrated with a case, where a claimant wanted to use a building outside a building zone for a car-repair shop. The court denied this use, because the building first served as a carpenter’s workshop, then during the 1960s as a warehouse, and finally, during the recession in the mid-seventies it remained empty, until it was used as a warehouse again. The court denied the privilege of continued existence on the grounds that it refers only to “existing facts” (Baurekurskommission des Kanton Zürich, 1983, 56). The court stated: “If only a ruin is left, no rights follow from the privilege of continued existence.” (Baurekurskommission des Kanton Zürich, 1983, 56). For the law, a building is therefore unstable over time. As soon as it is not used for a certain period and the network of the building vanishes, this constitutes a break in its congruence between use and materiality. Under these circumstances, the building ceases to belong to *any* building type. In the view of the court, the old uses were thus tied to the material building. It assumed that as a technology, the uses can only persist if they are backed by an intact material base and once this material base vanishes, the uses vanish too.

This is further elaborated in another case, where somebody wanted to change a sauna and an electrical repair shop situated in a house in a residential zone into offices. The court denied a privilege of continued existence because the law only protects “existing facts”, defined as “built parts of a certain size serving the prohibited use”. If, as in the case under consideration, “all parts that served the forbidden use are replaced”, the proprietor waives the privilege of continued existence (Baurekurskommission des Kanton Zürich, 1990, 38). The court justified this claim, because the privilege of continued existence does not protect “the use as such, but the material assets that serve the use” (Baurekurskommission des Kanton Zürich, 1990, 38). The court defines the classification “office building” as an assemblage of parts that enable the use as office. Again, the building is understood as being a technology proper as a building type, an assemblage of various parts that stabilize a use. If *all* these parts are gone, then the classification is disassembled and has lost its technicality to stabilize the uses.

But not *every* material part of the building grants the privilege. Therefore, the question is: How can the law define the parts that do grant the privilege and what do they really do? As the court further elaborated in the same case, the privilege of continued existence rests on the

idea that “existing structures prohibit the use of the building according to the law.” In some cases, it reasoned, “the whole building is constructed in a way, that no use as ordered is possible at all. But in most cases, it is only some rooms, whose structure negatively set a precedent for a use contrary to regulations” (Baurekurskommission des Kanton Zürich, 1990, 38). It turns out that for the court, only in a few cases the *whole* building necessitates the classification as a given type. In most cases the defining power is delegated to specific rooms. These rooms do not so much define a type, but resist being integrated into a new type.

The privilege of continued existence is thus deeply technological. In the view of the court, uses can be easily changed, but not the buildings. The court starts with the assumption that building types are technologies (as in the first example) and when it turns out that building types are not coherent, the capacity to define a use is shifted to specific rooms, the next lower level. These parts at the lower level can be identified, because they would *force* the owner to break the law. The court defines the technological parts as black boxes that cannot be opened, not even by the force of law. The privilege of continued existence is therefore not so much a privilege, but a burden: it proves that building *parts* can be, at least for the court, *real* technologies.

However, this leads to the third question, namely whether building parts are positive technologies in the sense that they enforce certain uses, or whether they are negative technologies in the sense that they simply prevent specific other uses. The case mentioned in the introduction concerning the transformation of industrial spaces into offices elucidates this issue. As mentioned, the court ruled that even though a conversion to offices would be possible in principle, it would force the owner into “considerable construction expenditures” that would not even lead “to satisfying solutions” (Verwaltungsgericht des Kantons Zürich, 1992a, 21). Conversion would only be possible with “voluntary cooperation by the clients in the context of integrated concepts” (Verwaltungsgericht des Kantons Zürich, 1992a, 21).

As becomes clear, the technology here is negative: it is not a technology that enforces a use, but a resistance to acquire specific new uses. Furthermore the resistance is by no means total. Conversion in principle is always possible. But the conversion would require a new network to be put in place, consisting of cooperative owners, a lot of money, and an “integrated concept”. The integrated concept, I infer, would be a replacement of the resistance by the technological parts with a new building type, that is, a new “whole” that turns the building

from an industrial building into flats. The fact that the building parts are technological is a negative attribute: it cannot take on new uses. We deal here with what we could call a *white box*, which contains many actants that neither belong to a specific network, nor do they link to another network. But the building is not totally materialized or muted either. The white box can be muted in principle, but only at a very high cost: namely, the insertion of a new network. But for the law, buildings are not always technological, but more often they are simply material and without defence against foreign and prohibited uses. To analyse this more closely, we turn to those cases where change of use itself is under consideration.

Problems of Identifying and Separating Uses: Technology vs. Observation

As we have seen, the legal definition of zones implies a notion of building type that conflates use and material building. But in cases of change of use, use and material building fall apart. For the law the problem emerges whether the building or the use defines the type, since change of use can occur without materially changing the building, and materially changing a building does not constitute necessarily a change of use. The two mirror problems are thus: When and how do changing *uses* redefine a building type? And when and how do *material* changes redefine a building type? I look at the two problems in turn, each time looking at a specific case that exemplifies the problem.

Ephemeral uses and materialized buildings

Starting with the uses, the law is confronted by the fact that uses are ephemeral. A use is an interaction between humans and a building. It takes place once or twice or ten times, and neither its time-scale nor its scope is known beforehand. Change of use, then, must be defined as a *quantification* of repeated (mis-) uses that ultimately sums up to a reclassification of the building type. The idea here is that uses can or cannot conform to the building and if they repeatedly do not conform, then the building itself becomes transformed. So when does repeated (mis-) use indicate a change of use?

The problem of repetition is exemplified in a case where a community has asked the owners of a nursery to file a building proposal for the use of the nursery as a party space, which the owner rents out every second week or so. The appeal court states that change of use according to federal law only requires a building proposal if they are likely to have “localized impacts on the order of uses” (Verwaltungsgericht des Kantons Zürich, 1992b, 6). After an inspection, the court found out that for the following six months no more than 10 events would take

place, each with 30-60 participants. The court reasoned that the above-mentioned “impacts” would include the additional traffic by the guests, unspecified “emissions”, probably noise, and the additional load of the sewage system. Then it stated that in case of doubt, the community should ask for a permit, only to counter this statement by adding: this should not lead to “a farmer or a gardener having to apply for permission, if he wants to use his building in the rural zone from time to time for a convivial evening with family members, employees or a third party” (Verwaltungsgericht des Kantons Zürich, 1992b, 7). The court added that in the present case “the use under consideration in no way displaces the authorized nursery” (Verwaltungsgericht des Kantons Zürich, 1992b, 7). The court finally left it open, whether a permit is required.

As we see, it is impossible for the court to define the exact number of parties required for a change of use. For the court, the party is not technological and thus difficult to grasp, especially since it does not mute the other uses. The building is muted only for short instances of time, which for the court are just repeated events and do not add up to permanence. The ephemerality of use is key to understanding that uses do not redefine building types: As long as the normal uses and the material building remain intact, then repeated other uses do not constitute a change in building type. The view of the court here is that a type is material only (and not technological) and that uses are ephemeral for definitions of type.

Indifferent building parts as multiple technologies

In the last case material and interactional changes occur together. Here the question is how the interactional changes are linked to the material ones. In this case, a farmer uses a wooden barn 25 km away from his farm as a refuge when taking care of his sheep. Because the farmer needs protection from the cold, wind and rain, he replaces a weathered façade. He also fills three openings used for throwing hay in and out of the barn with windows and installs a wood stove. The community asks for the replacement of the windows and the stove, claiming he turned thereby the barn into a summer cottage. The court denies the request by the community, with the following reasons. First, it states that the outer appearance of the building remains the same and that the owner showed no intention to change the use of the building, nor would the changes imply such uses. The court holds that staying overnight seems suitable only “in good weather conditions in summer” (Verwaltungsgericht des Kantons Zürich, 1985, 9). It describes the situation as follows: “The thin timber wall fails to protect from the cold; many chinks do not even protect from draught” (Verwaltungsgericht

des Kantons Zürich, 1985, 8). Furthermore, since the “sanitary conditions needed for habitation are lacking entirely” it would be an unlikely summer cottage even for somebody with “the most primitive demands” (Verwaltungsgericht des Kantons Zürich, 1985, 9). On the other hand, the court writes that the “cattle need a barn to spend the time until the onset of winter in these rough regions” and that “minimal comfort” for the farmer should exist “to warm up during breaks in the cold season” (Verwaltungsgericht des Kantons Zürich, 1985, 9). Furthermore, “a sudden change in weather or an accident might force the owner to stay overnight” making the changes acceptable (Verwaltungsgericht des Kantons Zürich, 1985, 10). Finally, the court adds, if the owner would not adhere to these proposed uses, “the community administration would quickly notice it” (Verwaltungsgericht des Kantons Zürich, 1985, 12).

More than in the case before, we can see here the close connections between building parts and uses, with *both* being unstable. The building is at once unsuited to use as a summer cottage, and at the same time it has to allow the farmer to stay overnight, just in those adverse circumstances that the building is not made for. The reasoning rests on the assumption that using a barn as a summer cottage and using a barn for emergencies in adverse circumstances are not only socially different uses, but also black boxed in technology. The two uses represent two different building types: a barn and a summer cottage. Parts of the building, the timber wall and the chinks, are technologies to prove that it is unsuitable for holidays, other parts, such as the stove, are technologies to prove that it is suitable for staying over night. But neither of them is a proper technology to *discern* the two uses and define a building type. The chinks do not prohibit the use as summer cottage. How could they, if they even allow the farmer to stay overnight in winter? Conversely, the stove cannot be prevented from cooking a meal on mild summer nights either. Even if the changes of parts of the buildings can be observed, and even if these changes are considered to be technologies, change of use cannot be read from that. The problem here is that all these building parts are technological, but they are technological for *both* of the uses. They can be inserted into two different networks at the same time without muting the other one. Creating either of these types does not require other actants than those that are already there. The only solution, on which the court relies, is to constantly observe the actual uses. Real and actual use is decisive, but cannot be technologized, thus it has to be monitored. The cottage proves to be a typical case of a quasi-technology: in some instances it is a technology, in others it is not and all possibilities to stabilize the separation between the two fail. Furthermore, the court assumes that a

supervision of the uses by the village is easily accomplished. However, reflecting on the case on parties I assume that it would have become an even more difficult task to prove that the uses – cooking a meal for example – turns the barn into a cottage. Luckily, the records indicate that none of the parties involved attempted such a proof.

Conclusion

The goal of this article was to show the specificity of buildings as objects. The specificity of buildings relates to their secondary classification as building types. As building types, buildings act as technologies to locate specific interactions. However, as I have shown, buildings are not real technologies, but quasi-technologies – they only operate as technologies under very specific instances and for specific users. Furthermore, as mutable mobiles, they are located and singulars. They are impossible to standardize and they are likely to be changed and used differently by different constituencies. In the second part of the article I have shown how this status as mutable immobles creates a problem for the law. Zoning law is already on the level of the written law undecided about whether it defines zones as relating to uses or of relating to building types, thereby mingling buildings and uses. The problem continues on the level of individual cases. In cases of continued existence, the law tends to deny the technicality of whole buildings but grants it to building parts or rooms. In cases of change of use the courts decide that ongoing differing uses do not constitute a change of use. On the other hand, they decide that even though minor material changes of the buildings may constitute change of use, the material changes are not proof enough to stabilize a change of type. These varying decisions of the courts do not signify that the court is absent-minded. It merely hints at the fact that building types are no proper technologies and can never properly stabilize uses. What zoning law and the courts accomplish is a short fixation in the ongoing puzzle that the classification of buildings as types pose. By defining the relationship between buildings and use for a given moment in time, they allow or forbid the owners upcoming specific changes and uses. They do so with the power of the law, because buildings cannot accomplish this feat on their own.

This conclusion also leads us back to how to understand buildings with regards to the general notion of urban assemblages. We can now see more clearly the specific location of buildings in a more general theory of the urban. The location of buildings, as indicated with their designation as mutable immobles, is in between a classical sociological conception as “urbanism as a way of life” (Wirth, 1938) and the technological notion of the urban as backed

by infrastructure (Graham and Marvin, 2001, Star, 1999). Whereas the former understands the urban via interactions only and misses the technical part, the latter conception refers to an understanding of cities as composed of mostly invisible real technologies that either work or don't. The focus on mutable immobiles highlights not only buildings as primary objects of cities, but it also enables to see, why they create a specific problem for society: they are immobile and used, and therefore pose a constant problem of defining and categorizing them. The very idea of a city consists in an assemblage of mutable immobiles. Our very joy in rambling through a city derives from this fact: We orient ourselves with types and we enjoy being surprised by the failing of our own classification of types.

Endnotes

ⁱ For an exemplary proof to the contrary, see the pioneering study of lofts by Sharon Zukin (1982).

ⁱⁱ For some studies in the tradition of STS relating to particular technological aspects and thus different parts of buildings see Thompson (2002) and Slaton (2001).

ⁱⁱⁱ Although ANT and Social Systems Theory seem to cover opposing terrain, their concept of technology is remarkably similar because it refers to stabilising processes and not to a materialist definition.

^{iv} As a kind of classification it is maybe comparable to the classification of gender among humans, a similar classification on a secondary level that deeply affects the definition of the whole. For other objects, such secondary classifications do not exist, because classifications usually refer to defined features. A car may have a four wheel-drive or it may be a diesel or a cabriolet, but none of these classifications affects the car as such. The classification of a building as bank however, is not limited to any specific part.

^v Quatremère de Quincy who provides us with the most well known definition of type in architectural theory put it like this: „All is precise and given in the model; all is more or less vague in the type“ (Quincy, 1977, 148). Because of the vagueness of the idea of type, no boundary work with regard to types exists. There are no architectural texts, where an author could state, that a given building is in fact *not* a bank. We can give a positive description of the general features of specific building types (Pevsner, 1976), but no negative criteria for the exclusion of a building from a type. The indexical empirical assertion („This is a bank!“) always overrides analytical definitions.

^{vi} Neufert has sold more than 1 Mio. copies and is estimated to be the world’s best-selling architecture book. On the history and influence of Neufert on standardising building types see Prigge (1999).

^{vii} For an overview of current discussions and analyses of the problem of type see Franck & Schneekloth (1994).

^{viii} For an historical account of how buildings were made and unmade as technologies see Guggenheim (2008) and Vanderburgh & Ellis (2001).

^{ix} ANT puts heavy emphasis on the work used to create networks and make them work. However, this is mostly due to its preoccupation with controversies in scientific contexts where documentation, experiment and proof are the prerequisites for winning a controversy.

^x For other works on changing buildings in the context of STS see Gieryn (2002) and Hommels (2005).

^{xi} The following material is taken from the publication of the courts. These publications contain only the ruling of the court and no pleadings or texts of lawsuits. Switzerland has a national space-planning law which was instituted in 1979 (Schweizerische Eidgenossenschaft, 1979). According to this law each Canton is obliged to regulate basic zoning, whereas each community is obliged to divide the land into zones which have to conform to the regulations of the Cantons. Conflicts are first dealt with by the local administration from where they can get to the Building Appeal Commission of the Canton and next to the Superior Administrative Court of the Canton.

Bibliography

- Baudirektion des Kantons Zürich (2005) Planungs- und Baugesetz des Kantons Zürich (PBG). Entwurf für die Vernehmlassung 19. August bis 19. Dezember. Kanton Zürich.
- Baurekurskommission des Kanton Zürich (1983) BRKE I, Nr. 358/1982. *Baurechtsentscheide Kanton Zürich*, 2/3: 55-56.
- Baurekurskommission des Kanton Zürich (1990) BRKE I, Nr. 836, 837/1989. *Baurechtsentscheide Kanton Zürich*, 1: 36-40.
- Boudon, P. (1969) *Pessac de Le Corbusier*, Paris: Dunod.
- Durand, J.-N.-L. (1821) *Précis des leçons d'architecture. Données à l'école royale polytechnique*, Paris.
- Evans, R. (1982) *The Fabrication of Virtue. English Prison Architecture, 1750-1840*, Cambridge: Cambridge University Press.
- Foucault, M. (1976) *Les machines à guérir. Aux origines de l'hôpital moderne*, Paris: Institut de l'Environnement.
- Foucault, M. (1979) *Discipline and Punish. The Birth of the Prison*, Harmondsworth: Penguin.
- Franck, K. A. & Schneekloth, L. H. (Eds.) (1994) *Ordering Space. Types in Architecture and Design*, New York: Van Nostrand Reinhold.
- Gieryn, T. (2002) What Buildings Do. *Theory and Society*, 31: 35-74.
- Graham, S. & Marvin, S. (2001) *Splintering Urbanism. Networked Infrastructures, Technological Mobilities and the Urban Condition*, London: Routledge.
- Guggenheim, M. (forthcoming) (Un-)Building Social Systems. The Concrete Foundations of Functional Differentiation', in Farias, I. & Ossandon, J. (eds.) *Observando Systemas Vol 2*. Mexico City.
- Hommels, A. (2005) *Unbuilding Cities. Obduracy in Urban Socio-Technical Change*, Cambridge, Massachusetts: MIT Press.
- Latour, B. (1987) *Science in Action. How to Follow Scientists and Engineers through Society*, Cambridge: Harvard University Press.
- Latour, B. (1991) 'Technology is Society Made Durable', in Law, J. (ed.) *A Sociology of Monsters. Essays on Power, Technology and Domination*. London: Routledge.
- Latour, B. (1992) 'Where are the Missing Masses, Sociology of a Few Mundane Artefacts' in Bijker, W. & Law, J. (eds.) *Shaping Technology - Building Society. Studies in Sociotechnical Change*. Cambridge: MIT Press.
- Luhmann, N. (2000) *Organisation und Entscheidung*, Opladen: Westdeutscher Verlag.
- Markus, T. A. (1993) *Buildings & Power. Freedom and Control in the Origin of Modern Building Types*, London: Routledge.
- Neufert, E. (1998) *Bauentwurfslehre. Grundlagen, Normen, Vorschriften über Anlage, Bau, Gestaltung, Raumbedarf, Raumbeziehungen, Masse für Gebäude, Räume, Einrichtungen, Geräte mit dem Menschen als Mass und Ziel. Handbuch für den Baufachmann, Bauherrn, Lehrenden und Lernenden*, Braunschweig: Vieweg.
- Pevsner, N. (1976) *A History of Building Types*, Princeton: Princeton University Press.
- Prigge, W. (Ed.) (1999) *Ernst Neufert. Normierte Baukultur im 20. Jahrhundert*, Frankfurt/Main: Campus Verlag.
- Quincy, Q. d. (1977) Type. *Oppositions*, 8: 147-150.
- Schweizerische Eidgenossenschaft (1979) Bundesgesetz vom 22. Juni 1979 über die Raumplanung (Raumplanungsgesetz, RPG): Schweizerische Eidgenossenschaft.
- Serres, M. (1987) *Der Parasit*, Frankfurt a. M.: Suhrkamp.
- Slaton, A. E. (2001) *Reinforced Concrete and the Modernization of American Building, 1900-1930*, Baltimore: Johns Hopkins University Press.

-
- Smith, N. (1996) *The New Urban Frontier: Gentrification and the Revanchist City*, London: Routledge.
- Star, S. L. (1999) The Ethnography of Infrastructure. *American Behavioral Scientist*, 43: 377-391.
- Thompson, E. (2002) *The Soundscape of Modernity. Architectural Acoustics and the Culture of Listening in America, 1900-1933*, Cambridge, Mass.: MIT Press.
- Vanderburgh, D. J. T. & Ellis, W. R. (2001) 'A Dialectics of Determination: Social Truth-Claims in Architectural Writing, 1970-1995', in Piotrowski, A. & Robinson, J. W. (eds.) *The Discipline of Architecture*. Minneapolis, University of Minnesota Press.
- Verwaltungsgericht des Kantons Zürich (1985) VB 128/1984. *Baurechtsentscheide Kanton Zürich*, 1: 8-12.
- Verwaltungsgericht des Kantons Zürich (1992a) VB 91/0004. *Baurechtsentscheide Kanton Zürich*, 4: 20-22.
- Verwaltungsgericht des Kantons Zürich (1992b) VB 91/0156. *Baurechtsentscheide Kanton Zürich*, 1: 5-8.
- Wirth, L. (1938) Urbanism as a Way of Life. *American Journal of Sociology*, 44: 1-24.
- Zukin, S. (1982) *Loft Living. Culture and Capital in Urban Change*, Baltimore: Johns Hopkins University Press.