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Which education for which planning in Switzerland?

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Which Education for Which Planning in Switzerland?

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Switzerland’s spatial development

The land area of Switzerland measures approximately 41,300 km². Settlement areas comprise only 7% of this, while 56% are considered uninhabitable: mountains (Alps, Jura), forests, surfaces of the water.

Politically, Switzerland is a federal state made up of 26 cantons. Each canton is further divided into municipalities. Today, Switzerland is made up of 2,800 municipalities, although this number is currently decreasing as a result of a current trend toward fusions.

Originally Switzerland’s character was predominantly agrarian, largely determined and influenced by agriculture and handcraft industries. Its appearance was determined by countless villages, hamlets, farms, and relatively few and spread out small and mid-sized cities well into the 20th century.

In the wake of industrialisation, the character of the landscape had significantly changed locally as early as the 19th century. However, only after the end of World War II Switzerland did as well as neighbouring countries experience a significant turnaround in their settlement structure carried by a prolonged period of growth lasting into the 1980s, with minor interruptions. In this time span of less than 50 years, the built-up settlement area of Switzerland has more than doubled.

In the meantime, almost four-fifths of the 7.45 million inhabitants (July 2004) lives in the metropolitan regions of Zurich, Basel, Bern, and Lausanne/Geneva as well as in the Ticino, the region located south of the Alps and already considered part of metropolitan Milan. It is here and along connecting urbanised corridors that one finds the strongest settlement growth in Switzerland today.

The spatial development report 2005 of the Federal Office for Spatial Development (ARE, 2005) came to the conclusion that current spatial development trends in Switzerland are not sustainable: among other things because urbanisation remains uncontrolled, the agglomerations continue to spread out, compulsory mobility increases, wasteful land use practices continue (ca. 1m²/sec), etc.

In addition to these clearly apparent developments are also those, which are less clear and cause entirely new challenges to spatial planning:

- Ever greater conflicts emerge between the spatial behaviour of people, households, and businesses – the real life – and the political-administrative structures, which organize the living spaces in which they function. And while real life increasingly requires larger spaces going beyond communal, cantonal, and national boundaries, planning authorities are still oriented on the finely meshed structures of the 19th century.

- Tremendous investments in technical infrastructure of the past decades has led to an impressive increase of spatial freedom (“Everything is possible anywhere at any time”). At the same time, however, our dependency on these infrastructures has also grown. This dynamic leads to new questions regarding

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emissions and safety of these infrastructures (technical issues, environmental threats, terrorism) and their financial feasibility (buildings and facilities and their operation).

- Although the main task of spatial planning half a century ago consisted of enabling and coping with growth, more recently it seems as if this task has changed to the coping with stagnation and shrinkage. Instead of expanding and extending settlement areas and infrastructures, spatial development is taking place in existing built-up areas (i.e. reuse of former industrial areas) as well as the ordered retreat from urban sprawl. However, traditional, restrictive planning instruments are hardly suitable for these purposes.

- Linked to this problem is, among others, the debate surrounding one of the former priorities of Swiss spatial planning: equalising the differences between the regions. Can and should we guarantee equivalent qualities of life in all parts of the country?

- Ultimately, global developments also lead to changed general conditions of spatial development. On the one hand, economic globalisation continues to speed up structural change and strengthen the influence of global players. The latter raises questions, as to the interrelationship between spatial development and economic and tax policies. On the other hand, global climate change can already be connected to ascertainable crisis symptoms (i.e. limitations on tourism in high mountain areas).

Spatial Planning in Switzerland¹

According to spatial development and its problems also the issues and methods of spatial planning have changed. The modern era of spatial Planning in Switzerland can be roughly divided into 4 phases: pre-World War I (preliminary phase), between World War I and II (transitional phase), from World War II until approx. 1980 (institutionalisation) and since approx. 1980 (consolidation).

Preliminary Phase (until World War I)

Urban and regional planning was essentially undertaken in local situations without relation to a larger context:

- In settlement areas, spatial planning was urban planning or even urban design
- Outside of settlement areas, efforts concentrated on infrastructure (i.e. water), forestry, land improvement, etc.

Transitional Phase (between World War I and World War II)

It is in this transitional phase than one began talking about nationwide planning. People began to understand land and landscape as scarce resources, which needed to be managed and preserved. The main subject of discussion was the uncontrolled urban development and the future of agriculture. Hans Bernhard, a leader of the so-called "Inner colonisation" movement, formulated this in 1915 as follows: “The main goal of domestic colonization is that more people should have more living space and more land for improved alimentation then before.”

In this phase the first concepts and plans were developed, which addressed and/or undertook spatially comprehensive themes:

- 1915 the international Ideas Competition for Zurich and its Periphery presents its first proposal for a city-region.
- 1920 the Association of Swiss Street and Transportation Professionals develops its first design for a national highway system.
- 1920 Prof. Hans Bernhard develops first planning approaches. He calls for the clear division between rural and urban-industrial settlement areas.
- 1926 the city of Winterthur enacts the first land use zoning plan of Switzerland.
- 1928 CIAM (Congrès international d'architecture moderne) discusses an "Urban Program" (Programme d'Urbanisme), in which planning is not limited to the city, but rather extended to include the entire landscape.
- In the 1930s, the first regional planning groups are founded.

1933 in an essay, Armin Meili develops a proposal for a national settlement model of Switzerland.

1937 a first cantonal plan is presented in Geneva.

1937 architects and public authority representatives establish the Swiss National Planning Commission, a Task Force for National Planning is set up at the ETH in Zurich.

1939 the Swiss National Exposition propagates the theme by giving it its own category Urban and Spatial Planning.

**Institutionalisation (World War II until 1980)**

During World War II, spatial planning took a large step forward. A cultivation plan guaranteeing self-sufficiency with respect to food (Wahlen Plan) made the word "plan" presentable. Beforehand, it had carried the negative connotation associated with planned economy (in German: Planwirtschaft). Subsequently, the Federal Department of the Military assigned tasks for working out the foundations of national spatial planning.

According to a federal resolution from 1942, measures to combat unemployment were to be taken into consideration in national spatial planning. Incidentally, it is in this context that the term "spatial planning" is referred to in national law for the first time.

- In 1942, the first conference for national spatial planning was held at the ETH Zurich.
- In 1943, the Swiss Association for Spatial Planning (VLP) was founded.
- In the same year, the Centre for Spatial Planning was founded at the Geographical Institute of the ETH Zurich, headed by the geographer Prof. Gutersohn. In 1946, the Centre became the Institute for Spatial Planning.

After the war, spatial planning underwent a tremendous crisis. Although planning expanded in other countries due to the need to rebuild cities destroyed during the war, this broadly based debate ended in Switzerland just as the big building boom took off. At the beginning of the Cold War, spatial planning had had a somewhat negative image more or less due to ideological reasons. Planning, in general, was associated with governmental statism and disappropriation. Planning, not only on the national nor regional level, could not develop and counter the rapid expansion of urban settlement areas. One concentrated instead on addressing particular problems. In addition, a legal framework, which clearly defined the roles of federal, cantonal and communal governments with respect to spatial planning, did not yet exist.

Spatial planning finally became a national theme in the 1960s. The results of former laissez-faire policy were obvious. Although planning had formally been seen as hindering growth in the past, the catchword now was "Growth requires planning". Public authorities were given the mandate to correct infrastructure deficiencies. As a result, planning horizons were lengthened to cover longer time-spans and larger territories and planning’s core competencies clearly expanded in the direction of comprehensive or overall planning.

- In 1961, the Institute for National, Regional, and Local Planning (ORL Institute) was founded at the ETH Zurich.
- Between 1965 and 1971, Swiss National Development Concepts (ORL-Institut, 1971) were developed under contract with the federal government. Nine different settlement concepts for a Switzerland with 10 million inhabitants in varying spatial concentrations were worked out.
- Based on these models, the directors of the most important federal departments developed the first National Spatial Planning Concept CK-73 (DRP, 1974b). At its centre was the so-called "decentralised concentration" of urbanisation. This concept went back to ideas of the 30s, especially taking the strong federal government structure into consideration.
- Spatial planning legislation developed parallel to the increase in planning activity. In 1969, the federal constitution assigned the task of spatial planning more or less to the cantons (Art. 22 quater). Above all, the goal of spatial planning was stipulated as the economical use of land and the ordered settlement of the country. Politically, this was only possible with the simultaneous guaranteeing of private land ownership rights (Art. 22ter).
- The concretion of these basic standards both in terms of content and organisation led to bitter discussions spread over a decade and two national referenda. Only in 1980 did the Federal Law on Spatial Planning take effect.
In the meantime, the biggest problems in spatial planning were to be solved based on emergency means (Federal resolution on urgent measures in the field of spatial planning) (DRP, 1974a).

The legal foundation set off the rapid institutionalisation of spatial planning within the federal, cantonal, and municipal government branches in the following years as well as a large wave of planning activity on all levels. The main task was to overcome anticipated growth as rationally as possible. However, because existing planning concepts were politically not enforceable, an overall target for spatial development was lacking (BRP, 1987).

**Consolidation (since approx. 1980)**

Due to the obvious lack of planning goals, the federal government assigned the Federal Office for Spatial Planning the task of formulating model visions. In 1996, the Federal Council released the "Swiss Planning Policy Guidelines" (BRP, 1996). The strategic goal of this integrated spatial planning policy was a "network system of towns". In order to realize this, four planning policy lines of action were designated:

- To plan urban areas, i.e. creating regional expanded towns and growth points close to important rail junctions.
- To strengthen rural areas in their function as economic and living spaces.
- To preserve natural landscapes and the countryside, i.e. ecological guidelines for economic development.
- To integrate Switzerland into Europe (i.e. High-speed railway network, transnational cooperation).

While the National Spatial Planning Concept CK-73 still formulated a clear goal, the "Swiss Planning Policy Guidelines" referred more to interrelationships and networking. One wanted to gain an overview without having to regulate everything comprehensively once and for all. As a result, a fundamental paradigm change became apparent: from conclusive to strategic planning (Wegelin, 1996). Planning no longer referred to the reaching of concrete goals but rather the working out of larger problem-solving strategies. As a result, the general concept of planning also had to be expanded:

- Integration of the concept of sustainability into spatial planning
- Strengthening participative methods in planning
- Strengthening private-public partnerships and negotiation-oriented planning
- Strengthening the application of decision support tools: modelling, simulation and visualisation

**Spatial Planning Education in Switzerland**

Planning education evolved a great deal parallel to the changing understanding, content and methods of spatial planning over time.

Until World War II, there were no specific education programs in spatial planning. The necessary knowledge and skills were communicated within the framework of professions such as architecture, civil engineering, rural engineering, geography, etc.

Only with the strong increase in the significance of planning in the 40s and particularly since the 60s were systematic courses developed and offered. A first course for practicing planners was offered by the VLP as early as 1945.

Until today, there are no basic studies in spatial planning at the academic university level. Whereas the ETH Zurich, the EPF Lausanne as well as the University of Geneva offer postgraduate studies in spatial planning.

The only one basic course in spatial planning is offered at a technical level.

**The Postgraduate Program in Spatial Planning at the ETH Zurich**

Since 1967 ETH Zurich has an interdisciplinary postgraduate program in spatial planning. One qualifies for admission with a university masters degree as well as at least two years of experience in the profession. In the wake of the Bologna Reforms, the Postgraduate Program was changed into a MAS Program leading to a "Master of Advanced Studies ETH in Spatial Planning".
Objectives

Until the mid-1980s, education in spatial planning oriented on the rapidly growing need for professionals to prepare the first generation of communal land use plans and building regulations, infrastructure plans, as well as special plans for particular projects or situations (i.e. design plans, area developments). The most important issues were the limiting of settlement areas, controlling the type and mass of built substance, the planning of technical and social infrastructure, as well as the enactment of regulations for protecting special places of interest and landscapes.

In the last two decades the program has needed to continually adjust to new challenges in spatial planning, like new ways of looking at problems of spatial development, changed understanding of planning, changed general conditions, as well as changed expectations of students (i.e. ability to combine one’s professional life with one’s studies).

Against this background, the objectives in content changed. While at the beginning of ETH Zurich’s spatial planning education the gaining of knowledge and skills for communal land use planning stood in the foreground, the focus has currently shifted towards the development and implementation of complex spatial development strategies, resulting in the following objectives:

- Ability to grasp and understand complex problems in spatial development.
- Ability to develop suitable strategies for their solution (Planning as a method of strategic problem solving)
- Knowledge in the main features and interrelationship of theories, models, and methods of analysis of spatial development.
- Knowledge of the most important theories, models and methods of spatial planning and development and the ability to use them.
- Knowledge of spatial planning practice in Switzerland and an overview of practices in other countries.
- Knowledge in the history of spatial planning and development.
- Ability to work together in multidisciplinary groups and introduce individual expertise from one’s own basic studies as well as professional practice.

Course offerings

The course offerings can be divided into two parts with differing didactic concepts. On the one hand, knowledge from specialists in different disciplines is passed on through lectures and seminars. On the other hand, students become acquainted with the main knowledge and skill requirements needed in the field through explorative learning within the framework of project works and acquire the essential knowledge base on their own. Therefore, the responsibility for learning success lies both with the teachers as well as with those who are being taught. This is not only justifiable, but even desirable, because all students already have some degree of professional experience and, as a result, relevant knowledge, skills, and experiences.

- Lectures and seminars
  - Spatial planning as task and method
  - Theories, models, and analysis methods of spatial development from different scientific disciplines
  - Theories, models, and methods of spatial planning and development
  - Modelling and simulating spatial development
  - The history of ideas in spatial planning
  - Spatial planning and spatial development policy in Switzerland and Europe

- Two project case studies in interdisciplinary groups
  These projects involve problems in the real world:
  - Project 1: Spatial development on the periphery
  - Project 2: Cross-border spatial development Switzerland - Germany
  The following project support is offered:
  - Planning methodology
  - Work strategies
  - Knowledge management
  - Communication and presentation techniques
• Study trips and excursions
  Two study trips address the theme: "Which solution strategy for which problem?" The goal is to gain insight into planning practice in Switzerland and abroad, while becoming acquainted with methods of resolution and their implementation.

• Individual concentrations
  Within the framework of the curriculum, knowledge and skill deficiencies due to one’s personal education and experience should be eliminated in individually chosen courses.

Schedule
The original four semester full-time course of studies was converted to a 24 months part-time program. The entire curriculum comprises of 19 weeks of presence at ETH (760 course hours) spread over two years. Additional phases of individual study as well as two larger individual projects are also to be completed within the same approximate time frame.

Program interest
The demand to participate in our program is surprisingly large. Until today around 400 people have successfully completed our programs. Almost 60 candidates have applied for the next cycle beginning in Autumn 2005, which is double the number which we are able to affiliate. This is even more astounding, since the MAS Program is not particularly inexpensive, costing approx. 10,000 CHF.

The disciplinary provenance is quite manifold: architecture, geography, jurisprudence, planning (!), civil engineering, political science, economy, natural science, and others. Also the fields of experience are various: spatial planning offices, special planning offices (i.e. transport pl.), architecture, engineering offices, research, and others.

In light of this situation, we conclude that despite all complaints – especially within the circle of planners in self! – interest in spatial planning is not totally lacking. There is apparently a growing circle of interested people from the most different fields who are willing to make extraordinary additional efforts to help solve the difficult problems of spatial development today and in the future. To these people we say, "Your impetus is our imperative!"

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