

Quotes and Definitions from “Shaping the Future” (2016) (Autobiographical) Environment and Growing Years - Biography of a Planner – Why? P. 7

“About 80 such biographies that were published in the first decade of this century in Iceland, apparently only one was about a university professor.” P. 7

“As we start to study the history of planning we soon recognize that the shaping of towns and cities has frequently been driven by the ideologies of individuals and groups on how to create a better environment and a better society.” P. 7

“As with politicians, Corbusier and Gropius also veered widely off the track, and many of their ideas about planning resulted in horrible designs. Here we are mostly talking about ideas that are linked to modernism in city planning...” P. 7

“Together with Hannesson the members of the committee were Geir Zoega, Director of Roads, and Gudjon Samuelsson, State Architect. The very important work of these individuals meant that the beautiful old town centres of Reykjavik, Akureyri and Isafjörður were created.” P. 8

“In spite of the fact that this rule: to always look first to the overall picture, is firmly established in the planning laws of most countries, it remains a constant battle in every project to try to get people to think big, and for the long term. This is especially difficult in Iceland because Icelanders have, for 1150 years, had agriculture and fishing as their main livelihood. These trades are very hard to plan because of the uncertainty of the weather...” P. 9

“I rather early recognized this lack of planning skills in us Icelanders. This primarily becomes obvious as a lack of long-term vision and the difficulty we have in working in an organized way – even in the making of plans.” P. 9

“I have also tried to present ideas that we Icelanders are especially disadvantaged, confronting ideas on an unusually large scale. I think that this handicap of us Icelanders; not to be able to think on a large-scale, is related to our lacking ability to think schematically. I have always wanted to try to help the nation to improve itself in this field.” P. 10

“As I learned about the importance of this revolutionary and provoking art movement (Dadaism), I decided, early, to present large and provoking ideas in planning to try to shake up the pedantic entrenched aspects of Icelandic society. One example of this is my proposal to make a long-term Iceland Plan that was characterized by highland roads and a new Capital City in the centre of the country.” P. 10

How I became a Visionary P. 11

“But, let us look at what Einar (Thorstein) recommended: “Don’t be scared to look at yourself as a Visionary, as people generally see you. And let the first twenty years deal more with how you got shaped to becoming a Visionary.”” P. 11

“...Talents in the field of arts and crafts dominated my mother’s side of my family, and I started early to drift towards these fields. This later turned out to be a good foundation as a designer and planner. P. 12

“Some people may not realize that a good planning concept has to be inspired – not only by a vision – but also from a feeling and poetic flavour. In short: A person who wants to create a strong and beautiful planning concept has, in his creation, to be able to achieve qualities that are characteristic of a good poem.” P. 13

“In short; my story of what I wanted to achieve was that at first I had wishes and visions on a small scale; I wanted to become a great and famous architect, but in my university years in Berlin my interest shifted to the planning of cities because of the hippie influence that wanted to revolutionize everything in society.” P. 14

“As I later, in 1980, started my PhD studies at Berkeley, California, the Mecca of environmental planning, I decided that the Iceland Plan – that I had begun in Iceland – would be the main emphasis of my studies and my doctoral thesis. But that was to change, as I will describe later.” P. 15

“As I returned to Iceland in 1987, it had slowly become more apparent that global warming would change most things on Earth. This subject later became the last aspect of my life’s work.” P. 15

“Þegar ég er síðan kominn heim 1987, fer að verða ljósara að hnattræn hlýnun muni breyta flestu hér á jörðinni. Varð þetta atriði síðasti þátturinn í ævistarfi mínu,...” Bls. 15

Conservative Values – Interest in the Visual Arts P. 16

“In upper secondary school an English book came into my position about the history of modern art. I buried myself in it for many years and learned art history thoroughly. Many years later I discovered that I had hardly read a word in the book, only studied the pictures, which in fact, turned out to be enough.” P. 16

“In all of Europe these were actually the times of modernism and internationalism. The root of modernism lies in socialism and these two developed in protest to the nationalism and fascism that were sprouting in Germany, Italy and Spain. In this protest movement these social ideologies in politics and the arts did much good, but unfortunately also damaged much, for example in Iceland. Religious symbolism and the sublime were denounced...” P. 17

“Another thing that the modernists hated was attempts to create nationalistic art and architecture. Sculptor Einar Jonsson’s use of basalt formations and high-spirited forms was said to remind of Nazism...” P. 18

“My talent was tested and verified as I started my architecture studies in Berlin, because three dimensional designing suited me especially well.” P. 18

Upper Secondary School: Society in Miniature P. 19

“In his book about these years (poet Sigurdur) Palsson uses an interesting word to describe me; “form thinker.”” P. 20

Basic Training for Life's Work P. 22

"The fact that during my secondary school years I did not receive proper recognition because of the prevailing snobbishness, made me very angry. I vowed to show the bastards that I was not inferior to them and was even more gifted – even though the proof would come later in life." P. 23

The Berlin Years - Selection of Subject to Study – and My Second Fatherland P. 25

"...I wanted to study in a country that was in the forefront of science and technology. The outcome of this formula was West Berlin. It also had an influence on my selection that I always had liked the Germans, their language and their culture." P. 25

"I see now, looking back, that probably I also was drawn to Berlin because there the tension was most between the East and West, but in a field of tension between opposite poles there is an energy situation, like the negative and positive poles that light a lamp." P. 25

"One day as I was passing the new Deutsche Oper I saw a black cross painted on the pavement. This gave me the strange feeling that this could be a sign of some unrest that could be lurking in the city, and this came to be true." P. 27

In the Footsteps of the First Planner P. 29

"The candidness of Tomas's description of Berlin is surprising: „Berlin is, more than most other places, boring for travellers, because the streets are long and straight so there is little variation." (p. 40). This was also my experience much later because, in Prussia, straightline planning and a mechanical spirit dominate." P. 30

"However, when I got to TU Berlin in the autumn of 1967 a political revolution had started within the leaders of the students and they had become very critical of what they called "small-minded servitude to a capitalistic elite" and wanted us the students in architecture and planning, to start to rethink and revolutionize the institutions of society. On the walls of the university there was this message: "Arkitekten hört auf zeichnen, denkt!" (Architects, stop drawing, think!)." P. 30

A Studio on a Kindergarten P. 32

"But now there were new times and new approaches to architecture that the students and the leftist instructors, were in rather fine agreement about. In these times the first step should be to study the phenomenon "kindergarten" politically. Various Marxist specialists in politics and pedagogy came to the studio and gave talks. P. 32

"In the spring, finally, there was time to try to draw some design options on paper. In this I happened upon on a systematic approach where I created a typology of options in a layout. By doing this it was easy to compare options. This the Germans liked very much because they like systems, and I became, because of this, some kind of a star in the studio. The foundation for this method I got from the new math in my secondary school,..." P. 34

Cities: A Source of Knowledge P. 35

“The most famous example of modernism in Berlin is Unité d’Habitation by Corbusier. It is especially memorable to me as we went on a “pilgrimage” to admire this “remarkable” building. I was very excited because I had been brought up in great admiration of Corbusier, as for the modernists in general. As we stood in front of the building there was a kind of sigh of admiration that rose from the group. Within me, on the other hand, there was some strange shiver that became a voice of inner doubt about the value of modernistic architecture.” P. 35

“My doubts about modernism made me more open to the beauty of the old and national type of architecture. Attempts at making nationalistic architecture had, on the other hand, gotten into ill repute because of Naziism.” P. 35

“The critic of these nationalistic politicians helped modernism and strengthened its relation to socialism in both countries. The roots of modernism are, however, older than this because right after the First World War the international style of modernism acquired wings as the value system of the nationalistic elite societies of the pre-war times crumbled.” P. 36

“As I was starting my studies in Berlin, it was very sensitive to talk about Naziism and communism. The definition of our professors of modernism therefore did not trace its roots back to socialism, but rather they were of a technical nature. They emphasized that modernism had come to be because of new building materials – concrete, steel and glass,...” P. 36

“I think that this had a great deal of influence on the shaping of the international style, but the condemnation of human values, ornament and national characteristics that are linked to it, come to a high degree from internationalism and socialism.” P. 36

“In the liberal arts such flaky theories are rather harmless, because few people read, for instance, modernistic literature (Joyce, Kafka...), but in architecture modernism led to cold, inhuman buildings and cities. The impact of this architecture has in many places been very bad and has led to alienation and crimes. The book *The Children of the Zoo* explains, in a shivering way...” P. 36

“The Gropius neighbourhood was designed in the spirit of Gropius, the head of the Bauhaus School in the second and third decade of the 20th century. In this school the modernistic monster in architecture was created to a considerable degree. It is not surprising that it has German roots as Naziism and communism.” P. 36

“It is quite remarkable that it should be architecture that rid the nations of the world from some of the plague of modernism. The one who spearheaded this movement was Robert Venturi, an architect, with his book *Learning from Las Vegas* (1972).” P. 36

“This book pushed out much of the austere values of modernism and so-called post-modernism was created. Somewhat later this movement also pushed modernism from its pedestal in the fields of art, literature and philosophy. The key sentence was: “everything is permissible... because all truth is relative”. P. 37

“Another clue on that everything was not OK with modernism I got in my trips into East Berlin. There modernism appeared in its starkest form in the high-rise residential neighbourhoods. Breidholt III (Höla and Fell neighbourhoods) are an Icelandic form of this and not surprisingly its main author was Geirhardur Thorsteinsson, a stubborn man and a socialist.” P. 37

“In spite of these two opposite examples of planning, i.e. Paris and Berlin, it was not until after many trips to Paris that I understood its importance as a school in how to design a beautiful and human environment.” P. 37

Study of Art – and to Find a Core through Abstraction P. 38

“...such a play with blocks of wood has, with many architects, become a method for designing neighbourhoods from the air. This type of plan-making is a form play of self-absorbed architects, whereas the people that are meant to live in the neighbourhood have become of no concern.” P. 38

“The plan of Breidholt II is, in this way, conceived of as a bouquet of flowers seen from the air. But this beautiful flower picture of Gudrun Jonsdottir et al. one only can enjoy from an airplane or a balloon, but in no way if one lives in the neighbourhood. This is only one example of the alienation and elitism of modernism.” P. 38

“I quite early got the feeling I could use this method “to move towards a core” for a theoretical purpose. In elective courses in sculpture and model-drawing, I continued to exercise the simplification of forms and made a series of pictures where each new picture becomes more simple, and more abstract.... and thus stronger!” P. 39

“... Wilhelm Worringer, who had written a book in 1907 on what happens in this process. The book is called *Abstraktion und Einfuehlung* (Abstraction and Empathy). He explains that if the abstraction is successful, the picture becomes more powerful, both in terms of form and empathy. Worringer created a word for the style of art that makes use of this, “expressionism”,... P. 39

“In methods employed in research, people aim for two things: 1) to gain an overview of the subject and 2) to search for the core of the subject. In math the product of the search is quite clear: There, for instance, people search for maximums and axioms, and make deductions from them.” P. 39

“In older times scientists were more preoccupied by making overviews and systems of classification than today. One of the most famous of these is the classification system of the Swede Linné of the botanic world. It works, for example, with plant characteristics like the number of crown blades and the form of the leaves.” P. 41

“Because of the prevalent lack of respect for wholes, as well as the creation of overviews, I decided to work in this neglected area. I started to make overviews for my projects. In our studio, devoted to kindergartens, I for example, did overviews on alternatives in their

layout. In my diploma thesis, in my last year, I created inductive overviews of the makeup of societies and formed typologies for environmental design.” P. 41

“Positivism (Poem): Reality is one,/ But science/Has divided it/Into compartments...” P. 41

“The simplification of form that produced the most practical result for me later was, as I discovered, that Iceland, in fact, is a circle... a little oval. Somewhat later I discovered that the settlements of Iceland are, to put it simply, a ribbon running around the edge of the ring. Running in the middle of this ribbon of habitation is the Ring Road that became the circular, linear centre of the country...” P. 42

“...But an urban point centre, in the centre of the country, does not exist. To read in the new math about topology – which deals with those basic qualities of form, that remain unchanged although the position and the shape of the form is altered – helped me understand this better.” P. 42

“In cities the centre is always the most important place – we talk here about the law of centrality – but the edge is mostly of not much interest. Because of this logical basic model for settlements, I suddenly realised how the settlement structure of Iceland, with settlement out on the edge – but not in the void, highly valuable central areas – is uneconomical, and actually completely wrong! This understanding came so suddenly to me that it was like a blow to my stomach.” P. 42

“Some readers may know that many capital cities have sometimes been planned and built on the basis of the law of centrality to fulfil the demand that a Capital is to have a central location. Examples: Madrid in Spain, Mexico City in Mexico, and Brasilia; Capital of Brazil.” P.42

Restructuring the World after the Second World War P. 43

“I do not know how much I understood of the problems of cities and societies, but we hippies probably understood them somewhat better than the authorities and the professors. The way cities were planned after the war was terrible. In Berlin, for instance, people had started to build gruesome high rise suburbs that were almost only for sleeping; bedroom neighbourhoods...” P. 43

“...the Americans were the great conquerors and the liberators in the war, and many people thought they could help the Europeans to get out of the hierarchical society where the selfish values of the ruling classes were in control of everything, and the general public was considered to be nothing but punks that were best kept outside the city in residential silos.” P. 43

“...In the US the origin of the revolution came more as a reaction against rigid societal forms that applied to women, jobs and family. Young women were a great force in this movement of change and the opening of society to begin to allow the realization of the potential of women. In many bungalow suburbs women and children were kept almost as prisoners.” P. 43

“In this same period of time consumerism in America had surpassed all boundaries and

had become dangerous to both life and the environment. Drugs were pumped into livestock to increase production and press for more gain, and poison was spread over the environment to keep weeds and rodents at bay. The drugs and the poisons went into the food chain which led both to damage in health, and deformity... “ P. 43

The New Math; New Understanding of Planning P. 44

“In order to get down to the primary level of the computer, much ability in analysis and in operation research was needed. As people have mastered this, all types of problems can be programmed into computers, that work on them at a tremendous speed. In this way solutions were reached that otherwise would not have been possible. The computer also helped in navigation...” P. 45

“My secondary school started to teach the new math at this time, and I was lucky to be in the first class. An example on the advantages the new math led to was, that within the environmental sciences there was suddenly a math that allows creating much more “organic” mathematical models than the old math could do.” P. 45

“The foremost pioneer to make use of this in architecture and planning was the Brit Christopher Alexander. Alexander started his academic career by completing his BS and MS degrees in math at Cambridge, but after that he went to Harvard where he did his doctorate in architecture. His thesis is called Notes on the Synthesis of Form. It was published in 1964 and has since then been a basic book in design science.” P. 45

“...Most famous is his article “The City is not a Tree” (1965). Already in 1967 designer Einar Thorsteinn translated this article in to Icelandic and it was published in the journal Birtingur. As Alexander is talking about a “tree” it is not an ordinary tree, but rather this is a term from math about a hierarchical structure. As a fine mathematician, Alexander could demonstrate that this mathematical model for analysis, could have a great influence on city planning...” P. 46

“We, in architecture in Berlin, buried ourselves in the writings of Alexander and this was one of the reasons I went to Berkeley in 1980 to start my doctoral studies. As it turned out I did not write my thesis with him because I discovered that he was stubborn and opinionated, as most good theoreticians are...” P. 46

Student life: Tension and Joy of Creating P. 47

“Life in society can be compared to an electrical system. Where there is much tension the wheels turn faster, which appears among people as excitement and the joy of creating. Some people cannot survive the tension and “burn out”, as happened with many of the hippies in these years...” P. 47

Prize in a Competition – and a Diploma Thesis P. 50

“...I then caught sight of an ad announcing that Berlin was holding a competition to change the Wilmsdorfer Street into the first pedestrian street in Berlin. I had lived in the next street for three years...” P. 50

“Then main characteristics of my proposal were that I proposed levels over the main intersections. From there ramps led down to the pedestrian area. These levels I let continue in back of the buildings and put parking places under them. The beautiful old frontal houses I kept, but proposed to clean out all the backyards. There I planned modern terrace housing with enough lighting and green spaces. The continuous row of the frontal houses sheltered the inner areas from the street noise...” P. 50

“...There were large groups working on these winning proposals, among others two professors at the university. I, as a single author – and a foreign student – was one of the three that got a third prize; 8000 marks. This great achievement of mine was mentioned in the Berliner Morgenpost and also in newspapers at home...” P. 50

“In rummaging in old books I had happened upon an old research method “morpho-logy” (form-logy) that, for instance, Linné used to create a graphic overview of the world of plants. A fine book by chemist Fritz Zwicky demonstrated how it was possible to create an overview over most solution sets, with the help of morphological methods and then select from this set of solutions... The new math helped create such solution sets and newly developed computer methods could sort them out.” P. 51

“For my diploma thesis I created overview tables for solution sets for environmental design. First I made an overview of the whole subject, and then schemes for several sub-categories. In this way I was able to create “field covering overviews” that could be used as Checklists. There I also found unusual interpretations and unexpected solutions...” P. 51

“An example of this is a table built on the utmost wishes – maxims – to build economically. The maxims are: 1) To use local material for building; 2) that the material only needs minimum processing; and 3) that both taking the material and putting it away have a purpose, which leads to double economy. Now, more than 40 years later, this has become one of the primary principles in sustainable design.” P. 51

“The main characteristic of cybernetics is that everything that goes in circular processes is monitored and corrected by the computer’s operating system. In my thesis I say: “Science makes use of these circular processes by creating prototypes that then are tested in a circular computer process.” Then I added “These circular processes we should also use as we are developing design ideas or solutions: A great number of possible alternatives should be created and the computer then used to bring the design towards better solutions through a great number of repeated tests.”” P. 53

“In my overview tables I not only created an overview on methods for the design itself, but I also created methods and processes and methods to strengthen the designer himself. One of the things I saw as I was making such an overview table was that in architectural schools the psychology of the designer was little dealt with. I pointed out that there were already “chess-psychologists” that instructed chess players how to maintain a psychological balance, to develop fighting spirit, and so on. I said that such advice also needed to be introduced into architectural teaching...” P. 53

The Years at the Development Office

***Environmental Awakening – The Development Office Established* P. 54**

“Strong voices had emerged demanding the protection of old buildings and there was increased criticism of the priority given to the private car and a very much increased critical attitude about the bedroom communities.” P. 55

“All these issues had become prominent in Europe about five years earlier and it was terrible that we were realising a plan in this modernistic spirit after other nations had learned, from bad experience, how terrible such planning was. The Danish specialists carry the biggest responsibility...” P. 55

“...I was flabbergasted to see the high rise suburb of Breidholt III that had the exactly same characteristics as the suburbs in Berlin that had been most highly criticised. But now the plan was to renew the planning work by establishing the Development Office of Reykjavik...” P. 56

“I was very lucky to get a job at the Development Office as it started operation on November 1, 1972...” P. 56

The Hippies Come Home and Start to Become Active P. 57

“...the hippie generation, because we were convinced we had the right views and solutions. In any case, our views were quite different from those of the older generation and now, we hippies, started to fight for them. As I have already partly described, the sentiments towards many issues had changed quite a bit, for example, as concerns the private car, architecture, planning and old buildings.” P. 57

“The new view on architecture and old buildings is most clearly expressed in the attitude to building on Bakarabrekka Slope. There the state had planned to have the old buildings demolished and to build a very ugly six story building to house ministries. The opponents to this did several things...” P. 57

“Shortly thereafter I had a talk with Brynjolfur Ingolfsson, the Secretary of the Ministry of Transportation. I told him about my talk with Gunnar and attacks by some other people. Brynjolfur, who was quite free from office pride, said: “One should not step on the toes of young people.” Ever since I have held Brynjolfur in great respect...” P. 58

“We young architects also became very active in the public debate, but there was a problem; the magazine of the Architectural Association was not published anymore. On the other hand, they published a newsletter Arkitidindi. We were allowed to enlarge it to the size of a magazine and publish an issue on the standing of architecture and planning. This all became very critical material such as “The Breidholt Wonders” and “Existential Rights of Architects”. This, the older people in the Association, did not like and we were forbidden to continue editing the newsletter.” P. 59

“... I, the hippie, thought architects in general, were haughty and reactionary and therefore I said in the last commandment: “The architect is a man (or a woman!) that does not need, or want, or can,

change.” It goes without saying that this “address” did not bring me much popularity among the older architects. P. 59

New Settlement Areas North–East of Grafarvogur Bay P. 60

“The sad fact, however, is that the Danish advisors had not yet realised the serious faults of modernistic planning as it was carried out in most places in the post-war period. The modernistic planning scheme was characterised by high-rise suburbs that often became ghettos for the lower class, and also the separation of places where people sleep and work demanded large highways for commuting. This ideology also carried with it much insensitivity for the value of old settlements that led to tearing down of buildings in order to push large traffic lanes through old town centres.” P. 60

“Let us now look at the suburbs. The building of the Breidholt areas started in the 1960’s, and at a conference held because of the 50 year anniversary of the Planning Law in 1971, great doubts about the plan surfaced. Among others, Olafur Ragnar Grimsson, then professor of political science (later President), said that it was likely that the Breidholt areas would become a poor people’s neighbourhood in the future because of the plan. This prediction has come true, as concerns some of the areas there.” P. 60

“In 1968 there appeared a book in the USA by Ian McHarg, Design with Nature. This book introduced a revolution on how new building areas were to be planned. The method starts by inspecting and mapping all types of natural and environmental conditions, and then the planning is adjusted to this information. One characteristic of McHarg’s method is to divide the assessment factors into positive and negative groups. We now started to prepare the evaluation and the mapping of the area in accordance with this method.” P. 61

“One of the biggest problems in planning the area was that the Westland Highway runs straight through the middle of it. In order to reduce the amount of traffic, and thus the dividing impact of the highway, I proposed an idea about a new road at the western edge of the area, on bridges, connecting peninsulas. This I considered to be one of my best planning ideas...” P. 62

“To be given the leadership in the planning of this huge area, was a great opportunity for me as a young planner. One of the things that we proposed was a settlement east of the Westland Highway in the Hamrahlid area under Mt Ulfarsfell. We knew that this settlement, in the future, would stretch further east at the foot of the mountain, as actually is planned today. Therefore we proposed a New Town Centre for this settlement of 45,000 people...” P. 62

Open Areas for Activities and Beautification P. 63

“The third issue that had been neglected, was the finalising the open areas and the creation of facilities for sports and outdoor activities. When Birgir Isleifur Gunnarsson became the new Mayor in December 1972, a month after the Development Office started, he decided that a great effort within this area, would be his main emphasis as mayor. We,

at the Development Office, and the Director of Parks, were asked to start this project by carrying out a review of the present conditions. The project resulted in a Plan on Environment and Outdoor Life – often called “The Green Revolution” – that became the main issues in the spring elections of 1974.” P. 63

“Together with work on the new settlement areas, this work on the plan for Environmental and Outdoor Life became my main work for the next two years. In a draft to the report on present conditions, I did not hold back on my comments...” P. 63

“As for where the emphasis should be placed for facilities in the open areas, I say... “that a great emphasis should be placed on making the areas self-sustainable – and to create facilities that can help to initiate social activities” (p. 21). In my thesis I had recommended this, to keep running and maintenance costs low... and not less, to avoid designing in a way that only fits narrow purposes, but rather that facilities are created that give the users the opportunity to shape their uses and actions themselves. This is related to the sustainability concept of today.” P. 64

“In the spring of 1974, the communities in the Capital Area announced a competition on playgrounds and play equipment. In my proposal in this competition, I used the before-mentioned principles by designing a spectrum of landscape forms; hills, fields, trenches and walls. In addition, all the primary elements of nature were present, such as still and running water and many types of soils. My plan also provided for scrap materials so the kids could create their own playground and could build houses and dams. In this way they were not tied to the narrow types of activities of standardised play equipment I got the 1st prize for a playground and a 3rd prize for play equipment.” P. 64

“On the foundations of the status and the proposal reports, that Hafliði and I submitted, many proposals were made concerning activities in open areas, and these were published before the 1974 elections. There was, for instance, a proposal to try to get Videy Island under the jurisdiction of Reykjavík, and to restore the buildings there and make this island an outdoor area. Also there was a proposal to build a skiing area in the Blafjöll Mountains. In addition, a great plan was made about a path system of walking and biking for all Reykjavík. It takes, of course, a long time to construct this vast system...” P. 65

Spoiled Coast – Harbours and Boating Harbours P. 66

“Before we at the Development Office started our work on the new plan, the condition of sewers along the coast had become terrible.” P. 66

“In 1948 a new plan was made for the coastline of Reykjavík (the earlier plans were from 1927 and ’38). This was a terrible plan because it proposed policies that later led to all the worst planning problems in Reykjavík: an overblown highway system, zoning of functions, too large open areas, and finally the whole North Coast was planned for industry. It has been very hard and expensive to undo all these wrongs – and it is actually, in many cases, not possible.” P. 66

“The history of the destruction of the north coast is terrible. Quite early the inhabitants made the North Coast a dump site; sewage was discharged to there, as well as materials from building foundations... The industrial zone along the coast, and later a highway placed there, meant that nowhere in the northern part of Reykjavik is there direct access from residential areas to the coast. P. 66

“...This terrible story of the North Coast, and the lack of connections from the city to the treasures that the coast had – and could become again, with targeted measures – became the incentive for the main theme of my doctoral thesis at Berkeley: how to create connections between a city, coast and coastal waters. It is called A Theory of Integration (1987). The North Coast is the case study of the thesis, and I divided the coast into seven research areas.” P. 67

“The theoretical part of the thesis dealt with what had happened historically, and the cultural mode of thinking, that had made such a disaster possible. Firstly, there was an unbelievable insensitivity to the beauty of coasts, and secondly there was the tendency to think about everything in compartments or as polar opposites. This I argued is a characteristic of Western thinking that can be traced back to the Bible that presents everything as opposites; heaven and hell, city and nature. There the main conclusions of my thesis I made available in my book: City and Nature – An Integrated Whole (2000).” P. 67

“Our (the Development Office) alteration of this North Coast area from industry to residential area, was the first step in a decade long process. Next we changed the Skulagata area in a similar way, then the Borgartun area and the Kirkjusandur area. The Danish Plan had already changed the Laugarnes headland from industry to a green area, but beyond that this process stopped... “ P. 67

The Capital Area – and an Airport on Löngusker P. 69

“As described earlier the Regional Plan of 1972 was very bad because it had grown out of the same faulty thinking as the Danish Plan of 1965, since the advisors were the same in both cases! It was actually luck that none of the communities was willing to confirm the proposal in 1973.” P. 69

“...The first article, I published in Lesbok in August 1973. Here follow segments from the article on what I thought were the biggest issues: “The main problems of the road transportation system stem... primarily from the fact that the Capital Area is placed on peninsulas.” I then introduced an idea to connect the peninsulas of Alftanes and Seltjarnarnes: “I want to start by presenting an idea for a road on a landfill and a bridge from Alftanes to the western part of Reykjavik... as with this road we can escape the main traffic jam on Hafnarfjörður Road and within Reykjavik.” And I continue with: “Another main issue should be... to direct through-traffic... onto roads behind the settlement.”...” P. 69

“On planning maps the noise area of runways is long, and narrows towards the ends, and it is best if there is no settlement inside it. Suddenly I saw that the Skerjafjord had the shape of the noise area of a runway: Bingo!... In this the four steps were combined; 1)

inexpensive landfills, 2) the roadbuilding would be inexpensive, 3) approaching flightlines would be over the ocean from three directions, and 4) the noise areas would mostly be placed over ocean areas. Ergo: this was the right place for an airport. This realization came so suddenly that I felt like a blow to the stomach and could hardly gasp for air.” P. 71

The First Steps towards an Iceland Plan P. 73

“... an eruption started on the island of Heimaey, south of the mainland, on January 23, 1973. The eastern part of the town was submerged by ash and lava but, fortunately, the flow could be stopped by pumping sea water onto the edge of the red hot, advancing lava, so that the lava solidified and formed a protective wall, actually improving the harbour. Though we had of course known of past major lava flows and the damage caused, the immediacy of the eruption caused us to ponder what lesson could be taken from this, and where it would be advisable – or inadvisable – to plan and build settlements in our country.” P. 73

“It was not until two years later after I had collected maps that showed danger – and resources areas in the whole country, that I got the idea of making a proposal for a plan for Iceland in the future; an Iceland Plan, built on such data. In addition, only seven months after the Heimaey eruption had started, I was also pushed into think about the meaning of resources for settlements in Iceland, for example geothermal hot water for heating. This happened as the oil producing countries of OPEC reduced the production of oil and gasoline, which led to a considerable shortage and therefore a concomitant hike in oil and gas prices. The crisis revealed very strongly just how well off those settlements in Iceland were that had geothermal heating because in areas where people needed to heat with oil the heating costs went through the roof. From this it was rather simple to conclude that it would be very sensible to map those areas in Iceland where there was readily available geothermal heat and – in planning – try to direct settlements into such areas.” P. 75

“Even this idea; making a holistic study and mapping of all types of hazards and resource as a foundation for a country plan, did not occur to me until 1975. My first step in preparing for making an Iceland Plan was to carry out a historical study on how the settlements in Iceland had developed up till then, and try to visualize how the settlements would possibly develop in the future. I started by trying to understand why Reykjavik had been become such an overarching settlement core in the country. Two fields of interest of mine, historical development and a great interest to see and understand “the big picture”, helped me to understand what are the city’s characteristics. “ P. 75

“Based on this historical study on the position and the development of Reykjavik, I started to ponder if these patterns that are accepted today, i.e. that the settlement cores were almost wholly along the coast, could possibly change in the future. I was soon convinced that in the future the importance of land transportation would increase and that coastal transportation would decline. By studying similar developments in other countries I saw, for instance, that the advent of train systems in Mexico, was a precondition for why a new capital city; Mexico City could be built in the central highlands.” P. 76

“... the highland road system could make it possible to build a service centre in

the middle of the country, which even might possibly develop to become the only right place for a new Capital? This could be comparable to what happened when it had been decided to build new capital cities in the central highlands of Spain, Mexico and Brazil. As I published my ideas about a system of highland roads in 1977, I decided to be as bold, to predict that a city – even a Capital City – would come to be in the middle of Sprengisandur, maybe as early as in 100 years, because of the law of centrality and the crossroads meeting there. This aroused enormous public attention.” P. 76

Prelude to the Writing of the Planning History of Reykjavik P. 77

“To prepare for the revision of a master plan for a city means partly historical research. The first and most obvious step in this historical study is to study the present plan thoroughly... I soon started to study the history of the planning further back in time in order to understand better the historical background of the 1965 Plan.” P. 77

“I bought all the books that had been published on the history of Reykjavik and created a collection of all regulations and other printed material. By studying all this I understood much better how the planning and the city had developed. What was most surprising was how little had been written about the present history and the technological story of the city...” P. 77

“Well, as the big book on the development of the city did not exist! And I concluded that without knowing how the city had developed, I thought it was not possible to form well-founded ideas on how the city could best be developed into the future. I started therefore to make a plan for writing The History of Reykjavik...” P. 78

“Thorsteinn, the publisher (of my plan-history of Reykjavik), knew well what powers were at work in trying to prevent the publication of an important book and he comments on this in the preface to the book: “What is most remarkable about this book is that it is the project of an individual and bears witness to tireless activity and the fight of an individual driven by interest and vision, contrary to a system of official institutions that try to monopolize the field” P. 79

“Here’s an example of my predictions (in the book): Houses will allow variations; there will be a withdrawal from high-rises; electric car, bicycling and walking paths will be built; car traffic will be reduced because of the communication revolution; everything will be available in supermarkets and shops will be only for fun in older neighbourhoods (p. 143). From this description it becomes obvious that as a new master plan is to be made, it is important to have performed historical research on trends, and also that people need to form ideas on the likelihood of how various aspects of city life will develop in the future.” P. 79

Where I was at in 1977... and What was Driving Me? P. 81

“...to proceed carefully as concerns nature and try to adjust actions and projects to local conditions, both as concerns society and the environment. Ian McHarg became a key person for this type of planning with his book Design with Nature (1969) that was especially interesting for me because McHarg put his theories into the context of how the philosophy on the connection of man and nature was developing in the world.” P. 81

“Another key person in this same development was Buckminster Fuller, who designed the exhibition hall of the USA – a geodesic dome – for the 1967 Expo in Montreal. ... I then realized that the central criterion for eco-friendly architecture is to build at minimum cost and with the minimum use of material.” P. 82

“The aspect of Fuller’s theories that had the most impact on me, was how he wanted to make all his designs connect with the nature of the earth and existence in general! For instance, he established an office that is called The World Resources Inventory and designed, for example, an energy transmission system for the whole globe...” P. 82

“I had long time ago discovered that there was a rebel within me that took great pleasure in attacking accepted ideas. Also I had realised that I was quite a bit an idealist, ready to sacrifice myself for principles and projects that I felt were urgent...” P. 82

Worldview of Toughness – I Get to Know a Worldview of Softness P. 83

“As I was studying in Berlin, Prussia, I adopted a style that was prevalent there; a style of toughness, exactness, critical mindedness and always to think that I knew better; Besserwisser! The ideology of the hippies in Berlin skipped the toughness and the exactness, but was characterised by critical mindedness, and the hippies thought – I included – that almost all present planning of society and institutions was totally wrong...” P. 83

“I had been quite successful in my studies in Berlin, which boosted my self-confidence. Now, after returning to Iceland I stridently expressed my views about the city system and in newspapers, condemning and proclaiming the right views. Because of this the people of the Road Division in Reykjavik gave me the nickname SelfTrusty FirstChoice, which can be derived from my name...” P. 84

“The remarkable thing about the fights I had now started in Iceland, was that only a part of me is a warrior, whereas the other part is a man of reconciliation. The overarching characteristic of me personally, all the way back to my youth, was that I was against accepted rules and wanted to attack them. The word for this personality is iconoclast...” P. 83

“The main thing with me was therefore, actually, to provoke and break down boundaries! This performance of mine had a positive meaning. I thought my performances would provoke people, in the bondage of their mind-sets, to loosen up and that they would afterwards be pleased that they had been provoked to think more freely. Dadaism has shown me the value of such a shaking up...” P. 84

“... Now I started to look around for books on soft lifestyles, as such books had been a part of hippie literature. I had also noticed that it got better result approaching people cautiously and politely and that people had the tendency to stop lads like me, who were always trying to elevate themselves. A sentence from the Bible came frequently to my mind: “Pride cometh before a fall”...” P. 84

“I also started to sense that this alteration from toughness to softness could become a foundation for an new approach to design and planning. The characteristic of the method would be to work more with processes in time, but in order to be able to do this one had to practice patience! I learned a lot from studying old Icelandic sayings like: “One can wait to his advantage”...” P. 84

“...Once, as I was paging through books in the Eymundsson bookstore, I came across a little book with a delicate cover, its name The Book on the Way. It resembled a book of poetry, and was written by the Chinese scholar Lao-Tse 500 years ago. As I stood there, glancing at the names of the poems, they aroused my interest: “Virtue is Like Water”, “Work with Gentleness” and “Duties are more Important than Demands”. I now started to sense that something very important was now happening in my life, and after I had paged through the book for some time, I was suddenly as if hit by a lightning!...” P. 85

“When I got to Berkeley California for my doctoral studies I soon discovered that here more softness was prevalent than in Europe and books like The Book on the Way were held in high esteem. Gradually the main subject of my PhD thesis developed into describing the problems that had been caused by the tougher western worldview and to demonstrate how the softer eastern worldview could be used to find ways to adaptations and interweaving in design and planning.” P. 85

Systems of Thought and Systems of Value Bls. 86

“...I said: “The main reason why environmental preservation viewpoints in this country have an uphill battle is a vain sense of historical values. This appears, for instance, in the constant talk about notable men and notable institutions. Buildings and other artefacts, depicting the struggle from destitution to city life are not highly respected... The exhibition halls of the National Museum bear witness to this view of history”.” P. 86

“We at the Development Office had proceeded in our planning work and we had a revision proposal for a master plan ready in 1977, a plan that introduced great progress compared to the Danish Plan of 1965...” P. 86

“Usually a policy of densification is an issue pushed by right wing parties whereas green policies are favoured by Leftists. In Reykjavik this had been turned around because of political warfare...” P. 87

Work on an Iceland Plan – A New Phase in My Life P. 88

“... in the spring of 1978 I started to try get financing for another big interest of mine, an Iceland Plan. I applied for the large environmental grant of CCMS in Brussels and got it, which was very fortunate. The grant was 8000 dollars and sufficed for one year’s work. The aspect of the project that I applied the grant for was a Study of Natural Features in Iceland. The project consisted of making evaluation transparencies, using McHarg’s method. This method of overlaying transparencies shows visually where the most positive and negative features for settlements are within the country.” P. 88

“It is quite memorable to me as I gave Sigurdur (Thorarinsson, professor) my draft for the map, because it was as if Sigurdur thought the map was dangerous, and only touched it with a long stick: “Here you can enlarge the danger zone to the east because the volcanism is moving east in the Veidivötn Area...”. This was the way this map on the danger of pumice fall came to be, And a similar method was used for many of the other hazard maps I drew.” P. 89

“In the beginning I made a list of the 33 maps that were most necessary to do, showing positive settlement features, but I put an emphasis on finishing the ten most necessary. On my list of negative features I listed 11 aspects that I thought were most necessary to map, but only gathered data and drew the seven most necessary ones.” P. 91

“In my doctoral studies in Berkeley that I started in 1980, it was first my idea to let the Iceland Plan become my thesis project, but I gradually got more interested in studying the value of the soft nature-friendly worldview and I made the utilization of it in design and planning the subject of my thesis.” P. 91

The Forming of Theories in Berkeley

My First Journey to the USA – and to Berkeley P. 92

“After the filming had ended I went to Philadelphia and knocked unannounced on McHarg’s door at the university. I was quite lucky that he gave me ample time, probably because his father-in-law had been the agent for the Icelandic steamship Gullfoss in Scotland, and he liked reminiscing about those old times. I explained my maps to him that I had taken with me, and asked for his interest in cooperation...” P. 92

“...had an interview booked in the afternoon with another world master of design theory in the 20th century, Buckminster Fuller. He had an institute there, working on long term thinking in design, and on the future of the earth. I had got to know Fuller in Iceland because I was a friend of Einar Thorsteinn. I started by describing to him my stressful encounter with McHarg in the morning, and I was like gasping for air. I had hoped that Fuller would say that this or that in my project was fine. After my description Fuller sat silent for quite a while and looked me calmly in the eye. Finally he said only these two words: “Be strong!” This is the best advice I ever received!” P. 93

“Dickert now told me that recently a new course in Environmental Planning had been established in the Landscape Architecture Department. This would be the right place for me. I then said I was not so much thinking about a MS degree, I already had a five year diploma from Berlin, and I said I was more looking for advice. I gradually started to realize that Dickert had considerable interest in getting me to Berkeley. Then I suddenly got the idea to say: “If I come to Berkeley, it would only be to enter a PhD programme”...” P. 93

“In the summer Einar Thorsteinn and I went on a pleasant journey that had a connection to my Iceland Plan. I had a metal plate engraved: A Cornerstone for Haborg placed on July 30th, 1980. The date was my father’s birthday. I fastened the plate on a rock and put it into the trunk of my car. In the centre of the country, in Sprengisandur, we found a place that we considered fine for a New Capital City. We built a cairn and placed the cornerstone at the bottom of it...” Bls. 94

The Development of Concepts – California, Fatherland no. 3 P. 95

“Berkeley and California have a long history in the re-visioning of worldviews. John Muir, for example, became a pioneer in preserving the remains of the redwood forests of California in the second half of the 19th century. The British Arts and Crafts Movement also got a strong base there, and many timber houses in Berkeley are in this style and also in other places along the San Francisco Bay. This organic building style has always supported organic lifestyles...” P. 95

“As I had chosen to study Environmental Planning, this environment suited me exceptionally well. Because the mapping of natural hazards was one of the largest aspects of the Iceland project, the extensive studies of natural hazards in California were a good model for my studies...” P. 96

“Another professor of architecture at Berkeley became a pioneer within the area of ecological design. This was Sim Van der Ryn. Governor Jerry Brown made him the California State Architect in the second half of the seventies. Under their leadership California enacted legislation on energy efficiency, energy standards and accessibilities for the handicapped. In addition, Ryn also designed several buildings for the Government of California in Sacramento that were among the first in the world to be ecologically sound...” P. 97

“Already by around 1970 Ryn and some others had made changes in this direction to a house and a garden in Berkeley, which has since been used for teaching. In Iceland the village Solheimar in Grimsnes is designed in this ecological spirit of sustainability.” P. 97

The University in Berkeley... And my Studies There P. 98

“... Universities are always crucibles for future development, and when I was at Berkeley, the University, together with Stanford University were the cradles for the computer industry that mostly developed in Silicon Valley leading to the second industrial revolution that changed the whole world. P. 98

“In 1959 the most important design departments of the University were brought together in a new unit: College of Environmental Design. For the unified departments, a nine story building was erected, though in the clumsy style that was popular then. Soon the value of bringing related departments together under one roof became apparent. The departments of architecture, planning and landscape architecture started to work together more...” P. 98

“This interdisciplinary cluster Environmental Planning was placed as a study route within Landscape Architecture. This was a good arrangement because the teaching of landscape architecture requires inputs from natural science disciplines, such as hydrology, ecology and geology. Therefore specialists in these disciplines have teaching contracts with this department. All these disciplines were vital for my work on the Iceland Plan...” P. 99

“Because of my growing interest in understanding the roots of the faulty, though western worldview, I took three philosophy courses with Paul Feyerabend, who was known to be

very critical of the mechanistic worldview that was created in western sciences about 300 years ago...” P. 99

The Modern Problem... and a Draft for Solutions P. 101

“...The first step was to define six aspects of the problem, which I considered to be: 1) Specialisation, 2) The mechanistic, 3) Visual chaos, 4) Lack of symbolic content, 5) Crude schemes, and 6) The tough worldview...” P. 101

“...1) Specialisation: specialisation in society and in design leads to the breaking up of wholes and thus leads to lack of connections... Problem 2) is the mechanistic, which appears in design, for example, in straight mechanistic lines and box-like forms... 3) visual chaos, is characterized by the lack of connecting rules in design and in the worldview in general... 4) the lack of symbolic content... 5) is crude schemes. An example of a crude scheme is a plan that divides the elements of city life into isolated boxes... 6) the tough worldview. In architecture the tough worldview appears in letting only functions guide the design, which in turn makes the design cold...” P. 101

“The theoretical part of my PhD thesis described how these problems of modern societies and design, have deep roots in the governing tough western worldview. I succeeded – after much grumbling – to create a soft, holistic design theory by studying principles from old Eastern worldviews...” P. 102

The Impact of the Ideas of Christopher Alexander P. 103

“Many have tried to understand what could possibly be the causes for the disintegration and alienation of our modern times. In philosophy this is often connected to the so-called split of mind and body that can be traced back to the Greeks. For practical reasons it is better to talk about separation of the forming of ideas (i.e. aspects connected to the mind) from reality (which is referred to as body)...” P. 103

“As one can see here, eastern ideas had arrived. Alexander often cites a book about archery training in Japan, Zen in the Art of Archery (1953). There it is the main goal not to try to direct the shot of the arrow, but rather to try to forget oneself and try to let The It shoot. The thinking is that our inner core (The It) has supreme capabilities... and if we only let it – as happens, for instance, with children and primitive people as they draw...” P. 104

“Alexander and I started cooperating on an idea of mine about my doctoral thesis that I might write under his guidance. I put forth a theme that he liked; Form comes First, which means one should start a design process with form ideas. This theme was directed against the main thesis of functionalism: Form follows Function, which claims that it is enough to think and design from the functional aspects, and the form qualities and the form structures will follow naturally.” P. 105

“Letting the form be in the foreground is the main characteristic of the theories of Alexander. By digging down into this thinking of letting the form have an overriding influence, I discovered the weakness in Alexander’s theories, and started to think less of them.” P. 105

How Form-Characteristics of Worldviews have an Impact P. 106

“The fact that I did not consider it right to let either form or function guide design... but rather the interweaving of the two... did not mean that I did not think that the form could have a very fundamental impact in design and systems of thinking...” P. 106

“Because of the influence from Fuller I started to analyse the form qualities of different worldviews, research that I have continued ever since. I started with the flat pancake worldview, where it is logical to talk about up and down in relation to this flat area...” P. 106

“As I started to study the present worldview I discovered that it is like a flat ribbon, that is connected together as a cylinder around the globe, because today’s flat maps flatten the earth. This has meant that the two polar areas do actually not belong to the present worldview...” P. 107

“The third step or idea in my study of form characteristics of worldviews, did not happen to me until after 30 years, as I was writing the book *How the World will Change – with Global Warming* (2006). There I described that global warming will make the whole sphere habitable because, as the ice sheets of the North Pole area melt, the Arctic will be as fit for habitation as other areas on the globe, and even better...” P. 107

“The first description on this I put forward in an earlier chapter: *The Modern Problem... and a Draft for Solutions* (p. 101). Now my position in my doctoral studies was that I had stopped making the Iceland Plan and the Form comes First thesis, its subject and had started a third idea for my dissertation, which dealt with the impact of worldviews on the shaping of society and environment, in the spirit that has now been described.” P. 108

Courses in Philosophy and the Shaping of the Dissertation P. 109

“I had developed an intuitive feeling that the solution to some of the worst problems of modern design was dependent on reducing the impact of the western worldview... and establish instead, new basic rules in design in the eastern spirit. I got ever more convinced that this could be a foundation for a paradigm shift in design and planning...” P. 110

“I now started to construct a description of my third thesis idea. This process started by a description of the problems of modern design and how they have roots in the faults of the western worldview. Also I described how certain aspects of the eastern concepts could become a good foundation for new thinking schemes in design.” P. 110

“It also helped me a lot that northern California – and thus the Berkeley area – was at this time under much influence from ideas on how, for instance, Zen and Tao could direct us to new ways in design and science...” P. 111

Student Life, Visits and a SE Asia Journey P. 112

“We all were primarily connected in an academic spirit, and I think nobody went far towards living according to ecological lifestyles by, for instance, having sprouts and vegetables for all meals. We here – at the citadel of the academic environmental sciences – even

made a little fun of the hippie lifestyle...” P. 113

“...For money from this fund (Farrand) I went on a trip around the world in 1985. The purpose of the trip was to learn how eastern theories appeared in design and planning in Japan, in the Philippines, Thailand, India, Hong Kong and China, that was starting to open up...” P. 114

“After one and a half hours I realized he (prof. Nakamura) was not in much hurry (as so often in the West),but sat in a lotus position on the bench. Then he said: “Can I offer you tea?” “Well, thank you...” and a Japanese beauty flows into the room with a tray of tea and cookies. Now I started to try to relax and we continued our discussion. After another one and a half hours this Japanese master said again: “Can I offer you tea?”... “Well, thank you” ...” P. 115

Characteristics of Western and Eastern Worldviews Bls. 116

“After I had, for some time, tried to find what is the root of the faults of our Western world, I discovered that the main characteristic is alienation that actually has much been complained about in most areas. As a next step I came to realize that the basic characteristic of what is alienated is what is detracted from other things. As I started to dig into how the various types of separation had come to be, I discovered that the governing method of science, dissection, is in many cases, was the deep root. Dissection became the main method in Western science in the 17th century...” P. 116

“Earlier there had been in science, a quite different method; induction. The main characteristic of this method is to look at the wholeness of the subject at hand – for instance, man together with his whole environment – to try to understand its nature. This is, for instance, is the main approach in anthropology...” P. 116

“What I have now described is a retelling of the first part of my PhD thesis. This philosophical chapter has the purpose of digging down to the deeper roots of the problems of modern design; the alienation, the lack of connections and the little success in creating wholes. The next part of my thesis described holistic theories, both as they appear in modern physics and in eastern philosophies... and here mainly, those theories that have a connection to T'ai Ch'i. One of the key terms in these theories is complementarity...” P. 117

“The T'ai Ch'i symbol is put together from three features; I. Circle, II. S-line and III. Black and white halves. In eastern thought the circle stands for Wholeness, the S-line for a Dynamic Interaction between polarized pairs within this whole... and the two halves of the symbol, the Black and the White, symbolize that we are here dealing with the polarized yin/yang pairs.” P. 118

Form Used to Strengthen Connections in Design P. 119

“I will now explain how I succeeded in creating a form theory from the four principles of the T'ai Ch'i symbol. And, this is the main contribution of my PhD thesis... We will now start to look more closely at the four philosophical form principles that appear in the T'ai Ch'i symbol... Wholeness that appears as a Circle in the T'ai Ch'i symbol... My next... was to define and describe five

form features that I linked to the Circle...” P. 119

“Rule 1) on how (the Circle be made stronger) can be done is by strengthening of the Rim of the Circle... rule 2) is based on designing the centre as a Focal Point... next method 3) is to create many Circumferences within the Circle... The next form principle 4) recommends that the area within the Circle has an Inclination towards the Centre... form principle 5) recommends that Lines go from the Rim to the Centre... P. 119

“As for the philosophical concept of II Dynamism, we see it as a S-formed line in the T'ai Ch'i symbol. The curved line is an opposite of the straight line that is so common in mechanical western design...” P. 119

“The third philosophical concept from the T'ai Ch'i III Complementary features, appears at the coast in such a way that form and activity characteristics, both on land and out on the water, correspond to each other...” P. 121

“The last concept from the T'ai Ch'i is IV Cores of the opposite areas. This appears, for example, as pools or ponds (cores of water) and as rocks and islands (cores of land) out in the sea. These cores strengthen the interplay of land and water...” P. 121

“In these last sections a description of my PhD thesis has been given. This description is however, very selective because the essay is 222 pages long...” P. 121

The First Twelve Years after Returning to Iceland

Testing Various Subjects P 123

“...The basic idea is an elaboration of the principle complementarity. This principle is known, for instance, from the theory of colour. There, complementary colour pairs are known, and their effect strengthens both colours, resulting in $1+1=3$. Examples of complementary pairs in design include city and nature and house and garden. By letting them play together according to certain rules, the two halves are mutually strengthened.” P. 123

“Twelve years after I came back from Berkeley I had digested my theories long enough to be able to write an accessible book in Icelandic about them (1999), and one year later my translation of that book was published with the title: City and Nature – an Integrated Whole (2000)...” P. 125

A Design Library – Settlement Policy and Highland Roads P. 127

“As I said before, I had hoped that, instead of my failed attempt at publishing my complementary theory as a book, I could again start my work on the Iceland Plan in Iceland. In preparation for this endeavour I published a book in January 1987: Ideas on the First Iceland Plan.” P. 127

“In the autumn of 1989 I was ready to start a programme to present my ideas on an Iceland Plan. At this point in time there had occurred a serious situation concerning

settlement of the countryside, because the rural population had declined drastically. A collapse was imminent in many places.” P. 127

“In this situation I saw it as an opportunity to present my idea on an Iceland Plan as a new settlement policy. On this I wrote two long articles (1987)...: Has the Settlement Policy Failed?... The second ...: First Ideas on a New Settlement Policy. It dealt with how it was possible to reduce the faults in the disadvantaged situation with road improvements and road shortcuts... primarily by constructing roads shortest distance between settlements of the country, which is over the highlands, instead of having to drive the long and crooked roads along the coast.” P. 129

“I also pointed out that we in Iceland, have a dated settlement structure that was formed in the period of small boats and horse-drawn carriages. I also suggested that we needed to stop distributing settlements grants like sweets from an airplane over the whole country, to hopeful, as well as hopeless, areas. Instead we should reduce the number of villages and state owned harbours and make decisions on privileged, large development areas for the future.” P. 129

“With that article I published my Iceland Plan Map... that has three Development Areas, where were best conditions for settlement are found. The map also shows my proposal for a highland road system that would connect all parts of the country directly, which would mean considerable shortening of driving distances to be covered. This highland roads aspect aroused the most interest and was widely discussed...” P. 129

“Many other things have happened in the highland road discussion in the last few decades, but the biggest step was when four highland roads were designated primary roads in 2001, in the first unified transportation plan. These highland roads are: Kaldidalur Road (from Thingvellir to Langjökull and from there to Borgarfjörður), Kjalvegur Road, Sprengisandur Road and the Northern Fjallabaksleid Road.” P. 130

Associate Professor – and the Writing of Three Books P. 131

“... an offer... by Civil Engineering at the University of Iceland, of a 37% Associate Professor Position at the Department... I started my work in August 1988 by teaching Country and Town Planning, which was an obligatory course...” P. 131

“The project was organised as a comparison of alternatives: the Capital Area with, and then without the Fossvogsbraut Road. The impact of these two alternatives was described in the report, in terms of planning, traffic flows and the impact on ecosystems. In order to be able to assess the magnitude and distribution of air pollution, we created a pollution dispersion model. There were six of us experts that worked on the report. It can be called the first report on Strategic Environmental Assessment (SEA) in Iceland.” P. 131

“By getting the position at the Civil Engineering Department I was in fact, more fortunate than I realized in the beginning, because my education on all the newest in environmental matters in California, proved to be a good foundation in helping develop the department towards more environmentally friendly ways.” P. 133

“Furthermore, it became evident, that my analyses of natural features in Iceland, was a very positive addition because engineering was somewhat lacking in such analyses. Analyses of land- and environmental features are a precondition for being able to adjust building projects to local conditions and to minimize their environmental impact. The fact I had written the Planning History of Reykjavik, was also a good foundation for the teaching of the planning course...” P. 133

“That I could direct the student work into the various aspects of my interests, made it easier for me to write articles and books on them. The first book I published after I came to the University is called A Vision for Iceland in the 21th Century (1991)...” P. 133

“The next book, Land as Resource (1993), I composed in a similar manner, but now the subject was to form a model on how modern regional plans for parts of the country, could be made – in this case SW-Iceland. The outcome was meant to be a Frame Plan for this part of the country...” P. 134

“Because of a new revolution in the position of nations as concerns environmental matters, and also because of the communication- and internet revolution, new opportunities were opening up for small and isolated nations. I then realised that it would no longer be enough to study only Iceland itself when creating a future vision for the country. In 1993 I therefore contacted Albert Jonsson, who was Special Advisor to PM Oddsson on international matters, about the idea of writing a book on this. He liked the idea and we wrote a description of the book and after that we got a grant from the government to write it.” P. 134

“... it was published in January 1995 and is called At the Turn of the Century – Iceland’s Position in a Changing World. The book was very well received, but it was not much reported on in the media. I think that our closeness to political power could have been the reason for this.” P. 134

A Fight for Ideas, and Their Distribution P. 135

“... After I presented the Iceland Plan as a new approach to settlement policy, I succeeded to further it somewhat by the authorities. The interest of both students and engineers at the Public Roads Administration, and at the NPC, in highland roads made it possible to keep the research work alive.” P. 136

“...My approach, after having being rejected twice about help, was – as so many times before – to do this plan myself... without the assistance of any institutions. Therefore, in the autumn of 1991, I decided to let my planning course mainly deal with creating a proposal for a Regional Plan for the Central Highlands. I myself worked with the students on this, and also we wrote a report that we distributed widely.” P. 136

“... newspapers and tv stations published many news stories and elaborations on my ideas. For example, the State Television gave Ragnar Halldorsson in 1992 the task of creating a tv programme about my work, called The Future has to be Designed. Channel 2 also made a programme on me in

the series Independent People. There the emphasis was on my theories about the impacts of global warming. In the autumn of 1993 I attended a course at the State Television meant for scholars, on how to make tv documentaries. There I wrote the manuscript The Unknown Territory – A Search without an End. This was the only film that was made based on a manuscript from the course...” P. 137

Creation of Form Theory of a Settlement Development P. 138

“In short: The spatial characteristics of Iceland are; the country is a circle, the settlement is like a ribbon out on the edge, and in the middle of that ribbon there runs a linear centre, the Ring Road, but the geographical centre of the country, on Sprengisandur, is, on the other hand, inactive. The building of highland road is thus both a method to shorten distances and also to activate this geographical centre of the country... because the logical thing is, eventually, to build a new Capital City at this centre, as was done in Spain, Mexico and Brazil.” P. 138

“...the development of settlement patterns of Iceland, divided into seven periods according to those spatial powers that were at work in shaping the settlement patterns, at each given time. From these powers one can mention the drive towards the interior after husbandry increased, and the reversed: drive again to the coasts, after the fishing industry and the coastal shipping started for real in the 19th and 20th centuries. My main conclusion from this study was that the centripetal force that had been driving activity towards the interior would again be very active in forming the settlements in the future, for example, because of the highland roads.” P. 138

“About ten years later (2006) I published a book on how the settlement patterns of the world would change because of global warming: How the World will Change – with Global Warming. There I define ten principle drivers that will change the settlement patterns of the world because of global warming. Another important form-theme in that book is the development of spatial systems and the theory I had started to develop in my study on Iceland. Here it is, in principle, a fact the Ring Road is the linear centre of the country. At the same time we see that the point centre in the centre of the country is missing.” P. 139

“In my book on the future development of the globe, the study of the form-systems could be applied to explain the main spatial systems in the development of global settlement. Originally, the global spatial system was a rather equal distribution of humans and animals on the habitable areas of the globe. Later point-centre settlement systems started to be developed... with steamship transportation and the extending of the telephone systems around the world, the world started to grow together into one whole. In this process, the spatial system; ribbon of habitation around the globe came to be. With this, the strength of various older point centres was reduced. In the northern part in the ribbon of habitation, the linear centre of the world was gradually formed...” P. 139

“... the formation of a global spatial system. In this new system, where all places have equal position, countries on the edge profit, compared to earlier negative impact of their being out on the edge. In a similar manner the earlier point centre and linear centre impacts, will be reduced.” P. 141

“Because, by far, the largest part of the landmass of Earth is in its northern hemisphere, the part of the ribbon of habitation that is there, will grow in importance and also continue to widen into the Arctic Region. The final phase in this spatial development would be, as the whole Arctic has become activated, which would eventually mean the forming of a new spatial system; the semi-sphere of the northern hemisphere that would have a point centre in the North Pole.” P. 141

Form is a Key to Beauty and Depth P. 142

“In earlier centuries designers were, first and foremost, artists who had been trained in art schools. In the 20th century the study of architecture became ever more technical and the buildings of architects started to look more like industrial buildings...” P. 142

“Earlier city planners also were artists and many of the most beautiful cities in the world, like Paris and Washington, are basically planned as a work of art...” P. 142

“The wholeness and the beauty that was achieved in the planning of Washington and Paris are basically due to the geometry of the plans. In the case of these two cities the most outstanding characteristic is the geometry of visual axes and star formed squares, but at the same time, the plan was well adjusted to the rivers that flow through them.” P. 142

“...Another tool in terms of form, in addition to the geometry, is to enhance the beauty of cities and buildings with ornament. Our modern times are so impregnated with negativism towards the word ornament (as in ornamental speech)...” P. 143

“Ornament has been forgotten as a basic discipline in planning and architecture for about 100 years. Post-modernism meant some resurgence of it, in the last decades of the 20th century. Post-modernism makes, most often, this connection to older times in a rather superficial way with so-called historical references. These include occasional Greek gables that are erected in front of the building like a set in a movie...” P. 145

Engineering: A New Policy for the Department P. 146

“... In 1992-93 an assessment was made of the Engineering Faculty by the American accreditation institute ABET. In the USA this is especially important because state control of universities is not as advanced as in most European countries...” P. 146

“In addition, ABET put heavy emphasis on the need to start teaching ethics, aesthetics and environmental matters. I was given the task of reshaping the course on Country and Town Planning and to give it a new name; Environmental Planning...” P. 147

“...Björn, the Dean of the Faculty, said in his farewell speech that it was his opinion that the increase in the number of students was because of the promotion pamphlet that was sent to the Highlands P. 149 home addresses of secondary school graduates. There he mentioned especially my work on these pamphlets.” P. 148

Country Planning and the Planning of the Central P. 149

“In earlier chapters I have described how around 1975 I formed my first ideas on the planning of the country as a whole (see p. 73). The first proposal on a comprehensive plan for the country I published in a book in 1987 (see p. 88). It was based on considerable work in interpreting maps on the hazardous areas as well as the most valuable resource areas.” P. 149

“An important phase was reached when I wrote my book Land as Resource (1993). This book presents our frame plan for SW Iceland... PM David Oddsson entered the picture because he was also the Minister of Settlement Issues. A next productive step in the cooperation with the Office of the PM was cooperation with a specialist on foreign affairs, Albert Jonsson, on writing the book At the Turn of the Century – Iceland’s Position in a Changing World (1995).” P. 149

“...Oddsson gave us a grant to write the book Iceland the New that dealt with how to make a country plan, and at the same time it published extensive criticism of the Central Highlands Plan.” P. 152

Tourism in an Iceland Plan – with Connection to Road Plans P. 153

“As I was studying in California a new vision towards society and the role of individuals was in the forming stages. This new vision had its foundation in increased density and population in the world, so that everything connected to wide spaces and clean areas was now being considered more valuable. I realized that this could mean a great opportunity for Iceland, given the increased tourism to wide open and little spoiled countries.” P. 153

“This vision and this assessment are not considered to be news now, a quarter of a century later, but when I started to present this idea – just after I had returned from my studies in 1987 – it was. My central message was that the future policy of the country should take guidance from this vision.” P. 153

“In 1991 I published a book on this that I called A Vision for Iceland in the 21st Century. In the introduction I say on p. 12: “What is so fascinating about the policy to use the cleanliness and the beauty of the country for increased income (especially from increased tourism), is that we Icelanders also profit from this ourselves.”

“Lower on the page it continues: “In this book ideas will be presented on how to open the country for the whole nation... and to be able to enjoy the country... there has to be a good road system... Fortunately there is a good but under-used service system in the country... and there are primarily the obstacles in the road system that prevent us from utilising the country better.” – All this is still valid today” P. 153

“In order to allow the number of tourists to grow – meaning both domestic and foreign tourists – the roads need to be improved, and the authorities have made a significant effort to do so. Maybe my persistent propaganda on the importance of improving the roads, because of the great opportunities of tourism and the importance of better transportation in general, has had some part in this. If the road system had not been improved significantly, the country would not have enjoyed the immense increase in tourism that happened at the beginning of the 21st century...” P. 154

“But the part of the road system that is most urgently needed is the highland roads. Some important advancement there has, however, been achieved, because Kjalvegur, Sprengisandsvegur and Vatnajökulsvegur Roads are already half finished...” P. 154

“The Director of Roads, Helgi Hallgrímsson, appointed three division heads to work on it with me and the Annual Meeting in 1998 in Skagafjörður, was dedicated to this project. In the preface to the book Helgi writes: “...the effort of Trausti Valsson to write this book on roads and tourism is quite a catch. The author is known for his fresh approaches to his projects and for putting forth new and provoking ideas about the future.”” P. 155

“In 1998 there came an announcement from Europe that Reykjavik had been selected – together with seven other small cities – as European Cities of Culture in the Millennium Year 2000. ... I received a grant for publishing a book and to build an exhibition in the City Hall on the theme. (Three) institutes formed a work group, to help me write a book about this, a book that is called *Borg og nattura* (1999). In 2000 it was published in English and called: *City and Nature – An Integrated Whole...*” P. 155

The First Professor in Planning

Advancement in Planning Matters at the University P. 156

“... Environmental and planning matters had entered the social discourse strongly at the end of the 20th... My opportunity to take some lead in this was strengthened as I had been promoted to Professor of Planning at the University. Fifteen years later (2015/16), at my retirement, I was still the only professor on planning in Iceland...” P. 156

New Master- and Regional Plans Press the Airport Issue P. 158

“In the autumn of 2000 I dedicated my planning course to a vision for the planning of Reykjavik, where the main subject was to design a mixed-use settlement in the airport area” P. 158

“But now, for the first time, a representative of Reykjavik had become a Minister of Transportation, Hanna Birna Kristjansdóttir. She was in addition, a former Mayor of Reykjavik and had supported the removal. She and the Icelandic State made an agreement to form Ragna Committee to solve this locked issue. This committee did not solve the issue...” P. 159

My Overview Book: Planning in Iceland P. 160

“...the early settlement of Iceland is one of the clearest examples of this, not least because the natural conditions here are very decisive both as to resources and hazards. Therefore the book could have value outside Iceland as a way of displaying how settlement and society are formed by local conditions.” P. 160

“In making this attempt to describe the interaction of settlement and nature in the book, it was very obvious that it would have to touch on many branches of the natural sciences, in addition to the disciplines that deal with settlements and planning. I therefore decided to divide the book into distinctive parts that I call Books” P. 160

“The First Book, I called Nature: The Forces That Shape It... Book Two I called: First Steps in Shaping of Settlements... The Third Book I called: The Plan Development of Towns and Regions... The Fourth Book I decided to call: Development of Systems on a Country Scale... The Fifth and last Book I called: The Developments of Today...” P. 160

“The preface was written by Sir Peter Hall, a professor at Bartlett in London. Sir Peter starts his preface with: “Trausti Valsson has achieved an extraordinary feat of scholarship...” And he ends the preface by saying: “... TV’s book sets a new standard in historical scholarship and provides a model for other scholars in other countries to follow.”... P. 161

Impact of Global Warming – Farrand Professor 2004 P. 162

“It is quite memorable to me that our professor of weather and hydrology at Berkeley – Luna Leopold – came back from a conference in 1981 and said that so much greenhouse gases were accumulating in the atmosphere that it was quite likely that the world climate would start to get warmer. This would mean, for example, a higher sea level and a shift of eco-zones towards the Poles and to higher altitudes.” P. 162

“Already in 1992 I had started to take the predictions of the warming seriously and my students and I showed on a map (see figure on p. 78) how large were the coastal areas the rising seas would engulf in SW Iceland, and we also showed how much higher the line of vegetation would go. Because of this, the agricultural areas would expand up to higher ground. Since then I have written about the impact of global warming in all my books.” P. 162

“Because of the knowledge of the impact of the warming that I had acquired in the studio, from the ACIA report and in other ways, I decided that I would make the impact of global warming on planning and on the settlement patterns of the globe, my main research theme in the years to come. Also I decided that my next book would be about this. Already in Berkeley I laid out the first draft for the Table of Contents for the book...” P. 163

“In February I gave a talk at a conference of the Foreign Ministry about the impacts of climate change. This Ministry is in charge of Icelandic participation in the Arctic Council, and it had published a report on this in the autumn called North Meets North (2005). In the spring I prepared a conference at the Engineering Faculty about the impact of a higher sea level and dangerous coastal floods, with nine speakers...” P. 164

A Book about How the World Will Change with the Warming P. 165

“The whole year 2005 went into writing the book How the World will Change – with Global Warming. I wrote it in English because most of the issues had rather a global than an Icelandic reference. This book, I think, is the first book in the world that describes the impact of warming on planning and settlement issues on a global scale.” 165

“As I decided on the structure of the book, I decided to make this idea, that Kyoto would

never work, a point of departure. My message was therefore that we should rather embrace the changes that come with the warming. I wrote a poem Let's Embrace Change! in English and published it in that book and also in this one. (See next page)." P. 165

"In chapter four in the book, I described how the system of ship transportation in the world will change because of the opening of shipping routes in the Arctic Ocean, i.e. north of America and Asia. Also that land transportation will be much easier in the High North (for example in Iceland) because of less snow and shorter winters..." P. 167

"Abroad the book got a good press, including in a tv-interview on the BBC (see YouTube) in 2007 and in Time Magazine that published the cover story Who Owns the Arctic?..." P. 167

"The 1500 copies of my book were soon sold out, but it is still on my homepage at the UI. After the book had been published I was invited widely to give talks. The most memorable invitations in 2007 were to Nuuk in Greenland and to Torshavn in the Faroe Islands..." P. 167

"The West North Council invited me to a conference in Torshavn where I was the keynote speaker. The theme of the conference was the changes in the High North and the enormous rise in the number of cruise ships in the northern seas. The possibility that something could happen to these ships is a cause of great concern for the small nations in that area..." P. 167

The Impact of Climate Change on Iceland P. 169

"Another example of wrong planning and wrong investments, was to advertise Myvatn Lake as an area for snow mobile competitions and fishing through ice. Not long time after these investments had been made, the ice on the lake had become so unsafe in the winters, that it did not allow this type of activity. I gave a talk about this in a conference of Scandinavian leaders in tourism at Budir on Snaefellsnes in June 2007, as bad examples." P. 169

"One of the greatest impact of the warming in Iceland is that the summers are getting ever longer, that means, for example, the lengthening of the period for summer tourism, and farmers can now even get three crops from their fields in the summer..." P. 169

"It has been calculated that SE-Iceland will elevate about 2 m in this century, and at the same time it is predicted that the sea level will rise about 1,5 m so the netto rise of Iceland there, will be about 0,5 m. Because of this people have been worried about the reduced depth of the harbour Höfn in Hornafjörður..." P. 170

"The activity in Iceland where there will be greatest impact because of the warming is transportation. There one should first mention the road traffic over the highlands. Both the vegetation- and snowline are moving upwards, which has meant that the amount of snow in the highland routes has been reduced..." P. 170

"One of these two groups (in our studio at UI) created an idea on a country plan where it was assumed that a transshipment harbour would be built in the Finnafjord in NE Iceland, oil extraction in

the Dragon Area, and possibly the placing of a submarine electrical cable from East Iceland to Scotland. The group concluded that if this great activity would start in the East, the roads to the East had to be improved very much. The group also proposed a better connection of the East to SW-Iceland by building a highland road north of Vatnajökull. This road would shorten the distance to Reykjavik some 200 km.” P. 171

The Development of Settlement Patterns on the Globe P. 173

“This increased ambition in terms of creating something that is considered to be of some value in the international world of science, has the drawback that there is little or no incentive to write for Icelandic magazines.” P. 173

“...focusing on The Impact of Global Warming on Transportation... Gudmundur asked if I would like to join him in writing an article on this – which we did. A few of the papers given at the conference are published in the most respected transportation journal in the USA, and our article was accepted for this publication. The editor wrote to us: “Your article is utterly fascinating”.” P. 174

“The next theme in our writing, was to assess what areas on the globe would profit, or lose, from global warming, something that comes mostly from the retreating of the Arctic ice. ..” P. 174

“
Our third theme to write about were my earlier ideas on how the settlement patterns on the globe would change. A draft of this theme I had put forth twelve years earlier and later in somewhat more detail in the book How the World Will Change...” P. 174

“Then for our fourth article we chose to describe the drivers that are shaping the settlement patterns of the world... now applied to the study of the development of a small area, which in our case was Iceland...” P. 174

Threads of Work-Life Come Together

Our Settlements Studies Become an Important Theory P. 175

“...We soon realized that here was a good opportunity to dig down to the deepest roots of how settlement patterns come to be, and develop. We thus created a theory on this and the article we published in Future. The article on our theory takes its name from it: “A Theory of the Evolution of Settlement Structures Based on Identification and use of Patterns: Iceland as a Case Study”.” P. 177

“It is not every day that a new theory on the development of settlement patterns is published in the scientific journals of the world. It is a very good feeling that we succeeded in creating a comprehensive theory that brought all our other studies on the development of settlement patterns into one theory...” P. 177

A New Policy for the Faculty and the School P. 178

“The next opportunity that I was offered in terms of formulating a future policy, was as the last Dean of the old Engineering Faculty, Ebba Thora Hvannberg, gave me the task to plan six mini-conferences under the name Engineering in the World of the Future. This took place in the spring of 2008...” P. 178

“My next opportunity to work on events that were dealing with future visions of engineering – and thus future visions in general – was as I was made the chair of a committee of the three engineering departments that was to prepare for the Centennial of the University in 2011. The newly established School of Engineering and Natural Sciences, was assigned the month April for its 35 events.” P. 178

“Somewhat later I was fortunate also to have the opportunity – once again – to work on the policy making for my own Civil and Environmental Engineering Department. This time it was a direct continuation of my earlier work as the Head of our department ten years before, as we were taking the first steps in forming our master’s programme.” P. 179

“My next opportunity to work on events that were dealing with future visions of engineering – and thus future visions in general – was as I was made the chair of a committee of the three engineering departments that was to prepare for the Centennial of the University in 2011. The newly established School of Engineering and Natural Sciences, was assigned the month April for its 35 events.” P. 178

“
A few of us professors established a group to create a clearer structure for the MS programme and to prepare a promotional effort. We now defined the study tracks and the elective courses more closely, and put them into very organized tables. When this had been finished Sigurdur Magnus Gardarsson and I created promotion pamphlets for the MS programme, both in Icelandic and English...” P. 179

Environmental Planning has become a Key Discipline P. 180

“We Icelanders know well that overuse of nature’s resources can have terrible consequences. An example on this was the desertification of the highlands because of overgrazing in cold periods in the early centuries of the settlement of the country. Another example is the overuse and collapse of fishing stocks...” P. 180

“Environmental planning was the subject I studied at Berkeley in 1980-’87, and even though this subject was mostly directed towards adjusting settlements and constructions to nature on the scale of cities or regions, this knowledge has helped me to assess theories about what could happen on the global scale...” P. 180

“One of the methods in Europe to save energy, is to try to prescribe what types of planning of cities and towns use less energy. The most common measure in this effort is the attack on the private car, which, for instance was done by making streets narrower and by building more densely with fewer parking spaces, as was done in the Reykjavik 2014 Master Plan. This creates a pressure on car owners so that more of them will use buses and bicycles, or they will walk. It is one of the main goals of the new Master Plan to make such alternative transportation modes easier...” P. 181

“...the educated and more valuable part of the young generation, puts a heavy emphasis on being able to live in this type of urban environment. If this is not provided for in Reykjavik, very many of these important individuals are likely to move abroad. The main problem today (2016) is that

tourism is gobbling up space in the Town Centre, so it is becoming expensive for most Icelanders to live there.” P. 182

“

In 2009 I got my first MS student in the sustainable planning of cities, Katrin Halldorsdottir... her final project would be the sustainable planning of a mixed land-use settlement in the Ellidaar Bay and on the Artunshöfði Headland. In order to strengthen our work on this, I decided to dedicate my planning seminar in the fall of 2011, to this project. I was very lucky that I succeeded to get the City and Björn Axelsson (who later became the Planning Director of Reykjavik) to give this course with me – Katrin being an assistant instructor...” P. 183

“Following this the department organized a big conference on its effort in the spring of 2012 in order to introduce sustainability in planning and construction.” P. 183

The New Master Plan of Reykjavik 2014 P. 184

“Urban planning in small countries often takes guidance from the most current ideas abroad. Icelanders are eager to follow ideological trends and it takes a theoretical insight to understand what makes the situation in Iceland and Reykjavik different from abroad...” P. 184

“The first fundamental issue is associated with the wish to create an urban structure that will lead to lower emissions of greenhouse gases. The Master Plan employs two methods to achieve this goal: To reduce the use of cars and to aim for more urban density, because these two will reduce emissions. Closer inspection, however, reveals that neither goal will be effective. The reason why less use of car will not lead to lower emissions is because in the future dangerous emissions will be much reduced, because the number of electric vehicles will increase significantly.” P. 184

“Concerning the other principle: increased urban density, new research by Jukka Heinonen, a young professor of planning at the University of Iceland, reveals that densely built cities are responsible for more greenhouse gases than the less dense, when everything is considered...” P. 184

“The squeezing of the private car is therefore not only directed to the rich, but also low-income people, because e.g. the increase of parking fees is hardest on them, because they pay same amounts from lower income. And besides, it is precisely those low-income people, that many of whom live in the suburbs, and thus cannot do without a car. Politicians point to the bus as a solution and promise that now finally, a good plan has been achieved...” P. 184

“The false picture that has been presented in the new Regional Plan of the Capital Area, is especially shocking. Here a very unrealistic dream image is presented, which has – as a base – a high-speed rail system that is meant replace the car, to a large extent. First one has to notice that the area is too dispersed to be able to support the expensive high-speed rail system...” P. 185

The Planning and Location of the University P. 187

“In the beginning the University was designated to be only one building in the Haborg on the Skolavörduholt Hill. The small universities of the past were often located in such old urban centres. During the 20th century the faculties of technology were often moved out of the city...” P. 187

“... It was therefore allocated a large area outside of town, on the Melar, which was not such a bad location. After the war, however, Reykjavik grew very fast, and finally stretched up to Breidholt. Reykjavik is located on the peninsula called the Western-wing of today’s metropolitan area...” P. 187

“... relocation of large institutions to the east would have been good for the planning of Reykjavik because with this the number of working places west of the Kringlumyrarbraut would have been reduced. Today most of the working places are there, whereas most people live in the east- of the west wings, as well as in the other municipalities. This means that exceedingly wide traffic lanes are now needed to the west, in the west-wing.” P. 187

“Unfortunately, the basic structure of the campus was wrongly conceived. The Main Building, however – which was built first – was put in the right place, i.e. in the middle. Then unfortunately, the infamous “in-corners-placement” policy took over. This meant that important buildings were placed in the corners of the campus...” P. 187

“In the spring of 2014 a competition on a future plan for the campus was announced. An overall plan had never been made... The City was instrumental in the shaping of the criteria for the competition and gave half of the prize money. The jurors were seven. Only two of them came from the University – me and Anna Dora Saethorsdottir.” P. 188

“As the work of the jury progressed I realized that the University had made a great mistake by agreeing to be a minority in the jury, as it would determine the main lines of the future for the University. The worst thing is, that both the authors of the competition proposals and the other people in the jury, tried to follow the Reykjavik policy to put little related activities into the area...” P. 188

Country Planning and Highland Roads again P. 189

“Earlier in the book, I discussed my work on Country Planning in four chapters: “The First Steps towards an Iceland Plan” (see p. 73), “Work on an Iceland Plan” (p. 88), “Country Planning and the Planning of the Central Highlands” (p. 149) and “Tourism in an Iceland Plan – with Connection to Road Plans” (p. 153). Attempts to establish Country Planning in the planning law have failed...” P. 189

“To compensate for the disappointment that the Country Plan did not get into planning law, there was created a strange phenomenon called Country Planning Policy... The four sections of the policy have little internal connection...” P. 189

“most discussed, is the melting of the sea ice of

the Arctic Ocean. This will result in a great increase in shipping off Iceland's East Coast. A large transshipment harbour in Finnaþjórdur is being considered. Also it is possible that oil extraction will be started in the Dragon area, and a sub-sea electrical cable from the East Coast to Scotland is a possibility. All these scenarios should be highly influential factors as one considers which regions and communities will be strengthened in the future. Country Planning needs to consider factors like these. As many future possibilities are possible, planners need to sketch scenarios on possible development tracks into the future. The Country Planning Policy does not give consideration to this." P. 190

"The Country Planning Policy, has the vision that the centre of the country should be some kind of a national park, visited from the edges. The emphasis on natural protection and "wilderness" is so extensive that the plan contains many obstacles to energy production and road construction..." P. 190

"The highland roads would also play a great role in security as natural hazards happen. The road Northern Fjallabaksleid, has the biggest role, e.g. as Volcano Katla erupts. This eruption would disconnect the Ring Road for a long time. Many seem to think that the opposition to the highland roads is great, but a poll on radio Bylgjan on April 4 2015 asked: "Do you wish for a highland road to connect the North and the South?" Those who opposed this were only 28.6%, but 71.4% were in favour of a highland road." P. 190

Conclusion: Shaping the Future is an Important Matter P. 191

"Title of the book is Shaping the Future, and planners and designers are among those most active in the shaping of physical environments. For design to be successful, a close cooperation between designers and politicians on such tasks is required.

In the 20th century the cooperation of State Architect Gudjon Samuelsson and politician Jonas Jonsson was most successful..." P. 191

"In Iceland, on the other hand, modernism is still so strong that many people consider it right to build alien modernistic buildings in the City Centre. My view is, contrary to this, that this type of fill-in must end and I see it only to be luck that modernism has not already destroyed the City Centre..." P. 191

"... This book has made an effort to provide an insight into what has shaped the ideas behind the planning- and design conceptions in the past 50 years. I support my argument, among others, by how I experienced these ideologies myself, especially in my study years in Berlin and Berkeley." P. 192

"I was quite lucky to get to know personally three of the most important proponents of worldviews, design and planning in the late 20th century: Buckminster Fuller, Ian McHarg and Christopher Alexander. The story of their contribution, here in this book, is probably clearer because of the personal encounters. Their ideology also had a distinctive influence on how I worked myself on my projects." P. 192