

Cities and creative milieus

Creative scientific milieus. The European City ideal as a model for innovation processes.

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When Socrates explained to Phaidros: "Forgive me this, my friend. I am simply desirous to learn, and fields and trees will teach me nothing, yet the people in town may,"¹ he probably thought something similar to New York's mayor Bloomberg when he emphasized that creativity was what made New York into a place which we love.²

This bold leap of 2,400 years is intended to highlight the fact that cities have principally been regarded as the typical space of creativity and new ideas. It is claimed that they offer the most appropriate setting for the pursuit of art, culture and scientific activity and that in short they constitute a "creative milieu" per se. This image depends on specific features that are ascribed to cities in general, namely their characteristics as a social space, as a space of interaction, of density and diversity, of networks and plurality.

The concept of the city as the genuine place of science already drew the attention of various thinkers such as Socrates, the Moslem philosopher Ibn Khaldūn as well as that of the utopians Thomas Morus, Tommaso Campanella and Francis Bacon (Basalla 1984). The central role of cities for the generation of knowledge has been a matter of course for centuries. Universities came into existence simultaneously with the generally growing importance of cities from the 12th century onwards. Cities have served as transfer points of knowledge since the 16th century. The foundation of academies took place in the cities of the 17th century; also coffee houses played a crucial role in the intellectual life of Europe from the end of the 18th century. Likewise, associations and clubs influenced the production of knowledge and led to the emergence of local ways of thinking in the 19th century, as for example Toulmin and Janik showed for "Wittgenstein's Vienna" (Toumin / Janik 1973).

Nowadays, on the one hand, interest in the connection of science and city has again increased. For example, the Stifterverband für die Deutsche Wissenschaft recently advertised a reward for a city of science in order to encourage German cities to be aware of their creative capabilities and to tap their full scientific potential. Some cities, however, are already - as stylizing as it might be - designated as stimulating and creative cities: thus, Berlin is even called a "paradise for humanities"³. On the other hand, some scholars believe it is possible to observe a lessening of the importance and the role of the city from the beginning of the 21st century. Firstly, with regard to the diffusion of information and communication technologies, it is claimed that places in general and cities in particular are losing their importance since the new technologies present new possibilities to access, store and diffuse knowledge independently of any location. There has even been talk of the "electronic requiem of cities" (Böhme 2000: 13). Secondly, in the course of the 20th century, there was a perceptible trend to locate science institutions and universities not in the center of the city, but outside the city. New cities - to be precise "science cities" or "technopoles"

1 Platon, Phaidros, 5, 230d, nach der Übersetzung von Schleiermacher. Platon. Sämtliche Werke. Bd. 4, Reinbek 1996, S. 13. (my translation!)

2 New Yorks Bürgermeister Bloomberg anlässlich der Einweihung eines Kunstwerks im Central Park. Zitiert in: DIE ZEIT, 14. März 2002, S. 47.

3 Im Hirn der Republik. Martin Spiewak, in: Die Zeit, Wissen-Spezial, 17. Juli 2003, S. 30f.

- have emerged at the edge of old cities and metropolises: a trend which we shall term the "suburbanization of science" in what follows.

My paper focuses on the relationship of the city and science during the second half of the 20th century. I would like to argue that in the 1950s and 1960s no special importance was attached any more to the city as an appropriate setting for the pursuit of scientific research. Compared to the centuries before, this, without a doubt, represents a notable change. In this time period, many universities and research institutes in Europe were located on the outskirts of cities; science was separated from the city. That corresponded with the prevailing old concepts of urban planning ("separation of function") as well as with the ideas of science as a project which was separated from society and every day life.

However, in the 1970s, another change can be observed. Since then - and in particular since the 1990s - a "revival of urbanity" has taken place. That does not mean that science has returned inside the city. Rather the trend of suburbanization of science has continued. But, as this paper would like to argue, urban planners, local politicians as well as science policy have made a great effort to create a "creative milieu" outside the city, thereby referring to a specific ideal of urbanity or of the city. In short, a certain perception of the "city" now has served as a role model for the organization of sites of knowledge. Thereby, "creative urban milieus" have served as a tool for ensuring economic growth and scientific progress.

Case Study: The city of Munich

I would now like to exemplify this with the case study of the city of Munich.

While in the early 19th century Munich was described as a burghers' city, a capital city and a royal capital, in the course of the 19th century its image changed. Munich then came to be regarded as an "art city" with lively artistic communities and a university (Zimmermann 2000). Finally, in the second half of the 20th century, in particular in the 1980s, the image of the city of Munich changed again. Munich is now perceived as a "science-city" or a high-tech-city. Of course, a city usually does not represent one coherent site of knowledge. Instead, a high number of different sites of knowledge, such as universities, scientific institutions, libraries, and hospitals - to name but a few - are located within cities. Munich, for its part, is not a unified "science and technology space". The crucial point, however, is that in the course of the second half of the 20th century various centres or clusters evolved for different sciences and technologies, for example nuclear physics in Garching, microelectronics in Neuperlach, and biotechnology in Martinsried, which are all located on the outskirts of Munich. That corresponds to a general trend after the Second World War, namely the suburbanization of science.

Suburbanization of Science

In Europe, academies, universities and science institutes were usually located within the city until the 20th century (compare Burke 2002: 69ff, Jessen 2003, 1-6, Nägelke 2003). A university on the outskirts of a city was an exceptional case. Rather, the idea that most of the functions of a university should be unified within one building at a central place in the city, was fundamental. (Nägelke 2003, 8). The few cases in Germany, such as Berlin Dahlem or the University of Tübingen, where universities and an agglomeration of science institutes were located outside the city at the end of the 19th century, met with resistance (Paletschek 1997: 45 /Nägelke 2003: 19).

However, in the 1960s these reservations no longer applied. Contrary to the criticism of the 19th century, now "modern American institutions", namely the campus, became the model for building new universities and "science cities" in the 1960s, which were sited outside cities. Typically they have remained close to a city, constituting an "experimental field" on the outskirts of a modern city (Muthesius 2003: 30). In the case of the city of Munich, new sites of knowledge emerged close to the village of Garching and Martinsried and also close to the "new town" or "satellite town" of Neuperlach. (Bild) Out there, no infrastructure, no streets existed, no public transportation was available. These sites of knowledge were created out of ex nihilo. One main reason for this - and this is true not only of Munich - was the lack of space within cities, while most universities simultaneously still aimed to ensure the spatial proximity of institutes. This orientation towards the model of the campus was, however, not a simple adoption of an American ideal in Europe. Rather, it was appropriated by different nations in different ways: in Great Britain, for example, it merged with the model of the college, while in Germany the influence of Humboldt's tradition was still effective (Paletschek 1997) insofar as education policy referred to it (Muthesius 2003: 23). Hence the idea that the university should represent a whole established a new priority from the early 1960s onwards in Germany. The "integral ideal of Humboldt University" was advocated again (Jessen 2003: 2). However, in view of the increasing number of students and the differentiation of sciences, it became more and more difficult to realize this ideal within cities. These considerations can be observed in the case of Munich, regarding all three locations I have mentioned. I shall just cite one example: The administration of the TH of Munich stressed the need to concentrate research institutes and various departments in one location, thereby using a Humboldtian language: "The university is a complex whole. It is not separable. All departments are more or less connected to each other. [...] communication between various research areas is absolutely necessary."⁴ The aim was to ensure spatial proximity of institutes and to prevent universities and science institutions from being spread in the urban sprawl; therefore they were located outside the city. Thus, we can talk of a suburbanization of science.⁵

The spatial organisation of the sites of knowledge outside the city

What does this suburbanization of science mean for the relationship of science and the city? How are these single sites of knowledge connected to their town, and how is space organized within their research areas?

In the following, I would like to concentrate on one case study, namely the town of Garching, which is located 15 km to the north east of Munich. When the development of the research area started in the 1950s, Garching was a small village, mainly based on agriculture.

Garching's research area was founded a certain distance from the town of Garching. (Bild) It is a separate location, where, until recently, exclusively scientific institutes were placed. That meant that worktime and lifetime were sharply separated, insofar as the research area was a mere

4 Memorandum on the relocation of the Technische Universität München from Munich to Garching. Published by department 4 (Property) of the Central Administration of the TU München, March 1980. (hereafter: Memorandum), p. 20.

5 The newly emerged sites of knowledge are still connected with the city of Munich in different respects (administration, commuting scientists and so on). However, the increasingly develop as autonomous units at the edge of the city of Munich. Thus it would be worth to take under scrutiny, if we can still talk of suburbanization or if Munich rather develops into a polycentered city.

workplace. No houses, no cafes, no restaurants, no shops were built on the research area, since scientists were supposed to pursue their research without any disturbance and disruptions by daily affairs. Scientists pursued their research, remote from every day life as well as from the question of the technological and commercial application of their research.

In the first two decades, the city did not play a role as a setting for pursuing science - neither the city of Munich nor the tiny town of Garching. That corresponded to the concept of urban planning which was based on the idea of separated function - an idea that, as is well known, was called into question in the 1960s and afterwards. In particular, sociologists referred to the development with terms like the "murdered town" or "death of cities" (Siedler/ Niggemeyer 1994, Bahrt 1961, Jacobs 1961). At that point, the concepts of urban planning changed from the concept of separated function to density, integration and a blurring of functions. Likewise, in the 1970s, Garching's local politicians and inhabitants began to perceive the *separation of the research area* as a problem. The criticism was made that science as well as scientists themselves had become an alien element.⁶ The research area was now termed a "ghetto". Thus, in 1978, for example, Garching's politicians made real efforts to reduce the separation between Garching town and the science area in order to "overcome the bad functionalism".⁷ The aim was "to connect the alien element, the university, more closely to the center of Garching"⁸. These efforts culminated in a -more or less helpless - "plan to construct a walking route between Garching and the research center"⁹. Similar to that idea is the recently discussed plan to build a bridge connecting the research area with Garching town where various shops, sports facilities, meeting spaces and so on are to be located.

Simultaneously, the fact that no cafes, restaurants, shops, flats or bookshops existed in the research area was criticized. In the 1970s some satirical terms arose for Garching, such as "Akademgorodok"¹⁰ or "Novigarchinsk" (Wengenroth 1993: 297). These terms, which allude to huge planned Soviet cities, must be read as critical metaphors for lifelessness, artificiality and isolation. This criticism implied a re-orientation towards urban features, such as were typical for the European city in the 19th century and which comprise compactness, density, proximity, blurring of function, etc.

Urbanity has re-appeared on the agenda in two phases. First, it was discussed among urban planners in the 1960s. As a consequence of this debate, efforts were made in Garching - with a little delay, in the 1970s - to change the atmosphere and face of the research area. A memorandum of the Technological University criticized the "isolation" of Garching scientists.¹¹ Now, the administration of the TU as well as the Bavarian government claimed that facilities for shopping, recreation and housing areas should be built (but only a few have actually been built).¹² The crucial change began in the 1990s. Local and Bavarian politicians as well as the TU administration have been planning since then to build book shops, copy-shops, pubs, restaurants, shops, apartments, medical services, kindergarten, etc.¹³ Simultaneously the spatial integration of industry has begun to be an important objective of politicians. Furthermore the administration of the TU unambiguously recommends the *integration of function* in the research area and asserts that the city has to be regarded as a stimulating, provocative and plural environment, while the

6 Der Landkreis München. Beilage des Münchner Merkur, 6/7 July 1963.

7 Stadtanzeiger, 17. August 1982, S. 6. Garching: Eine Gemeinde sucht ihr Gesicht.

8 Local Archive of Garching, Anlage 3 zum Protokoll der GRS, 19.5.1978.

9 Local Archive of Garching, GRS 13 May 1977.

10 Süddeutsche Zeitung, 22./23. November 1975, p. 17.

11 Memorandum, p. 13.

12 Memorandum, Senatsbeschuß p. 2.

13 Archive of TU-Bauamt, Garching, 5000, 1996.

"splendid isolation" of scientists runs the risk of removing science from society.¹⁴ The concept of the seclusion of scientists has been replaced by an ideal of integrating science into society that was accompanied by a revitalization of urban features. Obviously, this constitutes a new sense for the importance of cities for scientific research and thus results in a considerable effort to create an urban environment.

The same is true for my two other case studies, namely Neuperlach and Martinsried, as well as for further more contemporary examples, which aim at organizing research areas by copying the model of a city, or more precisely the idea of the European city, e.g. the planned Science City of the ETH Zürich as well as the multi-function polis in Australia.

Thus, while in the 1950s and 1960s, the city was not regarded as an important setting for pursuing scientific research, since the 1970s and in particular since the 1990s, a certain model of the city has gained new importance - but as a kind of imitation of the "European city". This means that the locus of science is not the historically evolved city. Rather, urban planners, local politicians and science policy concepts now aim to build "creative milieus" on the outskirts of old cities, based on a certain ideal of urbanity. This model of urbanity does not refer to a sense of political organization, but rather to features such as communication, interaction, liveliness. Typical features as they are historically ascribed to the European city such as spatial proximity, communication, heterogeneity, networks, density, the blurring of function have been rediscovered as catalyzers of scientific and technological innovation. They are thought to offer a fruitful organizational framework for the production of knowledge and, in particular, economic growth. That means that a certain kind of urbanity serves to stimulate innovation, scientific and in particular economic progress. The city as a concept has been re-invented in the context of science and in particular in the context of science-based innovation.

A similar revival of urbanity can be observed in other spheres, too. For example, shopping malls imitate an urban atmosphere: they put the city on the stage. Here urbanity is seen as a guarantee of experience.

Finally I would like to take a quick look at why a certain historical ideal of the city seems nowadays to offer an appropriate context for science.

Firstly, it is obvious that the more science is expected to directly stimulate economic growth - and thus is application-oriented science - and the more companies rely on scientific knowledge, the greater the importance that is ascribed to an urban mode of organization. This depends on the need to transfer knowledge between institutes and between people and the idea that innovation and creativity result from a lively place with the possibility of informal communication. When the boundaries between disciplines as well as between science and technology, between pure science and application-oriented science started to blur, the attempt was made to integrate them in one place in order to ensure spatial proximity and communication. It is noteworthy that concepts of science policy, architects and urban planners refer to typical features ascribed to the city for centuries.

Secondly, the urban mode of organization of scientific research suggests the "contextualization" of science, as Nowotny et al. call a trend regarding the relationship of science and society: Scientific research is not thought of as an autonomous project any more. Instead science has to legitimize itself more than in earlier decades, since the public shows a more critical and sceptical attitude towards science. Simultaneously, as the TU administration also claimed, the city is regarded as an inspiring, plural, and stimulating environment for scientific research, while the

"isolation" of scientists runs the risk of removing science from society. Thus, now science is supposed to be pursued within social, political and economic contexts.

To sum up: since the late 1970s and in particular since the 1990s considerable effort has been made to create sites of knowledge which constitute an idealized model of the European city - thereby being located a certain distance from the "real city" which actually has lost its importance as a setting for scientific research. That also means that urbanity has evolved into a metaphor which evokes a certain historical image of the city and which is simultaneously used as a means to generate economic prosperity as well as to indicate the integration of science into society. These cities of science, however, are not real cities. People do not live there. They are places for well-educated, academic people, while other social groups have no reason to go there. Whether these new sites of knowledge actually will evolve into lively places, into an agora, as it is hoped, will only become clear over the coming decades of their existence. Ultimately, however, it will depend on the people working there and how they behave - despite all the hopes and efforts of urban planners who believe in the power of urban structures and architecture.