

## ICONS OF CONTEMPORARY ARCHITECTURE IN BEIJING

Every time one thinks about contemporary Beijing, one begins with Tiananmen Square, the witness of some breakthrough events in the recent history of China. The urban planning project of the square was carried out by Zhang Kaiji in 1954.<sup>1)</sup> The architect was born in Shanghai in 1912 and he graduated in architecture from the University of Nanjing. He was the principal architectural consultant in Beijing after Mao Zedong rose to power. The square he created was located at the very heart of the former inner city, and constituted – through specific grandiosity – a competition to the imperial city, stretching out to the north of the Gate of the Heavenly Peace. In the times of the People's Republic of China, the gate, despite having been an integral part of the imperial past, was symbolically incorporated and inscribed into the landscape of the new urban planning. The first instance of adopting the Tiananmen Gate to the purposes of communist China's nomenclature was its inclusion in the official national coat of arms in 1950. Such associations with the new rather than imperial times, were enhanced by putting the image of the leader on the facade of the gate, between the two inscriptions: "Long live the People's Republic of China" and "Long live the united nations of the Earth", as well as by his regular speeches from the box, also designed by Zhang Kaiji.

The development plan of Tiananmen Square was thought over in every detail, as was its opening, planned for the 10<sup>th</sup> anniversary of the People's Republic of

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<sup>1)</sup> Zhang Kaiji (1912–2006) – In 1990 he was honoured with a medal of the Ministry of Housing and Urban-Rural Development. In 2000 he received the First Liang Sicheng Prize. His designs include: China's National Museum (1959), the Beijing Observatory, the Wuhan Yangtze Great Bridge (1955–57). He died on 28 September 2006 at the age of 96.

China, that is in 1959. The whole square was based on the principle of symmetry and balance, and on maintaining the major route north-south route from the Tiananmen Gate to the Qianmen Gate. The square is flanked by two monumental buildings, also designed by Kaiji in the style of social realism – from the west – the building of the National People’s Congress (the Great Hall of the People), built from November 1958 to September 1959, and from the eastern side – by the National Museum (1959). Originally, the building housed two institutions – the National Museum of China History and the National Museum of Chinese Revolutionary History which, as late as in 2003, were merged under the name of the National Museum of China. Zhang Kaiji completed the design in less than a month during 1959, adapting it to the landscape of the Square and the previously designed building of the Parliament. In 2007 a major renovation of the museum was commenced along with vast modernization, owing to which the exhibition area was increased from 65,000m<sup>2</sup> to over 191,000 m<sup>2</sup>. The works took four years and were completed with the official opening on 27<sup>th</sup> March 2011, that is five years after the death of its leading designer Zhang Kaiji. On the reopening of the museum, the local media reprinted the quite subjective statement of his son Yung Ho-Chang (also an architect) who remarked that “(...) it has to be very different from the Great Hall of the People, which is a political building. Although it lies on such an important location, its vigor doesn’t have to be that protrusive and awesome. It has to make people feel that you can easily step in. A public building shouldn’t make people feel hesitant to enter.”<sup>2)</sup>

Due to the fact that symmetry proved to be a preferable concept for Tiananmen Square, the major route was emphasised by the Monument to the People’s Heroes (1958) in the form of an obelisk whose plinth was decorated with reliefs evoking particular events from China’s past, e.g. the First Opium War (1939–42) or the Taiping Rebellion led by Hong Xiuquan (1850–64).

In 1977 the whole complex was completed with Chairman Mao’s Memorial Hall, symbolically crowning the history of his rule since the proclamation of the People’s Republic of China in 1949, which he announced at the nearby Tiananmen Gate.

In the area neighboring with Tiananmen, the process of managing the open spaces after demolishing the inner city walls was continued as late as the turn

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<sup>2)</sup> “(...) It has to be very different from the Great Hall of the People, which is a political building. Although it lies on such an important location, its vigor doesn’t have to be that protrusive and awesome. It has to make people feel that you can easily step in. A public building shouldn’t make people feel hesitant to enter.” – <http://english.cntv.cn/program/cultureexpress/20110309/108043.shtml> (19 August 2013).

of the 21<sup>st</sup> century. In 1999, a decision was made to build the National Grand Theater of China (1999–2007), designed by Paul Andreu (Fig. 1). The building was located behind the Parliament, eventually rejecting the Maoist style in favour of a modern but monumental structure.

Paul Andreu was born in Caudéran (France) in 1938. In the 1960's he graduated from the famous *École Polytechnique* and *École des Beaux-Arts* in Paris.<sup>3)</sup> He is predominantly known as a designer of airports. So far he has rebuilt about 50 terminals all over the world, e.g. in Teheran, Shanghai-Pudong or Charles de Gaulle Airport of Paris-Roissy. He distinguishes himself by being a designer solving technical and logistic problems. Despite obvious differences between designing airports and buildings of cultural functions, the Beijing project revealed certain commonalities and similarities between them. They mainly referred to the combination of three independent functions: opera, theatre and concert hall, all in one place, because constructing three separate buildings might have disturbed the overall concept determined by the monumentality of Tiananmen Square.

The form was surprising, but in retrospect it can be said that it has endured the competition of the vicinity. In the middle of the square-like area, the architect built a huge, flattened dome on an oval ground plan, surrounded on all sides by a water tank. The main entrance to the building, located on the north side, i.e. from the Chang'an Jie, was positioned in an "underwater" tunnel. The gate opens onto a foyer from which one can access three different performances: the opera – the largest room occupying the central position, the concert hall located on the east side, and the theatre on the west. The total floor area of the building amounts to nearly 150 thousand square meters.<sup>4)</sup> As early as at the design stage the building aroused a lot of controversy. French architecture critic Frederic Edelmann called it a jellyfish<sup>5)</sup>. Bogdan Konopka, who photographed the building at the beginning of its construction, compared it to a bell glass covering a set of cheeses in a good restaurant<sup>6)</sup>, while the Chinese themselves call it a fried egg. Of course, the architect meant something completely different. The rendering of the structure raises an irresistible impression that the characteristic glazing in the canopy of the dome, completed with the water reflection, forms a falling drop. Besides, analysing the development plan of the area, one can see a square in an oval, two coexisting opposites, so typical of Chinese culture.

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<sup>3)</sup> Jodidio (2003: 12).

<sup>4)</sup> Kijak-Olechnicka (2008a: 90).

<sup>5)</sup> Edelmann (1999).

<sup>6)</sup> Wasieczko (2006: 18).

In parallel with the construction of Andreu's opera, in the district of Xicheng, the Capital Museum was erected (Fig. 2), designed by Cui Kai (CAG Design Studio) in cooperation with the French studio AREP (Jean-Marie Duthilleul and Etienne Tricaud). The new museum was to accommodate valuable collections scattered throughout Beijing – including the largest collection previously exhibited in the Temple of Confucius. In 2006 the exhibits were shown in the new premises. The building of the Capital Museum (pic. 85–87) was designed on a rectangular ground plan, and the slope of the area in front of it (covered with a green “carpet” of boxwood) gives the impression of being raised on a pedestal. The rectangular shape of the building was partly glazed. The facade glazing was used mainly in the upper part, while the cladding of grey material, referring to the colour of the city's traditional buildings, was applied below. The whole structure was crowned with a strongly projecting eaves shading the facade, which also constituted a reference to vernacular architecture. In a regular rectangular structure there is a dominant cylindrical dominant feature, passing diagonally through part of the facade. This formal solution evokes associations with the effect of the emergence of an object during archeological exploration. The rest of the cylinder/tube belongs to the interior of the building. Its walls are covered with plates of bronze, separated by a decorative belt, visible outside – under the eaves of the roof and, inside – in the ceiling. A similar pattern can be found on the lintel of the wide portal leading to the cylinder, accessible from the vast lobby. The creation of such a strong accent in the building allowed the diversification of its functions. In the separated cylindrical structure on the ground floor, the cinema was located, and above – exhibition rooms (Oval Exhibition Hall).

In the spacious hall, opposite the main entrance, against the rear wall of the building, a gate from the Ming Dynasty period is exhibited. On its both sides there are stairs leading to the basement. In the western part of the hall a 5-storey rectangular was placed, covered with elm wood veneer, which is an essential display area (Rectangular Exhibition Hall). In the main hall, where the visitors' paths converge and intersect, designers of the museum also focused their key thought None of the forms is random, and the materials used as well as the coverings were chosen carefully with respect to history and tradition. The oval ground plan was balanced with the rectangular, the cylinder – with the cube, mutual opposites achieving the desired harmony. The stone used in the building is the same material that had been mined for centuries in quarries of Fangshan – today the south-western district of Beijing, located about 40 km away from the centre. Similar deference was shown

to the elm wood or bronze, which were to refer to the reign of the Western Zhou Dynasty (1122–770 BC), when they established the first settlement surrounded by walls, marking the beginning of the future capital. What constitutes an additional factor influencing the atmosphere of the Capital Museum is the basement, which yet another time emphasizes the need to strike a balance, this time between what man has created, and what is the work of nature. The main element determining the character of that storey is a path meandering between bamboo trees and water.

The chief designer Cui Kai is the author of several structures in Beijing. One of the best known of them was created within the framework of the so-called Commune by the Great Wall near Badaling,<sup>7)</sup> or the famous broadcast tower built in the Olympic village for the Olympic Games and subsequent sporting events (Fig. 3).

The 132-meter tower is made of metal, its structure based on three columns, which also serve as transport (two lifts and fire escape) and installation passageways. Seven prismatic forms hang on them – intentionally referring to the structure of polished diamonds – used as functional spaces. Originally, that is during the Olympic Games, the ground floor area of 800 m<sup>2</sup> served as a vast lobby for international commentators. Currently, the room is rented for occasional events and also used as exhibition space. The highest floor was planned as a viewpoint (an area of about 100 m<sup>2</sup>). The structure is often compared to the Chinese pagoda, though the designer asserts he never intentionally chose this form as inspiration.

The tower was erected between two probably most iconic buildings of contemporary Beijing – *the Bird's Nest*, Herzog & de Meuron's stadium and the "Water Cube" by Australian team PTW Architects.

Herzog & de Meuron was founded in Basel in 1978. When entering the contest the company had completed several international projects, including the highly successful adaptations of historic buildings such as Tate Modern in London (1995–1999)<sup>8)</sup> and Art Centre of the CaixaForum in Madrid (2001–2005).<sup>9)</sup> The architects in the team had also gained experience designing sports facilities, such as: the Pfaffenholz center in Saint-Louis (1989–1993), the St. Jakob Stadium in Basel (2001), and the already began work on Allianz Arena stadium in Munich (2002–2005), in which they applied one of the largest membrane

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<sup>7)</sup> Kucharzewska (2012: 73–88).

<sup>8)</sup> Heathcot (2008); Jodidio (2005: 144–149); Jodidio (2008: 264–267).

<sup>9)</sup> Kijak-Olechnicka (2008c: 94–101); Jodidio (2009: 232–239).

structures in the world, facilitating a variety of visual effects. However, none of the sports facilities built or upgraded by the team promised the scale and construction solutions of the Beijing stadium.

The aesthetic values of the stadium stem from the sheer framework, a tangle of steel girders, none of which were random nor used for decorative purposes (Fig. 4). Linear steel chaos – due to which the name “bird’s nest” stuck – is, contrary to the popular opinion, an orderly structure that consists of 24 main columns connected by cantilevered truss beams. The structure can withstand potential seismic shocks.<sup>10</sup> The outline of the stadium is an ellipse with the axis dimensions of 313 x 266 meters. In addition to the essential function of a sports facility (athletics and football stadium, locker rooms, recreational spaces for athletes), it includes restaurants, bars, hotels, souvenir shops, which are located in the space between the stands and the outer framework. The stand seats are mostly in red, which had a specific meaning that can only be deciphered after referring to the nearby “blue” Water Cube building. The decor of the stadium is conceived comprehensively, with each element constituting a part of the coherent whole, so there is no dissonance between the framework and the smallest fitting (such as suspended ceilings in the form of metal mesh, lights illuminating the path to the stadium, reflecting the structure of the stadium).

On the opposite side of the major transport route of the Olympic village, there is an equally interesting sports facility – the National Aquatics Centre, designed by the Australian team PTW Architects<sup>11</sup> (Fig. 5). When explaining the idea of the project, the architects stated that the *Water Cube* was designed to counterpoise the nearby Olympic Stadium (...) bearing in mind the dual nature of the Chinese philosophy of Yin & Yang. The two structures are counterbalanced in shape (square-oval), colour (blue – red) and symbolism (water – fire)<sup>12</sup>. The building is designed on a square ground plan, whose sides amount to 176 m. The 30-metre-high walls are made of a metal frame clad with ETFE plastic (Ethylene tetrafluoroethylene) and subsequently filled with air.<sup>13</sup> In the building of the National Aquatics Centre the aesthetic value – as in the case of the adjacent stadium – stems from the sheer three-dimensional design, which this time resembles the structure of soap bubbles (Denis Weaire and Robert Phelan’s

<sup>10</sup> Kijak-Olechnicka (2008d: 104–112); Jodidio (2007: 68–71); Jodidio (2009: 222–231).

<sup>11</sup> Design studio founded in 1889 and named Peddle Thorp & Walker w Sydney; currently it has its offices in Beijing, Shanghai, Hanoi, Ho Chi Minh, Auckland and Abu Dhabi.

<sup>12</sup> Kijak-Olechnicka (2008b: 116).

<sup>13</sup> A similar technique was applied by Herzog & de Meuron when designing the elevation of the Allianz Arena stadium in Munich, choosing membrane structure filled with air.

concept).<sup>14)</sup> The choice of such solutions optimized the energetic properties of the walls, 3.6 m thick which, due to their transparency, let in the amount of light which proved to be sufficient to heat the rooms inside and the water in five pools, while limiting energy consumption for indoor lighting. The ecological solutions became one of the main objectives of the design, as exemplified by the rainwater treatment system and its reuse in the building.

In close proximity, there is a public park designed by architects from Herzog & de Meuron. In the paved area of paths and squares, greens were planted but the most interesting attraction in the park are open-air sculptures of various forms, from the abstract, nonrepresentational to those being direct references to tradition and culture, as well as those that appeal to our sense of humor and fun. Compared to the desolate post-Olympic complex in Athens, designed by Santiago Calatrava in 2004, the village apparently continues to be attractive to the inhabitants of Beijing.<sup>15)</sup>

Behind the *Water Cube*, Pei Zhu studio constructed a building called the *Digital Beijing* (2005–07), which was used for data processing, gathering sports results and statistics, and availing them to the commentators and analysts during sports events (Fig. 6). As early as at the design stage, the architects assumed that the building would be easily adapted to the functionality desired at a particular time, and would become a symbol of the digital age through continuous adjustment to the process of technological development. It was also seen as a museum of technique and digital technology. Pei Zhu is an architect educated at Tsinghua University in Beijing and at the University of California in Berkeley. The first firm founded by him in 2001 was *Urbanus*, and since 2005 he has been leading the Pei Zhu studio. Tong Wu is his accomplice, specializing in industrial design and computer graphics. The concepts proposed by the studio were immediately appreciated and as early as in 2006 they received the *China Award*. A year later the prestigious *Architectural Record* magazine ranked them among avant-garde designers<sup>16)</sup>. They partly owed the success to the *Digital Beijing* which, as they explained, is “the result of reflecting on the role of contemporary architecture in the computer age”, and the structure of the façade “resembles the ubiquitous symbol – a bar code.<sup>17)</sup>”

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<sup>14)</sup> Jodidio (2009: 406–411).

<sup>15)</sup> Bradecki (2009: 20–23).

<sup>16)</sup> Jodidio (2009: 386).

<sup>17)</sup> Jodidio (2009: 389).



Within Beijing's district of Chaoyang, modern Central Business District (CBD) was located, whose character was shaped by significant participation from foreign construction companies and designers from Europe, the USA and Japan. The dominant developments are multifunctional high-rise buildings – corporate offices and hotels, such as the China World Trade Center Tower III, the Beijing TV Centre, the China Central Place Towers with the Ritz and the Marriott hotels, the Jing Guang Centre, and others. Such projects are implemented by companies specializing in the construction of high-rise buildings and operating on foreign markets, whose branches are spread all over the world, such as Skidmore, Owings and Merrill (SOM) with offices in New York, Miami, San Francisco, Los Angeles, London, Hong Kong; Kohn Pedersen Fox Associates with offices in New York, London and Tokyo, the previously mentioned company – PTW Architects, and others. Their skyscrapers, though unfailingly impressive in terms of technical, constructional and aesthetic values, do not cause such a wave of discussion that is raised each time the names of the world's leading designers are mentioned, stars of modern architecture, such as Norman Foster, Zaha Hadid, Rem Koolhaas etc.

The engagement of “starchitects” is constantly commented on by the Western media, especially when designers are happy to share their political views, offer professional principles, and discover the ethical side of the profession they represent. In subsequent interviews, the architects are forced to explain their choices and participations in particular competitions organized by the People's Republic of China, whose specific political-economic situation is not in harmony with the attitudes they express. The more important and the more monumental a structure is, the greater the confusion it causes. Pierre de Meuron, attacked by the media for the design of the stadium, concluded “it is stupid and cowardly not to work there because China is not a democratic country.”<sup>18)</sup> The discussion had been going on since the winners of the competition were announced in 2002 until the opening of the stadium in 2008. One of *The Guardian* commentators remarked that even though the Olympics were prepared by an autocratic government, they did not deserve a comparison with the Berlin Olympics of 1936.<sup>19)</sup> The comparisons did not seem far-fetched, when it was revealed that Albert's son – Albert Jr. was responsible for the building development projects of some areas of Beijing.<sup>20)</sup>

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<sup>18)</sup> Jodidio (2009:33).

<sup>19)</sup> Buruma (2002).

<sup>20)</sup> Rasmus-Zgorzelska (2009: 38).



Even more confusion was stirred by the stars of the world's architecture participating in the competition for the design of China Central Television organized in 2002, which included, among others, Rem Koolhaas, Dominique Perrault, Toyo Ito, SOM firm. Until that time, architects had been forgiven and their explanations had been accepted, when it had come to the construction of a museum or an opera house, since those projects were social in character, but the construction of the CCTV headquarters (China Central Television Headquarters) – the mouthpiece of the government (90% audience figures), the centre of propaganda and the creator of the public opinion, sparked a flurry of outrage and unfavorable comments.<sup>21)</sup> In his interviews, Rem Koolhaas, the winner of the design for the building of the Chinese television, evoked his memories of the childhood spent in Indonesia where he had lived for four years and had come into contact with the culture of the Orient. During the construction he praised the Chinese for their “incredible determination and organizational competence” and remarked that the CCTV “is a building, which the Chinese could not dream of, and we [in the West] could not build.”<sup>22)</sup>

Markus Huppenbauer – professor of ethics in the Department of Theology at the University of Zürich notes that “moral judgment does not preclude to admire a work of art, but the observer must be aware of its aesthetic autonomy, independent of an artist's morality.”<sup>23)</sup> Assuming that it is possible to separate the architectural experience of beauty from the moral attitude of its creators, the CCTV building is an extremely complex structure, a consequence of abandoning typical constructions and solutions used for skyscrapers and modified over the years (Fig. 7). The structure of the building consists of two towers of unequal height, inclined from the vertical by about 6°, facing each other and connected with an overhang of 14 floors, and the lower base of 9 floors, thus forming a geometric loop. Under the building there is a three-storey basement. The higher tower has a height of 234 meters (54 floors), the lower – 210 meters (44 floors), and their upper connection begins at the – height of 162 meters.<sup>24)</sup>

The framework of the building is based on a complicated skeleton – a truss composed of columns and beams, and diagonally reinforced in structural stresses. It is visible on the facades of the building how the construction lines run. Constructing the overhang – an extremely difficult technical operation,

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<sup>21)</sup> Buruma (2002).

<sup>22)</sup> Dickey (2012).

<sup>23)</sup> Huppenbauer (2008); Huppenbauer (2009).

<sup>24)</sup> Kijak-Olechnicka (2009: 86–93).

completed in a specially selected, suitable, cool and windless time of year – resembled building corbel vaults. From each tower cantilevers were moved until they were finally joined.<sup>25)</sup>

Apart from that building, the lower TVCC tower and a supporting building were also erected. The complex has all the features essential for running a professional television company, from the technical and administrative services to the preparation and production of news and entertainment programs. There are numerous places for small pleasures and relaxation such as: a gym, a cafeteria, a buffet bar; and even some extravagant creations such as relaxation rooms for VIPs and a penthouse occupying one whole floor (in the overhang) with a panoramic view of contemporary Beijing. The project provides for public facilities like a theatre that seats 1500, cinema halls, a ballroom, and exhibition space. The building was also directly linked to the underground line through a newly built station located underneath. The construction costs, depending on a source, range from 600 to 900 million U.S. dollars,<sup>26)</sup> and its opening was delayed until 2012 after an unexpected fire in 2009 (according to the official version – caused by an explosion of fireworks launched to celebrate Chinese New Year).

In the theoretical basis for the project, Rem Koolhaas emphasised the theme of a loop, a contemporary symbol of infinity, without a beginning or an end, with fluently passing equality and duration. An analysis of facilities located in the building (e.g. of the penthouse overlooking Beijing) leaves no doubt that the hierarchy of importance of its users was carefully established and the boundaries clearly marked. It seems that the architect was closer to the truth when he said these words: "... Contemporary architecture is a slave to the market and its mechanisms. The market has replaced ideology. Architecture turned into a spectacle. It must brand itself and it does not have much significance except playing the role of a spatial icon – the brand of the city..."<sup>27)</sup>

The previously mentioned buildings, through their spectacular, monumental form are becoming icons of the city and will go down in the history of architecture as determinants of a certain fashion, and also as manifestations of a particular state policy. With the exception of the development of Tianan-

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<sup>25)</sup> Kijak-Olechnicka (2009: 92).

<sup>26)</sup> Philip Jodidio mentions 750 m euros – compare.: Jodidio (2007: 130); as stated in the press – 600 m dollars – compare: Kijak-Olechnicka (2009: 93); Christopher Dickey talks of 900 million dollars – compare: Dickey (2012).

<sup>27)</sup> <http://www.sztuka-architektury.pl/>. (12 February 2010).

men Square, which was built in the days of Mao Zedong's leadership and his specific policy of isolationism, the other buildings mentioned here were completed with the participation of foreign construction companies and Western architects. Inviting them to cooperate proved to be a guarantee of a successful investment, a kind of ennoblement and a way to attract attention towards the rapidly changing China. This transformation also occurs in the field of Chinese architecture and in the not-too-distant future, it may set the newest trends. A harbinger of this trend is the architectural work of Wang Shu – honoured with the prestigious Pritzker Prize in 2012.<sup>28)</sup> Wang Shu's novelty is deeply rooted in the local building history, grows out of a sense of loss for traditional Chinese architecture, and is an attempt to restore it, taking into account the characteristics of a particular place without copying Western architecture. Until now he has not completed any buildings in Beijing, but soon the direction that he represents may change the image of Chinese cities, and actually restore the pride in the native architectural work.

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<sup>28)</sup> Węclawowicz-Gyurkovich (2012: 294).

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Fig. 1. Paul Andreu, National Grand Theater of China, Beijing 1999–2007 (photo J. Kucharzewska, 2009)



Fig. 2. Cui Kai (CAG Design Studio), Jean-Marie Duthilleul and Etienne Tricaud (studio AREP), Capital Museum, Beijing (Chaoyang District) 2006, (photo J. Kucharzewska, 2009). A-outside view; B-Oval Exhibition Hall, C-Rectangular Exhibition Hall; D – basement story



Fig. 3. Cui Kai (CAG Design Studio), Broadcast tower in Olympic village, Beijing 2007, (photo J. Kucharzewska 2009)





Fig. 4. Herzog & de Meuron, Ai Wei Wei, ARUP, National Stadium – the Bird's Nest, Beijing 2003–2008 (photo J. Kucharzewska 2009)



Fig. 5. PTW Architects (Australia), CSCEC International Design (China), ARUP, National Swimming Center – the Water Cube, Beijing 2003–2008 (photo J. Kucharzewska 2009)



Fig. 6. Studio Pei Zhu, Digital Beijing, Beijing 2005–08 (photo J. Kucharzewska 2009)



Fig. 7. Rem Koolhaas, CCTV Building, Beijing (Chaoyang District) 2009, (photo J. Kucharzewska 2009)

