

Trapped by crisis: the plight of architects in Europe

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ABSTRACT: When one speaks about crisis today, one means a phenomenon that has hit many sectors of the economy. When one speaks about a global financial crisis, paradoxically, people in most countries of the world have not noticed any crisis at all. *Crisis* has become a fashionable word to excuse our helplessness. Apparently, the problem is being dealt with by analysts rather than by people who have first-hand experience of it. Architecture is no longer bound by any borders. In the globalised world, staff turnover is increasing. It has been 30 years since Christian Norberg-Schulz pointed out the problem in the education of young architects, who are not able to solve the problems of their time. His statement could easily be used in the contemporary situation. How should schools react to the present challenges? Should the education system be changed? Does one have to change the architect's view of creating new architecture? Is it possible to solve the current problem of crisis by an ecological approach to the world and by sustainable architecture? This article endeavours to clarify the present situation concerning the architecture profession in the European Union, discussing the needs and requirements of students, teachers and people in practice.

Keywords: Crisis, architectural education, architectural business, index of architects per inhabitant

INTRODUCTION

This article has been written in times when many people are frustrated and forced to think and react. People are forever listening to news of crisis, whether it is financial, political, economic, humanitarian, cultural or identity crisis. *Crisis* has become a fashionable word to excuse our helplessness.

Crisis is not a new phenomenon in the history of mankind. It has accompanied human society from ancient times, albeit in different forms and under different circumstances. For example, England was hit by crisis at the end of the 17th Century and at the beginning of the 19th Century.

France went through a crisis at the beginning of the 18th Century. In the 20th Century, one mentions global crises, e.g. the Great Depression of the 1930s (1929-1933), the economic crisis of 1974-1975, which was caused by a surge in prices of energy raw materials, in particular, oil and, finally, the present *global financial crisis* that began in 2008 when the USA mortgage bubble burst.

The word *crisis* (from the Greek *krisis* - the decisive moment, decision as such; confusion, financial or trade difficulties; in medicine - a decisive change in a disease [1]) is connected in particular with people and their activities. The word *crisis* is practically never used when dealing with plants, animals or inanimate nature.

Of all the professions, architecture is the one that has always dealt primarily with providing shelter for people. The main goal of this article is to consider the relationship between crisis and architecture. What kind of crisis are contemporary architecture, architects and the creative process going through? Several opinions on how architecture, the profession of architect and the education of young architects can affect one another are introduced.

THE CURRENT SITUATION OF ARCHITECTURAL BUSINESS IN THE EUROPEAN UNION

One may use the results of a survey carried out by the Architects' Council of Europe (ACE) organisation as an illustration of how architects in the EU see the present situation of their profession [2]. The stagnation in the building industry directly affects the functioning of architectural practices and the employment rate in the field. Figures 1 and 2 show the present situation of architectural practice and workload in Europe.

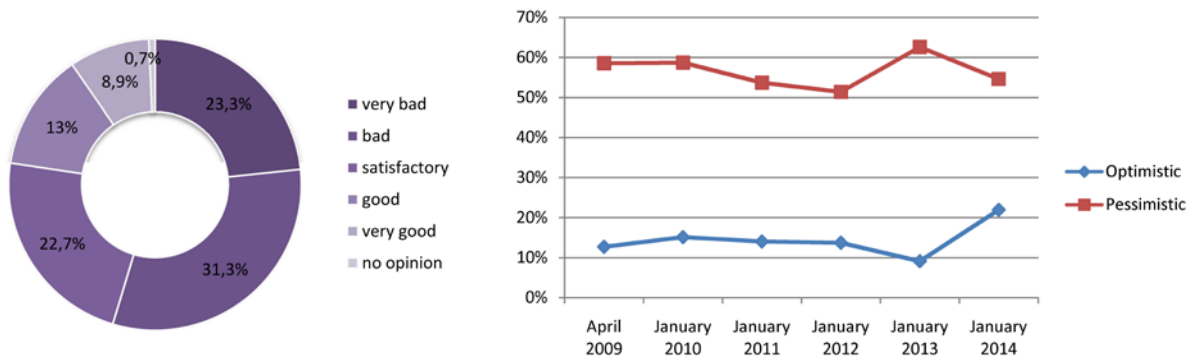


Figure 1: The current situation of architectural practice in Europe [2].

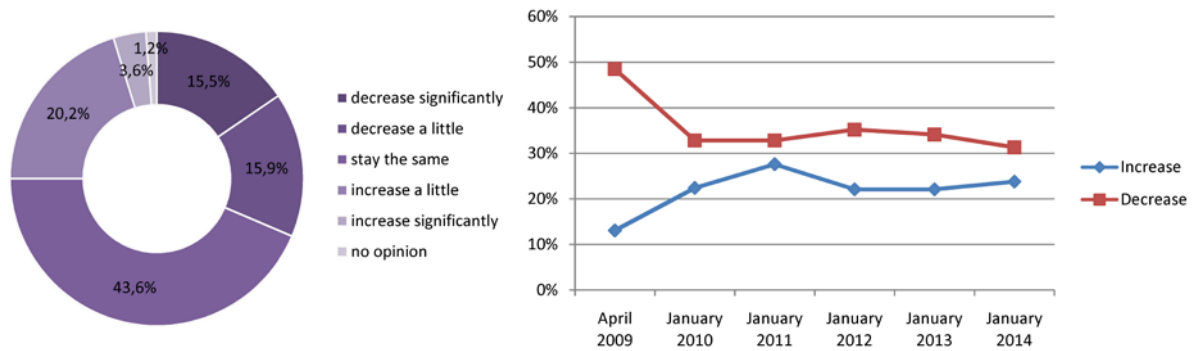


Figure 2: Expectations of the architectural workload for the next three months [2].

The Innovation Theory (*innovation*: from Latin innovation meaning recovery) tries to explain the present state. It assumes that approximately every 40-60 years technologies are fundamentally renewed. This gives more space to other radical societal changes. Theorists assume that the period between 2010 and 2020 should bring about such changes.

ARCHITECTURAL RESPONSE TO CRISIS IN HISTORY

The Innovation Theory confirms that this is a completely natural process, which is periodically repeated and is closely connected with the capital(ised) social organisation of the present globalised world. However, crisis could also be regarded as a beginning of something new. In 1933, in times of deep crisis, Czech architect, Jiří Kroha, wrote: *People without jobs, having nothing to eat, nowhere to live, people without worries, without social consciousness, architects without jobs or without knowing the reason for it all - that is today's world, the situation in architecture of 1933* [3].

The Minimal Flat designed by Karel Teige, one of the major figures of the Czech avant-garde movement, also proves the point. In 1930, Le Corbusier introduced his utopian project of the Radiant City - *Ville Radieuse*, a blueprint of social reform - and in 1933, the Athens Charter was adopted. The Russian Constructivists mostly clung to idealistic visions of architecture and society due to an unfavourable economic situation. In the 1960s, the Japanese Metabolism movement (Kenzo Tange, Kiyonori Kikutake, Arata Isozaki, Kisho Kurokawa) carried the torch of this trend and sought the solution to the problems of the time. A new period of utopian projects began with the *Convention City* (1976), Buckminster Fuller's geodetic domes, an avant-garde group of Archigram (1960) and Peter Cook's *Plug-in-City* (1964). History is replete with such examples.

MOTIVATION

Architects, like all graduates tend to blame the saturated labour market for a lack of jobs. According to an ACE survey (The Architectural Profession in Europe 2012), the estimated number of architects in Europe 33 was 548,530, while the population numbered 601,451,878 (that represents 0.091% architects per inhabitant) [4].

One way of dealing with the bad situation could be an architectural market change. The available surveys show that neither in Europe nor in America nor in other countries of the world does the situation look very promising. An expanding China with an active building market could be the chosen destination. According to a COAC survey (© *Collegi d'Arquitectes de Catalunya*), there are 36,000 architects working in the Republic of China, which represents 0.028% architects per inhabitant. [5]

India is another architectural market that seems really huge. In April 2008, there were more than 29,085 architects employed there, of which 19,238 were men and 9,847 were women. More than half of them were 20-35 years old. With a population of 1,241,491,960 in 2011, the index of architects per inhabitant is 0.023% [6].

The index of architects per inhabitant in the United States of America is 0.70%, with 223,600 architects (105,596 domestic architects and 118,004 architects) in a population of 315,651,000. (April 2013) [7].

A country that could relevantly be compared with Slovakia is the Czech Republic, with 8,000 architects. With a population of 10,504,203, the index of architects per inhabitant is 0.76% [4].

The Netherlands, *an architectonic superpower and a paradise for architects*, with a population of 16,730,348, makes it possible for 10,700 architects (0.64% per inhabitant) to find employment [4].

Currently, China and India are moving towards a recession in the building market. The ghost cities in China that are coming into being are an illustration of this. These countries are characterised by extreme poverty and the index of architects per inhabitant would be a confusing indication. The Oxford Poverty and Human Development Initiative and The United Nations Development Program (UNDP) have introduced a new index, called multidimensional poverty index (MPI), which takes into account several criteria. On the grounds of these parameters, it is estimated that there are 53.7% (MPI) of poor people living in India (41.6% of Indians are poor, according to the \$1.25 a day income poverty line and 75.6% according to the \$2.00 a day line) [8]. In China there are 12.5% (MPI) of poor people (28.4% of Chinese are poor according to the \$1.25 a day income poverty line and 51.25% according to the \$2.00 a day line) [9]. It is questionable how strong the architectural market demand in these countries really is. The majority of architects probably find employment due to the housing development caused by the constant rapid population growth.

There are 1,613 Chartered Architects registered in the Slovak Chamber of Architects [10]. With a population of 5,404,555 (March 2012), this represents 0.091% architects per inhabitant. According to the Architects' Council of Europe, Slovakia, together with Romania, ranks among the countries with the lowest density of architects. In Slovakia and Romania, the index of architects per inhabitant is lower than in the other EU countries. The surveys even show a shortage of architects. However, the data stated do not take into consideration the graduates with less than three years' experience and students of architecture already working for studios as part-time employees.

Since 1994, attention has been drawn to the relationship between the number of inhabitants, number of architects and architecture students based on the Association of Collegiate Schools of Architecture (ACSA) statistics. In 1994, there were 85,000 architects working in Italy and 95,000 students of architecture (147,000 at present), while the number of inhabitants was 57,150,000. [4] That means 1.66 architecture students per 1,000 inhabitants. Taking into account these proportions, there should be 8,300 architecture students in Slovakia, an extreme number for the country.

Since then, the authors have been trying to obtain a qualified estimate of an acceptable number of graduates from the Slovak Chamber of Architects. It has become apparent that the number of architects is more or less a matter of the market. The available numbers apply rather to the whole EU. The number of students enrolled remains a matter for every single university. Almost zero unemployment could be seen as an indicator of satisfaction.

ARCHITECTURAL EDUCATION VERSUS PRACTICE

It is a well-known *truth* that an *Alma Mater* only provides a system for the university degree and glosses over the fundamental knowledge that should be broadened individually by self-education. Joel Sanders wrote:

The professional standing of the architect is a relatively recent invention. During the Middle Ages, architects belonged to Guilds and were considered artisans. While the names of some Master Builders have been recorded for posterity, it was not until the Renaissance that the status of architects, along with that of artists, was elevated from anonymous craftsmen to individual creators. [...] Not until the establishment of academies like the Beaux-Arts in Paris in the 19th century do architects define themselves as experts who learn not on the job but in school, a change in status that leads to the licensing of professional architects in the early 20th century [10].

It has been 30 years since Christian Norberg-Schulz stated: *The schools have shown themselves incapable of bringing forth architects able to solve the actual tasks* [11]. The situation remains unchanged. Are architects actually able to define these tasks?

The current state is caused by the pressure on prices of architectural production, so architects work below cost. The question is being asked, not only in Europe, as to what proportion of current construction is actually designed by architects. This phenomenon is also being reflected in teaching and the exaggerated realism of teachers and students. Students who play it safe and their aesthetic ambitions are being suppressed, they want to be prepared for real practice. Cultural eruptions in the architectural world seem to be more and more distant.

Architects are forced to betray their aesthetic, and sometimes also ethical, ideals more than other artists. Paul Weiss said: *No other art is so hemmed in by men, tasks, and conditions relating to non-aesthetic matters* [12]. The large number of computer programs used by students and studios also poses a problem. One could name numerous:

AutoCAD, Autodesk Revit, ArchiCAD, Rhinoceros, Grasshopper, Photoshop, Corel InDesign, etc. They burden students who consequently have less time for the creative process. Drawing by hand is slowly but surely disappearing from the designing process or it remains the studio executive's privilege. The famous architect, Steven Holl, also confirms this fact by saying:

Throughout our world, consumer goods propelled by hyperbolic advertising techniques serve to supplant our consciousness and diffuse our reflective capacity. In architecture the application of new, digitally supercharged techniques, currently joins the hyperbole [13].

Obviously, the state can make strategically important decisions regarding education. Should the university serve as a temple of knowledge or just as a supermarket for information? Regarding the financing of education, both ways are possible. On the one hand, the present crisis puts pressure on architects, who have to be really efficient. On the other hand, all people know that, in the long run, it is culture that is crucial for a successful society. The dichotomy between *training* and *education* becomes urgent. It is debatable whether a university graduate should be *berufsfertig* or *berufsbereit* as Germans say. Actually, education is also going through a crisis. As a matter of fact, the slogan of ENSHA 2011 (one of EAAE projects) was *more for less* [14].

Differing claims about the education of graduates and the required professional experience show how internally disunited the European architectonic space is. The methods of professional examination are also different. The requirements of the European architect should be unified. One recognises a degree but not an authorisation.

Table 1: Acquisition of competences - how to qualify as an architect in the EU. Overview of the situation in selected European countries [15].

Country	Academic training	Required professional experience	Professional examination
Slovakia	6 years	3 years (supervised by an architect entitled according to the local law)	Yes (Examination Commission appointed by the Ministry of Construction and Regional Development (+ oath))
Czech Republic	5 or 6 years (depends on the institution)	3 years	Yes (by the CCA - Chamber of Czech Architects)
Netherland	5 years (technical universities), 4 years (academies of architecture)	2 years (from January 2015)	-
Italy	5 years	No	Yes (State Examination (confers the title of Doctor))
Germany	Minimum 4 years (University and Fachhochschule)	2 to 3 years (depending on the Länder, 3 years in Saarland)	No
United Kingdom	5 years based on two cycles	2 years (of which one desirable between the 1st and the 2nd cycle studies)	Yes (validated by the RIBA and accepted by the ARB)
Finland	5 years	No	No
Spain	6 years (project architect), 4 years (architect in charge of execution of work)	No	No

Educational system revaluation could also be a response to the crisis. The Slovak academic training concept of 4+2+3 years (Bachelor's + Master's + Doctor of Philosophy) and a compulsory professional experience of a minimum of three years (postgraduate in any country) seem redundant. The European Union supports two models 5+1 or 4+2, that means reducing the academic training length and reducing the required professional experience length (at least in comparison with Slovakia). If the academic training length is reduced, costs are lowered. If the required time of professional experience is reduced, the business environment is improved. The 4+2 model supports a longer professional experience, making the passing of the professional examination more likely. Then, it is easier to be accepted on the European market in accordance with the existing domestic legal regulations.

The question of a real hierarchy arises. Education should be based on a consistent branch of study. Universities which provide the studies should have an adequate personal, technical and cultural background.

ARCHITECT - APPROACH TO THE CREATIVE PROCESS

According to Ole Bouman, Director of the Netherlands Architecture Institute (NAI), crisis is *a positive change, which will force architects to seek solutions to problems that they themselves have helped to create*. He expands on the idea in his publication *Architectuur als Noodzaak* (Architecture of Consequence). Bouman blames architecture for making

a contribution to the current crisis by designing *buildings that paid no heed to issues of accessibility, social cost-benefit, energy consumption and future management* [16]. Architecture is, to a large extent, responsible for the accumulating crises. Examples are traffic jams, overloaded airports and ghost cities that were supposed to be a shining example of globalisation success.

According to Bouman, architects could find a solution to the problem of this crisis (and the architectural crisis too):

For a start, architects will have to give up the long-running quarrel over the relative merits of modern and traditional architecture that has raged for more than a century. Secondly, instead of inventing the ingenious concepts which mainly appeal to architects, they will have to turn their attention to the real needs of society [16].

Architecture must play a more important social role. It can be helpful in the food industry, health care, power industry, space, time and social cohesion, and in the actual economic system.

Architecture of the last century, seen as a modification of the material world, is characterised by a high number of styles and theories. *Contemporary architecture posing as the avant-garde, is more often engaged with the architectural discourse itself and mapping the possible marginal territories of the art, than responding to human existential questions* [17]. The questions of human existence could be a solution to the crisis. In his speech, Herman van Rompuy (President of the European Council), pointed out the potential of energy savings in the building industry. He noted within the Renovate Europe Campaign in partnership with the Lithuanian Presidency of the EU (October 10, 2013):

Energy efficiency in buildings is not a cost, but an investment with a great rate of return (...) undertaking ambitious renovation of the existing building stock can have very significant social, economic and environmental benefit.

He further underlined that

...buildings represent the greatest potential sector for energy savings in the EU. Deep renovation of existing buildings has also the potential to stimulate innovation, to improve health and to create about two million new direct jobs in the Union by 2020 [18].

It is necessary to implement the lowering of the energy consumption of buildings (Strategy Europe 2020) into the educational process, so that architects are able to respond to market demands. Architecture should be able to meet the technical requirements and play a primary role in the building industry.

Most architects see architecture as an object on which they can *put their seal*, which will be their signature eternally. It is each architect's dream to build great buildings. Koolhaas noted in his work *Bigness and the Problem of Large: Beyond a certain scale, architecture acquires the properties of BIGNESS. The best reason to broach BIGNESS is the one given by climbers of Mount Everest: because it is there. BIGNESS is the ultimate architecture. It seems incredible that the size of a building alone embodies an ideological problem, independent of the will of its architects* [19].

Like Mount Everest *big* architecture will remain an unattainable destination for many. Gehry's Bilbao, Cook's Kunsthau in Graz, the Centre George Pompidou in Paris designed by Piano and Rogers are undoubtedly icons of architecture. The French collocation *raison d'être* (reason for existence) is closely connected with this view. Why is the architecture of great gestures being built? Architecture embodies the ambitions and egocentrism of an architect. Other people want beautiful and effectively designed spaces. Architects fulfil people's desire for beautiful and effectively designed spaces and, at the same time, they satisfy their own architectural visions.

Today Ruskin's conception of beauty based on the natural relations of organisms could be transformed into the wording *each form made by a man is beautiful*. Sullivan's phrase *form follows function*, seen as a parallel to nature, means almost nothing today. Of course it depends on the preferences and perception of architecture.

Crisis that limits the creative work of architects considerably enables to rethink the primary function of architecture

...many of the architectural projects of the past 20 years, celebrated by the international architectural press, express both narcissism and nihilism. (...) The narcissistic eye views architecture solely as a means of self-expression and as an intellectual-artistic game detached from essential mental and societal connections, whereas the nihilistic eye deliberately advances sensory and mental detachment and alienation. (...) The world becomes a hedonistic but meaningless visual journey [17].

In conclusion, one would like to say something to stretch the reader's imagination. A futurist, Raymond Kurzweil, who deals with artificial intelligence said: *In 2050 a single personal computer may have the same capacity as the whole population of the world* [20]. Probably he meant the data processing speed, not the manual creation of values. *The machine is the architect's tool - whether he likes it or not. Unless he masters it, the Machine has mastered him* [21].

Following F.L. Wright's quotation, one could reach the utopian vision that maybe in 2050 there will be no profession of architect at all. Architects will disappear and they will be replaced by the computer software much preferred today that will be connected with the client's mind, ready to fulfil his dreams in all respects including the technical one.

The authors have no choice but to hope that architects will always offer some kind of an added value. In some way, computers are already creating architecture today. A concrete example is the *Flight Assembled Architecture* (Gramazio and Kohler, FRAC Centre in Orléans, France a Raffaello D'Andrea, ETH Zürich, 2011-12), a six-metre high tower that consists of small modules assembled by robots. This could be a possible indication of the architectural direction in future.

Architects often discover things (materials, etc) that have already been defined. The need for an interdisciplinary view of the problem of architecture becomes more urgent today. Communication with other branches of science could produce better results.

The word *crisis* is associated with such collocations as *crisis management*, *crisis scenario*. Each company has these. Let architects create them too. It does not matter whether it is by searching for utopian visions, by changing the view of the contemporary problems of architecture and society or by considering designing big architecture.

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BIOGRAPHIES



Young architect and researcher Ján Legény is an honours graduate in architecture from the Slovak University of Technology in Bratislava, Slovakia, where he also earned his PhD in 2013. His doctoral thesis topic was the Typology of Solar Town Planning: Urban Structures Generating. Presently, he is working in the Institute of Ecological and Experimental Architecture at the Faculty of Architecture of the Slovak University of Technology in Bratislava, Slovakia. He is an author or a co-author of about 12 articles published by Slovak journals. He peer reviewed two conference papers in the field of solar town planning, solar design and sustainability. He presented papers at five international conferences in Slovakia and abroad. Currently, he is preparing a monograph titled Sustainable Urban Design: Solar Strategy of a Sustainable City. He is a freelance architect in Slovakia and a co-founder of an architectural studio TRESarchitects.



Professor Robert Špaček graduated Master from the Faculty of Civil Engineering of the Slovak University of Technology (FA-STU) in 1976, and in 1984, he finished doctoral studies. He has undertaken many research fellowships: in Weimar (1980), Hannover (1981-82), Manchester (1993-98, occasionally) and Graz (2001). He is a co-founder of the Institute of Ecological and Experimental Architecture at the Faculty of Architecture of the Slovak University of Technology in Bratislava, Slovakia (1990). His appointments include the following: Dean of the Faculty of Architecture of the Slovak University of Technology (1990-94 and 1996-2002), Vice-Rector of the Slovak University of Technology (2003-2007), Head of the Institute of Architecture II at the Faculty of Architecture of the Slovak University of Technology (2004-05). Since 2010 he has held a post of the Vice-Dean for Foreign Affairs

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