Challenges and Approaches of Landscape Research and Design in the Global South

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1 Preamble

In this paper we reflect upon a series of academic design research studios in landscape architecture that had been conducted between 2008 and 2017. The studios and the related work in the field took place in four different countries and under the auspices of three different universities. Great esteem is due to those students of landscape architecture who agreed to work and travel with us. They delivered pioneering work and it is still rather unlikely that colleagues from the international landscape architecture community would bump into them – in the challenging locations they operated in (GIROT & REKITTKE 2011). Only a few schools of landscape architecture started to set about design and research work beyond developed world standards like pretty parks, pretty waterfronts and other beautiful classics. The research and studio work discussed in this paper aimed at the generation of examples, which might demonstrate a new understanding of how landscape architecture, urbanism, ecology and related professional fields can interact for the management of better and more reliable living environments. The paper has been written in a retrospective and relating to numerous items of the bibliography, in a deliberately self-referential manner. We rely on the latitude of a non-peer-reviewed paper and the recapitulatory function of the article at hand.

The rapidly urbanizing world needs armies of design-oriented researchers and creative graduates who are up to engage in the current global urbanization boom. The related multilateral transfer of knowledge will not be generated by well-meaning do-gooders but by a new generation of critical designers from all over the world who are aware of the fact that nearly all large urbanisation processes of the future will take place beyond the developed world's comfort zones. The most challenging cities are situated in developing or emerging countries and there are infinite ways and methods of contribution to an improvement of their environmental conditions. Here is where landscape designers can find out if they are able to shake off their gilded cage and exploit landscape architecture as an essential tool for urban design. A new type of urban environmentalists is in demand. They won't get around reclaiming the early Greenpeace activists' rallying cry 'Put your body where your mouth is' and show their face for a specific design guild that was not brought into being to be practiced in closed-off rooms. Landscape architecture is a profession whose sphere of responsibility lies thoroughly outdoors, out there, in real-world habitats of flora and fauna on global scale. Cities and their dwellers belong to these biotopes.

2 Dhaka and Khulna, Bangladesh

There's no disgrace in gathering knowledge and experience in calmer waters, before working in places where risks might be higher than average, where certain services and infrastructures might not be matters of course and where things happen on the street, which might not be common in highly regulated societies. But eventually the personal close season must have an end, heralded by a rite of passage. The initiation ceremony can be called autonomously, or, with a bit of luck, by an experienced colleague. It was Kelly Shannon, at that time teaching in the Master of Human Settlements program at Catholic University of Leuven – a program that addresses rapid urbanization in the developing world and contemporary urban transformations within the scope of sustainable development -, who invited the author and his students of the Master of Landscape Architecture program at Wageningen University, to accompany her and her students for a fieldtrip to the cities of Dhaka and Khulna in Bangladesh (REKITTKE et al. 2008). The colossal flows Ganges, Meghna and Brahmaputra, coming from the Himalayas and flowing into the Bay of Bengal, are carrying more water than all rivers in entire Europe together. The monsoon is regularly flooding roughly a fourth of the Bangladesh landmass and about every eight years the flood is rising so high that almost all houses, streets, and fields are affected (BLASBERG & BLAS-BERG 2007). Entering the universe of the Global South through the gates of Bangladesh constituted fortunate circumstances. Starting with an extreme allows to put all subsequent locations, environments and problems into perspective – further down the line (Figure 1).



Fig. 1: Laundering and drying of recyclable plastic waste along the ultra-polluted Buriganga River, near the historic centre of Dhaka, Bangladesh (Photo: J. Rekittke)

Our fieldwork focused on Khulna, a city of about 1.4 million inhabitants, located along the Rupsa and Bhairab riverbeds. During the British colonial era, Khulna became an important industrial hub for the handling and processing of jute, rice, tobacco, sugar cane, seafood, and wood, that was chopped down in the nearby Sundarbans, the world's largest single block of

tidal halophytic mangrove forest. Jute industry was the most important factor of Khulna's urban development before the city fell into economic halt, due to a swirl of economic neglect, pecuniary difficulties, shifting world market and industrial unrest. Meanwhile the government invests in new big scale infrastructure and established the new Khulna University. Education plays an important role in Khulna's struggle for economic reinvention (RE-KITTKE 2009).

For the preparation and analytical phase of the studio we used the interactive, realtime software system Lenné3D (PAAR & REKITTKE 2003) in order to generate speculative 3D model samples that delivered first overviews concerning density, spatial atmosphere, building structure, typology, vegetation share and road structure. Khulna opened our eyes for the problem of partial or total lack of available data. Our speculative models consisted of a rudimental mix of digital data as well as textual and photographic data and sharpened our senses towards better pre-fieldtrip knowledge of the site. The production of such vague 3D working models demands research work that improves the acquaintance with a still unvisited site. Data incompatibility with software in use and the necessity of time consuming adjustment and import action, had been early drivers for our subsequent research on fieldwork methods and spatial information gathering techniques. Such problems additionally fueled our resistance to putatively realistic looking images or scenes, which are not categorically appropriate for visual communication in planning and design processes (ERVIN 2001, PAAR & REKITTKE 2006).

The design works resulting from our fieldwork expedition to Bangladesh can be understood as test balloons of landscape-urbanistic approaches. Kelly Shannon (2007) observes that although "[...] landscape urbanism has eluded precise definition, it appears to be generally agreed that landscape urbanism is essentially rooted in belief in the intelligence and power of place – not so much in conservative sense of Martin Heidegger's and Christian Norberg-Schultz's *genius loci* [...] but more in Elia Zenghelis' contemporary interpretation of uncovering existing logics of reality and finding the capacity of sites by distinguishing the junk from the potentials [...]." We tagged the specific fieldwork and design focus of the students from Wageningen as Grassroots Landscape Architecture, understood as academic attempts to conquer unpopular and sparsely documented environments by travelling, intensive fieldwork and development of pragmatic and low-end designs for essential improvement.

A good example of Grassroots Landscape Architecture might be our work related to a challenging anomaly of Khulna, namely the nonexistence of bridges in the urban area of the million-strong city. The informal but efficient transport solution for this logistic gap, are small wooden barques that ferry people, animals and goods across the rivers. The landing and gathering places (ghats) of this ferry system constitute a network of strategic points dispersed along the riverfronts of the city. They are invaluable components of an informal public transport system on water, but no investment into ghat enhancement and security can be observed. Their importance and negligence distinguished the ghat and ferry system – genuine outdoor elements – to be focused by a grassroots landscape architectural design approach (Figure 2). The students developed a differentiated system for in and out going boats in order to reduce congestion and ferry time (Figure 3).



Fig. 2: Problem recognition in grassroots landscape architecture: Pedestrians and passengers of rickshaws, Tuk-Tuks, and busses have to elbow their way to boats at a neglected ferry landing (*ghat*) in Khulna City (Graphics: Ch. v. d. Zwet & M. Schut)



Fig. 3: Design proposal in grassroots landscape architecture: A differentiated system for in and out going boats reduces congestion and ferry time at a *ghat* in Khulna City (Graphics: Ch. v. d. Zwet & M. Schut)

In their design proposal trees provide comfortable shadow, public restrooms improve sanitary conditions, robust tidal-range-proof stairs and platforms allow safe boarding and disembarkation and electric lighting or simple oil lamps provide safety in the dark. By combination of these low-cost interventions the ghats would be significantly improved. The work shows that a crucial surplus value can be generated by gain of designed public space that contributes to the amendment of an essential piece of public infrastructure (REKITTKE 2009).

3 Metro Manila, Philippines

The approach of Grassroots Landscape Architecture, initiated at Wageningen University, was complemented by a concept that we refer to as Grassroots GIS (REKITTKE & PAAR 2010), developed in the context of our work at National University of Singapore (NUS). In search of potential social impact of digital modelling, visualization and related landscape architectural design projects, we dedicated two NUS MLA Design Studios (2010/2011) to

project work on urban informal settlements in Metro Manila, Philippines. Metro Manila is one of the biggest Asian megacities in developing country context with a population of more than 16 million people and an estimated 40% portion of urban informal settlements. The studios and fieldwork trips were organized in cooperation with the Philippine grassroots movement Gawad Kalinga (GK) whose mission statement is 'Building Communities to End Poverty' and whose working method is the establishment of 'Land for the Landless. Homes for the Homeless. Food for the Hungry' (GK 2010). The GK beneficiaries learn to take ownership of their community and are empowered to help themselves and others. Central aim of our research and design work in Manila was the extrication of urban slum areas and slum-upgrading projects from non-consideration and invisibility (Figure 4). Another aim was to create reliable geographical data for directed design interventions in these ignored environments. The common avoidance of slum areas is a comprehensible reflex, having said that the sheer number of slum dwellers - until 2030 the global number of slum dwellers might increase to about 2 billion (UN HABITAT 2003) - and their trying living conditions are spelling out the importance of urban informal settlements as a work task for the spatial designer.



Fig. 4: Mapping beyond the public eye: Until 2010, the vast slum area 'Baseco' had not been mapped by Google (left). Therefore we published our complementary field mapping information on OpenStreetMap (right) (REKITTKE & PAAR 2010).

Quite often slum areas constitute white spots on official maps and planning materials. As a first step away from the addresslessness and untraceability of people living in informal settlements of Manila, towards a collective urban identity and territorial consciousness, we began to lift hitherto undocumented and invisible city neighbourhoods onto the publicly accessible and popular platform OpenStreetMap. The new maps also served as data fundament for our subsequent design projects. Our students worked on the topics 'Needle in a Haystack Gardens' and 'Designs for the Real World', focusing on several urban GK project sites (called 'villages'): a) the notorious slum Baseco, situated at the estuary of Pasig River and the central harbor front area of Manila City; b) the GK village Espiritu Santo, surrounded by a vast slum area with the euphemistic name Sitio Pajo in Quezon City (Metro Manila); c) the GK village Concepcion, in the administrative district of Barangay Buayang Bato, Mandaluyong City (Metro Manila); and d) the GK village Telus in Quezon City (Metro Manila).

In 2010 the students had been asked to develop productive gardens for the provision of food for the table. The work 'Productive End Walls' by Cai Hanwei Leonard (Figure 5) had not only been awarded an ASLA Honor Award in the Residential Design category (2010 ASLA

Student Awards), it also was successfully implemented in the GK village Espiritu Santo (PAAR & REKITTKE 2011) by inhabitants and GK staff.



Fig. 5: From mapping to project implementation: (left) Updated map of GK village Espiritu Santo (Rekittke/Paar); (mid) Design proposal 'Productive End Walls' (Cai Hanwei Leonard); (right) Implemented project (GK Manila 2010)

In 2011 the studio group worked on the topic of livelihood, applied to the GK Metro Manila villages Concepcion in Mandaluyong City and Telus in Quezon City. In a collective effort we developed the idea of 'Pasig Jeeps' (Figure 6), a low-cost water transportation system for Manila, taking advantage of the splendid Jeepney culture and the strategically situated but currently under-utilised Pasig River (MLA STUDIO GROUP 2011).



Fig. 6: Water Jeepneys are composites of the iconic Jeepney body, and a boat hull (left). The Pasig River connects East and West of Metro Manila (right) (Graphics: MLA Studio Group 2011)

We propose a network of Water Jeepney stations along the river that would serve as a major East-West connector, unburdening the congested streets of the megacity. Water Jeepneys are a composite assembled from the iconic Jeepney body, crafted in the Jeepney manufactures of Manila and a boat hull instead of a chassis. Powered by electric motors the Pasig Jeeps system would provide an environmentally friendly alternative to the polluting car traffic of the Metropolis. In addition, the new system would create a significant number of new jobs for the local population. Several GK settlements (villages) along the edge of the Pasig River would be ideal locations for stations, dockyards, Pasig Jeep workshops and the establishment of new public amenities of all sorts. It were less the playful Water Jeepney

designs that the Singapore Institute of Landscape Architects awarded prizes in three prize categories for – to our students (2012) –, than the convincing water-based transport system for an entire megacity, affordable for everyone. Designed in academia, by graduate students, it turns out to be largely realistic and opens up undreamed-of possibilities for local income generation and employment.



Fig. 7: Conversion of the Jeepney from a street vehicle to a river craft, and equipping it with an electric motor, unlocks a new, effective, and environmentally friendly transportation system for Manila (Photos: J. Rekittke; Model: MLA Studio Group)

Working in the realm of informal urban settlements offers plenty of opportunities for landscape architects to revisit the essentials of the profession. While the comfortable, rather luxurious side of the urbanized planet seems to be buried under all sorts of institutional and technical layers of information, the other, less comfortable side of the coin seems to widely remain a blind spot in the global consciousness. After the fieldwork in Manila, the chosen approaches of Grassroots Landscape Architecture and Grassroots GIS were assessed adequate by us and our peers. The reticent character of grassroots approaches leaves room for identification and appreciation of homemade details in the tinkered worlds of informal settlements. Genuine appreciation of the existent is crucial for the development of context and user related designs, generated in our function as skilled outdoor and urban designers – not as helpers (REKITTKE & PAAR 2010).

4 Jakarta, Indonesia

It were the mega-urban agglomeration of Greater Jakarta and the Ciliwung River – springing from the slopes of Mount Mandala Wangi, and running about 100 kilometres through a catchment area comprising parts of Bogor, Depok, and Jakarta before merging with the sea – which finally confirmed our belief that landscape architecture can play a pioneer role in situations of environmental degradation in urban areas, and in urban design as such. For a total period of five years, a group of ETH (Swiss Federal Institute of Technology Zurich) doctoral researchers from the Future Cities Laboratory, and collaborating design research students from the National University of Singapore Masters of Landscape Architecture Programme (NUS MLA), were looking at questions of landscape and ecology along the Ciliwung River in Jakarta (GIROT & REKITTKE 2012). Jakarta's environmental condition is extreme, and the thirteen tropical rivers crossing the urbanized delta plain are abused as sewers. Greater Jakarta's population of about 28 million is expected to reach 35 million by the year 2020. Due to million-fold abusive groundwater extraction, with the unstable delta earth giving in to the city's weight, some parts of Jakarta subside more than twenty centimetres per year (COCHRANE et al. 2009). Into the bargain, Jakarta regularly faces flooding of cataclysmic extent. Most attempts of mitigation are presumably foredoomed, but Jakarta's stalwart population doesn't cease to adapt to the natural as well as self-inflicted challenges (Figures 8, 9, 10).



Fig. 8: Rhythm of the river: During flooding in Kampung Bukit Duri, Jakarta, rising water levels force people to shift their belongings – from furniture to motorcycles – to higher ground (Graphics: NUS MLA Studio Group 2012/13)

Over time, we gradually stopped emphasizing the term 'flooding' and began to speak of the 'temperament' and 'rhythm' of the river. Only when the studio-collective accepted to stop considering the changing river water level as a problem, but as a condition, we enabled ourselves to profit from the results of our intensive fieldwork. Future Jakarta has to be designed with the river(s) in mind. It cannot be developed in a sensible way, if topography and the changing river water levels will not be respected as axiomatic determinants for any design intervention (REKITTKE 2013).



Fig. 9: Peaking floods constitute serious challenges for the low lying settlement. Homes are completely inundated, forcing almost complete evacuation (Graphics: NUS MLA Studio Group 2012/13).

Landscape architecture must be understood as an essential ingredient of urban design, because – even in the densiest and largest of all cities – many elements and phenomena of the natural landscape incessantly persist in form of layers and functions. Cities are genuine 'theatres of operations' for landscape architects, because the original landscape only visually gives way to an increasing man-made cubic capacity. In effect, it does never disappear.



Fig. 10: Flood's aftermath: Sludge, debris and devastation remain. Time and again people immediately begin to clean, repair and rebuild (Graphics: NUS MLA Studio Group 2012/13).

In retrospect, we have to acknowledge that we did not deliver staggering designs for Jakarta or the Ciliwung River. But, while working in the field – time and time again –, we discovered and decoded an essential design principle, relinquished by and applicable to an entire megacity. Jakarta must be understood, and designed, as a city built in tropical rivers.

5 Mumbai, India

Participation in the Vertical Cities Asia competition 2014 allowed us to work with a group of MLA students from National University of Singapore in Mumbai, India. Competition site was a vast area of the partially operational, partially abandoned oil harbour in East Mumbai (Figure 11).



Fig. 11: The megacity of Greater Mumbai is built on what was once an archipelago of seven islands. Land reclamation started in the eighteenth century and continues to date (Graphics: NUS MLA Studio Group 2014).

Located on the Eastern waterfront, the historic port saw an economic boom during the heyday of textile mills that attracted migrants from other parts of the state and country, contributing to Mumbai's multifaceted charme. The harbour area also exhibits tidelands that seasonally host large numbers of migrating flamingos. Competition assignment was the development of housing for 100,000 people, themed 'Everyone connects'. Mumbai features a cornucopia of extreme contrasts. Landscape beauty alternates with toughest shapes of urbanity, extreme affluence is found in close proximity to bitter poverty. Economic, social and spatial inequity almost seem to have a stranglehold over the megacity and its society. For our competition submission, we focused on the spatial and social relations between the different classes of society. In a well-off Indian household, it is not uncommon to have seven to eight supporting staff such as cook, cleaner, gardener, driver, launderer, maid etc. The equivalent social hierarchy is reflected by the architecture and streetscape of Mumbai. At daytime the mentioned personnel smartly moves within the decent living environments of their taskmasters, at night they return to their customary housing type – the genuine slum, nearby. Our students, a couple of them from India, understand and respect the complex correlation which leads to the described social inequity and spatial conditions, nevertheless they were inclined to make a political statement. The collective studio result and submission shows a rather provocative spatial and social, horizontal and vertical amalgamation (Figure 12). New types of apartment buildings are proposed, to some extent shared by those who can afford good quality housing, with those who work for this propertied class – but typically live in the slum downstairs. The utopian design proposal brought about scepticism on the part of jury members and observers, but it was worth the revelatory experiment.



Fig. 12: Mumbai's slums spread horizontally, close to the vertical apartment blocks for the affluent. The studio group proposes new building types for spatial and social, horizontal and vertical amalgamation (Graphics: NUS MLA Studio Group 2014).

6 Bali, Indonesia

In difference to Mumbai or Jakarta, the Indonesian island of Bali is considered to be a dream destination, marketed as a premium locality for couples on their honeymoon. We, teachers and students in the Master of Landscape Architecture Program of the National University of Singapore, came to a different conclusion at the end of our academic expedition and studio (2014). Our results had been shown in the exhibition 'Out There - Landscape Architecture on Global Terrain', at the architecture museum of TU Munich, Pinakothek der Moderne, from April to August 2017. Seen from the perspective of an environmentalist, landscape architect and urbanist, Bali is an ecological nightmare (REKITTKE 2017(2)). We interpreted our research project in Bali as a 'research expedition to an endless city without infrastructure'. Having become familiar with the extreme environmental challenges of booming Southeast Asia by way of numerous projects and fieldwork operations, we wanted to find out whether the rapidly urbanizing, visually beautiful island of Bali also features this disconcerting, almost total lack of environmentally relevant urban infrastructure as sewage systems and wastewater treatment – like so many villages and cities in Indonesia and beyond. The short and sober answer is 'yes, it obviously does'. All the wastewater - fecal matter, cleaning chemicals, et cetera - of our four-star apartments, as well as of all other construction sites and dwellings that we thoroughly examined in our study area in Canggu, a touristic village north of Seminyak, is discharged directly into the rice terraces by means of visible plastic pipes. In the paddy field it follows the slopes, seeping into the soil and groundwater. The rest of the wastewater finds its way into rivers that wash it into the sea. Also the chlorinated water from all the pools we documented is discharged in the same way. A couple of septic tanks can be found, and also the well-intentioned attempt to remove and landfill some of the garbage has to be acknowledged. Nevertheless, also in beautiful Bali – deeply rooted in the Hindu cosmology, dividing the world into a realm of the gods, a realm of humans, and a realm of demons – it is not a municipal network of in-frastructure that absorbes most of the sewage and waste that twelve million people produce every year, but the landscape, the soil, the groundwater, the rivers, and the sea. This is bottomless – an endless city is punched into the rice terrace mud, without the provision of essential infrastructure. The artful irrigation system of Bali is brutally violated and becomes a sewage system (Ibid.).



Fig. 13: Construction site for one of the next infrastructureless apartment complexes in Canggu (left). With the help of UAV photography (mid), we generated a detailed model (right) (Photo: Rekittke; Model: Rekittke/Ninsalam/Paar 2014).

In order to document the sacrilege, we generated a geo-located and highly detailed proof in form of a model of a construction site for one of the next infrastructureless apartment complexes in Canggu. For this purpose we used a camera UAV. The piece of evidence features a kind of forensic quality that we deeply appreciate (Figure 13). It stands for what we intend to achieve as design research teams. We want to be problem specifiers and, in the ideal case, problem solvers.

7 Bunaken, Indonesia

Bunaken Marine National Park is located at the northern tip of North Sulawesi, Indonesia. Manado, the gate to the park, can be reached from all over the globe, the marine national park itself is only accessible by boat. It is the beauty and uniqueness of the apparent paradise that inescapably became a well-known attraction – flooded by tourists. With students from the National University of Singapore, we walked and sailed on the trail of mass tourism, at the same time we worked on a concept for the channeling of visitors and the protection of the fragile underwater ecosystem. A natural beauty that features the highest number of mangrove species, the highest number of seagrass species, and the highest number of coral species worldwide. Tourists are required to buy a visitor pass, a regulation that has been in place for more than twenty-five years, but hardly any stakeholder in the national park is able to name a single project that would have been financed by the collected cash. Corruption enriches a handful of thugs financially, while a whole region degrades environmentally. The marine part of the national park is highly endangered by a steady increase of visitors and the resulting environmental stress on the mangrove belts, seagrass meadows, reef flats, reef crests as well as the vertical reef walls (Figure 14). Aim of our academic studio on Bunaken National Park, was to develop necessary infrastructure components and

essential forms of management, on both water and land (REKITTKE 2017). In order to produce realistic transects of the vulnerable marine landscapes, we modelled samples of the species-rich coral reef that is permanently underwater, as well as samples of the intertidal mangrove belt, located partly above and partly under the water's surface. Based on our ability to operate in the air, on land, and finally in the water, we achieve what we refer to as field-sampled landscape credibility, which we think qualifies our digital work (REKITTKE & NINSALAM 2016). Our models and transects of Bunaken island typify the intertidal ecosystem of the national park, illustrate the tidal change, show all types of boats and their different draughts, include tourists and their behaviour, and include sea animal species, plants, corals, etc. They are detailed enough for exact analysis and abstract enough for subsequent design work.



Fig. 14: Fireworks remains at the national park beach of Siladen Island, 2014 (left). Photos of snorkelers while they grip the vulnerable reef, displayed at the National Park Office – unfortunately not for determent but for promotion (mid a. right) (Photo left: J. Rekittke; Photos mid and right: BMNP Office).

By means of our study of Bunaken Island, we were able to show how increasing visitor numbers cause cumulative environmental stress. One of the most problematic current practices is individual boat transportation to the many island resorts. On arrival and departure, each visitor tramples repeatedly through the sensitive intertidal zone, plus several times a day when going snorkeling and diving. Also all luggage and dive equipment are carried in this detrimental manner. The most vexing of all nuisances was the display of a vast collection of visitor photos, showing grinning snorkelers underwater, holding on to the reef. The disconcerting evidence was displayed at the National Park Office – not for determent but for promotion of the costly photo service.

One of our central project proposals is to diametrically change the organization of the current transportation system from a sea-centred to an island-centred system (Figure 15). Instead of transporting visitors and goods through the reef flats, seagrass meadows, and mangroves, a few reef-compatible but large jetties would serve as contact points, from where all dive and snorkel spots can be reached. Countless boat landings and improvised entranceways at the resort beaches perforated the existent mangrove belts. The mangroves, serving as indispensable nursery grounds for fish and other aquatic organisms, have to be restored. The underlying logic is plain: no mangroves – no fish stock; no fish stock – no dive tourism; no dive tourism – no income (REKITTKE 2017).



Fig. 15: Our visualization of actual boat landings on Bunaken Island during one week (left) speaks a clear language concerning the inevitable environmental damage. We propose to diametrically change the current transportation system from a seacentred to an island-centred system (right) (Graphics: NUS MLA Studio Group 2015).

What we realized in the course of the Bunaken studio work, were the unsettling consequences and the massive collateral damage that global tourism brings to even the remotest corner in the world. We travelled to the world's end, an alleged paradise far away from all metropolises, but city dwellers from all over the globe already conquered paradise, and bring about its loss. That is why researchers, environmentalists, and landscape designers must keep up with the global mobility and its impact – by dint of travelling and by demonstrating global presence through project and dissemination work.

8 Ho Chi Minh City, Vietnam

Planet Earth becomes increasingly urbanized, a trend that will most probably not see reversion in the future. Within our MLA laboratory Future Cities at Royal Melbourne Institute of Technology, Australia, we led a group of students to Ho Chi Minh City, also known as Saigon, in Vietnam (2017). The city's well-deserved nickname is Motorcycle City - 10 million city dwellers drive four or five million motorcycles, exact numbers are irrelevant. Central theme of the lab work was the infrastructural network of Ho Chi Minh City, with particular focus on the motorcycle culture. Motorcycles dominate the never-stopping traffic flow of this great city, and by an unorthodox and unhesitant way of using the entire street space, the motorcyclists and the megacity escape a daily gridlock. All of our nineteen lab participants were Chinese, and all of them came from cities with a population of more than five million people. The students had experienced how the Chinese bicycle culture had been pushed away by the car in modern times, as well as by the ubiquitous electro scooter. In Ho Chi Minh City our students were able to see – almost like in a crystal ball – a potential Future *City* of unique character. If, in the wake of Saigon's economic advancement, the fleet of millions of gasoline-operated mopeds and scooters would be replaced by electro scooters, instead by cars, a model city for super-effective, two-wheeled, environmentally correct mass mobility could be developed. We consider Saigon as a potential prototype of a truly Flexible City, where the mentioned two-wheeled mass mobility could be innovatively combined with the new MRT system that is under construction. We think that Asian megacities

deserve more than smog saturated air and endless traffic jams, caused by German, Japanese, and Korean makes of cars.

A very comprehensible, enlightening and fascinating piece of evidence of the unique flexibility and *flow* of Saigon's traffic, had been generated during the fieldwork in collaboration with students of RMIT Vietnam. For us, they flew their camera UAV over the most crowded spots of Saigon, in order to produce what we refer to as 'still lifes in motion'. These are movies of the five most central roundabouts in Saigon, documented in a way that the picture detail looks perfectly static, while the filmed vehicles and people move – incessantly. We celebrate these UAV movies as treasures of academic fieldwork results and inspiring input for design thinking, generated by bright and wonderful students (Figure 16).



Fig. 16: Left: RMIT MLA students on a motorbike in Motorcycle City. Mid: 'Still life in motion' – UAV movie of a roundabout in Saigon. Right: Phu and Hau, smartest drone team of RMIT Vietnam (Photos: RMIT MLA Group, J. Rekittke).

9 Postface

Landscape architecture is an outdoor discipline, its theatre of operations is the globe. Also academic landscape architecture ought to be practiced and taught outdoors, in the field, where real-world problem statements can be devised. Only via firsthand observation can the student of landscape architecture become thoroughly familiar with the milieu under scrutiny, on these grounds fieldwork is not an option, it is mandatory. Our laboratory setting is reality itself, no simulation or representation in the world can emulate it.

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