

Towards a more human orientated, socially driven architecture
A research in the field of participation in architecture.

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SYNOPSIS

Problem statement

According to Bill Hillier and Julienne Hanson the architectural environment has been deformed into a ‘landscape of strongly representational forms surrounded by a controlled landscape of zones and categories.’¹ Within this context, the built and natural environment seemed to be detached from human and body experience while physical and social isolation started becoming very visible within the architectural environment of that time.² According to Hilde Heynen, ‘it is self-evident that architecture can be approached as a mimetic discipline’³ and if we actually look closer in the field of architecture, we can see that in the formation of the architectural environment, processes of ‘correspondence, similarity and difference’ are always prominent. Based on that, some may argue that within its evolvement, architecture mimicked the same problems of the architecture of the past and carried into the foundations of the architecture of today. Architectural creation gradually became unreasonable to human scale and seems to be incapable of serving and strengthen the social relationships within the city environment. Architecture cannot live anymore by mirroring inefficient *models* of the past and exploiting its own false tradition, and as Frampton states, ‘it is architecture itself that needs, for its very production, the material represented by social relations.’⁴

Thematic research question

How could an investigation within diverse notable cases of participatory architecture of the 20th century allow us to explore an alternative model of participation that might have the capacity to reconnect human to natural and build environment as well as regenerate the social relationships that seem to be fading within a contemporary environment?

Sub questions

- Why is participation necessary?
- Is participation able to allow us to control the environment we live in and consecutively to offer us the opportunity to live in the way we desire?
- How would participation influence the social and physical form the contemporary built environment?

- What is the level of participation and what is the role of the architect?
- Can we go towards a model of ‘absolute’ participation in which the users become the builders too?
- Whose participation in whose decisions and whose actions?
- What model of participation would be the most appropriate for the reconnection of human to natural and build environment and for the regeneration of social relationships?

Keywords

Participation, Decision-making, Social regeneration, Living environment, Flexibility, Adaptability, Collectivity, Community, Built and natural environment.

Abstract

The problematic approach to contemporary architecture has caused physical and social isolation as well as community decay. This paper will investigate the participation in the production of space as a solution to the above problems. In this context, space and its production will be considered as a shared enterprise revealing the possibilities for new ways of behaving within the built environment; an environment which will be ‘received, designed, built and often occupied together with others.’⁵ However, some may argue; ‘*whose participation, in whose decisions and whose actions?*’⁶ In response, three notable cases of participatory dwelling will be studied revealing numerous - diverse and common - architectural and social characteristics. These characteristics will be used as key aspects in order to introduce an alternative model of participation which would be formulated upon the strengths of these participatory cases, capable to reformate the contemporary living environment and ideally propose a shift towards a more human orientated socially driven architecture.

Research Methods

My overall research methodology is derived out of a combination between **literature (theory)** and **case studies**. In this methodology the theory shapes a strong philosophical foundation and the case studies emerge as an empirical investigation of the practice of the abovementioned theory.⁷ I would like to consider theory and case studies as two methods that complement each other, since ‘theory development as part of the research design phase

¹ Bill Hillier and Julienne Hanson, *The Social Logic of Space*. (Cambridge: Cambridge University Press, 1984), p.22.

² Ibid, p. 28.

³ Hilde Heynen, *Architecture and modernity*, (Cambridge: MIT Press, 1999), p.192.

⁴ Kenneth Frampton, *Studies in tectonic culture*, (Cambridge: MIT Press, 1995), p. 26.

⁵ Nishat Awan, Tatjana Schneider and Jeremy Till, ‘*Spatial Agency; Other ways of doing Architecture*’, (Oxon: Routledge, 2011), p.78.

⁶ John F.C. Turner, *Housing by People: Towards Autonomy in Building Environments*, (London: Marion Boyars, 1976), p.139. 9

⁷ Linda N. Groat and David Wang, *Architectural Research Methods*, (New Jersey: John Wiley & Sons, 2013), p.418.

is essential, whether the case study's purpose is to develop or to test theory.⁸ I see this combined strategy as a tool that would not only reveal various types and models of participatory architecture, but it will also investigate the possibility for the proposal of a new model of architecture based on the principles of participation.

CHAPTER 1_PREFACE

i. A problematic [approach to] contemporary architecture.

To begin with, I would like to refer to one of Konstantinos Doxiadis' quotes. In his book *Architecture in transition*, he states: 'Architecture simply follows the general trends of its age. It is now in the process of evolution, as it has always been, but an evolution more intense and more rapid than ever before.'⁹

Even though this quote is coming from a book half a century old, some may argue that the same quote could describe the current state of contemporary architecture. We cannot escape from the fact that within its evolution, contemporary architecture, has preserved some defects of the condition from which it emerged, the Modern Movement. Modern architecture emerged as a solution to the population growth, the economic development, the need for socialization, the industrialization as well as the modern means of transport of that era.¹⁰ Within this shift towards modernism, the traditional architectural design approach discarded, all the 'knowledge from previous generations was thrown out of the window'¹¹ and by 1960's no one knew the criteria for a good architecture.

Hilde Heynen, in her book *Architecture and Modernity* states that 'it is self-evident that architecture can be approached as a mimetic discipline'¹² and if we actually look closer in the field of architecture, we can see that in the formation of the architectural environment, processes of 'correspondence, similarity and difference' are always prominent; different programmes, characteristics of the physical context, varied typologies and historical background 'lend themselves to being treated mimetically and thus to being translated in the design.'¹³ Therefore, it could be argued that the same problems of modern architecture mimicked and carried into the foundations of architecture of today resulting a problematic contemporary architectural environment which according to Bill Hillier reminds of a deformed 'landscape of strongly representational forms surrounded by a controlled

landscape of zones and categories.'¹⁴ In this context, problems that in other circumstances might not be existed started to appear. Specifically, the built and natural environment seemed to be detached from human scale and body experience while physical and social isolation as well as community decay started to be very visible within the contemporary environment.¹⁵ Specifically, the emergence of industrialisation and incoming technologies have contributed to the evolution of architecture both in height and depth. As a result, the architectural creation has become unreasonable to human scale with no capacity to serve and strengthen the social relationships within the city environment; an architectural creation that has been turned into an assembly of isolated building elements. This radical change in architecture have caused an uneven distribution of open space and building. Human scale has become the

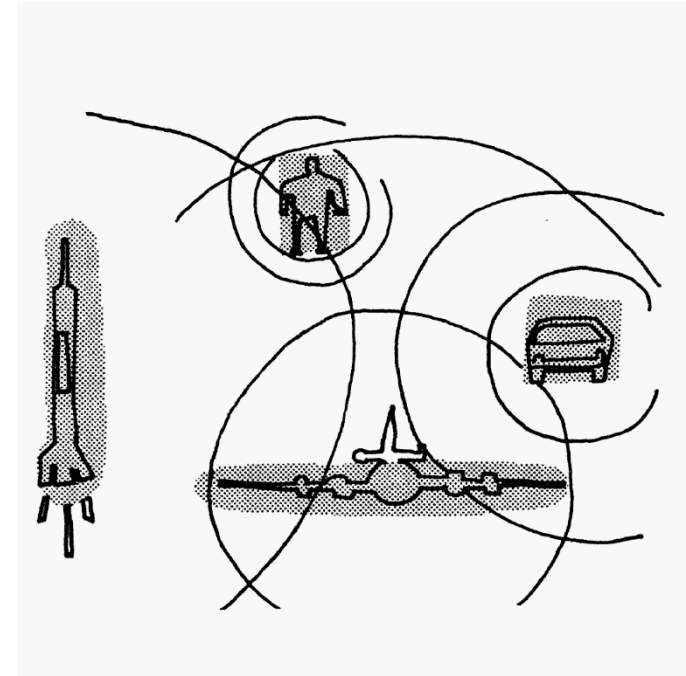


Fig.1. 'The human scale of our cities has now been replaced by many scales, of which the human is the weakest.'¹⁶

⁸ Robert K. Yin, *Case Study Research: Design and Methods*, 4th ed. (Thousand Oaks, CA:Sage, 2009), p.18.

⁹ Constantinos A. Doxiadis, *Architecture in Transition*, (New York: Oxford University Press, 1963), p.23.

¹⁰ Doxiadis, p. 52.

¹¹ *Jan Gehl Interview: How to Build a Good City*. Online documentary. Dir. Louisiana Channel 3 October 2017. <<https://vimeo.com/236551016>>, [Accessed November 2018]. Jan Gehl, interviewed by Marc-Christoph Wagner, March 2017.

¹² Hilde Heynen, *Architecture and modernity*, (Cambridge: MIT Press, 1999), p.192.

¹³ *Ibid*, p.193.

¹⁴ Bill Hillier and Julienne Hanson, *The Social Logic of Space*. (Cambridge: Cambridge University Press, 1984), p.22.

¹⁵ *Ibid*, p. 28.

¹⁶ Fig.1: Constantinos A. Doxiadis, *Architecture in Transition*, (New York: Oxford University Press, 1963), p.50.

weakest and man is losing his normal relationship to architecture within the city environment.¹⁷ At the same time, the population growth demands a higher level of socialization within the city environment, a fundamental quality in every aspect of our lives. The more the people, the more they will need to socialize. This lack of socialisation combined with the un-humane scale of architecture have caused a ‘big gap between social sciences and architecture’¹⁸; an architecture whose production is also constantly rising as an attempt to serve the modern living habits. According to Jan Gehl architecture is ‘an interplay between form and life and only if life and form interact in a good way then architecture is good.’¹⁹ So, how do we make life and form to interact in a such way?

*‘We must find an approach to the problem not of how our architecture is to look, but of how it is to serve us. We must indeed admit that we do not live as we would wish to live, so that the even more difficult question arises as to how we want to live and what our ideals really are. In asking ourselves this question we have to be careful to define all three of its elements: we, want, live.’*²⁰

Konstantinos Doxiadis

Architecture cannot live anymore by mirroring inefficient *models* of the past and exploiting its own false tradition. This paper’s aim is to investigate an alternative approach to architecture; a model of architecture whose production will be evolved upon the necessity for socialisation within the city environment; an architecture that will potentially influence the scale of our architectural creation aiming for a more human friendly, socially driven architecture.²¹ To achieve this, an alternative a framework which would be based upon the principles of the participatory architecture will be examined. In this framework the users themselves could decide upon the production of space; a process which will become a shared enterprise that involves ‘dialogue and always seeks the other’. Within this process people would be able to shape the environments *they want to live* in. As a result, the possibility for an architectural creation with the capacity to regenerate social relationships within a contemporary urban environment will be proposed and examined. People themselves will become responsible ‘for the conception and the creation of the proper human habitat’²² with ultimate goal the formation of a community.

¹⁷ Doxiadis, p.47 -52.

¹⁸ *Jan Gehl Interview: How to Build a Good City.*

¹⁹ *Jan Gehl Interview: How to Build a Good City.*

²⁰ Doxiadis, p.38.

²¹ *Ibid*, p.144.

²² *Ibid*, p.174

²³ Nishat Awan, Tatjana Schneider and Jeremy Till, ‘*Spatial Agency; Other ways of doing Architecture*’, (Oxon: Routledge, 2011), p.78.

²⁴ Anna Querrien, ‘How inhabitants can become collective developers’, in *Architecture and Participation*, ed. by Peter Blundell Jones, Doina Petrescu and Jeremy Till, (Oxon: Taylor Francis, 2009) pp. 105-117, (p.114).

²⁵ Doxiadis, *Architecture in Transition*, p.147.

ii. The necessity for participation

It is important to understand the necessity for socialization within the society of a contemporary environment. Participatory architecture reveals the possibilities for new ways of behaving within the built environment; an environment which in this contexts is ‘received, designed, built and often occupied together with others.’²³ However, as Anna Querrien states, it is important to understand that participation should not be considered as ‘just a form of ‘agora’ that gathers people together to make a common decision’ but as ‘a dialogue about differences, and about differences as production, even if this leads to confrontation [...] a search for collaboration that can change representation to produce new differences and new dialogues.’²⁴ Sharply, by participating in the production of space people are obliged to design or build for themselves, and within this process of collaboration or even difference and confrontation, the regeneration of social relationships will be imminent and inevitable.

This participation, as described by Doxiadis, offers the possibility to people not only to design but also to be able to build their architecture.²⁵ In this context, the barriers between builders and users are abolished, ‘building and using become two different parts of the same planning process’²⁶, resulting an architecture creation which will not only be contemporary but it will serve all needs of the society of each time; in other words, it would remain contemporary for as long as it needs.²⁷ Within this model of participatory architecture, space would be perceived as a shared property; a common resource open for any kind of interpretation. Tom Avermaete suggests that this perception of space as a common resource ‘could offer an initial starting point from which to develop such a new definition of the project.’²⁸ A ‘project’ in which people will be able to shape the spaces they occupy through their collective acts; a living proof that participation is not a formal issue anymore, participation is indeed actual involvement.²⁹ This would eventually result a radical change in the way that buildings are designed, especially living spaces. In this case, dwellings will become flexible and adaptable, with various functions and mixed uses; a more flux design that will allow a natural and progressive growth in order to serve peoples’ current living habits as well as needs for socialization.³⁰

²⁶ Giancarlo De Carlo, ‘Architecture’s public’, in *Architecture and Participation*, ed. by Peter Blundell Jones, Doina Petrescu and Jeremy Till, (Oxon: Taylor Francis, 2009) pp. 3-23, (p.13).

²⁷ *Ibid*, p.147.

²⁸ Tom Avermaete, ‘The architecture of the commons’ in *Architecture in the Netherlads Yearbook 2015/2016*, (Rotterdam: nai010, 2016), p.42

²⁹ *Professor Stavros Stavrides on Common spaces in crisis-ridden Athens*. Online Documentary. Dir. Isabel Gutiérrez. 28 September 2016. <<https://vimeo.com/184651620>> [Accessed April 2018].

³⁰ Doxiadis, p.115.

John Turner, in his book, *Housing by People* stretches the importance of housing from the perspective of not what 'housing is, but what it does to people's lives.'³¹ In other words, the level of satisfaction of the inhabitants is not defined by the imposition of dwelling standards, but from the qualities and experiences that it provides to its inhabitants. Subsequently, 'when dwellers control the major decisions and are free to make their own contribution to the design, construction or management of their housing, both the process and the environment produced stimulate individual and social well-being'³² and subsequently, a higher level of satisfaction emerges. However, within this board context of participation, we need to investigate to what extent we participate in the building environment and what is the role of the architect in this model of architecture.

Jeremy Till, in the book *Architecture and Participation*, describes full participation as an ideal process in which all the actors have 'equal power to determine the outcome of the decisions.'³³ At the same time, he emphasizes on the impossibility to achieve this level of participation in the field of architecture due to its own nature. Although participation in the production of space could be regarded as empowerment of the user and not the architect, it should be perceived as a process in which the architect is still present, but not with a role of an 'individual author of buildings' but as the cultivator of the abovementioned common spaces.³⁴ In this context Architect's agency would be considered as necessary for the practice of participation and he/she would be operating as a distributor of participation within the built environment. This is the kind of level of participation this paper is aiming to explore; an alternative model of participation in which the architect and the user co-exist; a process in which both are informed and influenced by each other's acts and decisions.

Through the analysis of various cases of participatory architecture, the extend of participation will be examined. This would lead to an understanding of the various actors within this process of participation and reveal various architectural qualities and characteristics. These qualities would become essential for the formation of an alternative model of participation appropriate for the estimation of a new approach to contemporary living environments; environment that would be able to reconnect human both to natural and build environment as well as to re-establish human relations. Before we move to these case studies, we need explore the notion of participation through the eyes of the pioneers; study their theories and understand their intentions.

³¹ John F.C. Turner, *Housing by People: Towards Autonomy in Building Environments*, (London: Marion Boyars, 1976), p.5-6.

³² Turner, *Housing by People: Towards Autonomy in Building Environments*, p.6.

³³ Jeremy Till, 'The negotiation of hope', in *Architecture and Participation*, ed. by Peter Blundell Jones, Doina Petrescu and Jeremy Till, (Oxon: Taylor Francis, 2009) pp. 23-43. (p.27).

³⁴ Avermaete, 'The architecture of the commons', p.43.

³⁵ Le Corbusier and Pierre Jeanneret., *Le Corbusier Et Pierre Jeanneret : Oeuvre Complète De 1910-1929*, Vol.1, (Zürich: Editions d'Architecture, 1967), p. 21-26.

iii. The [utopian] pioneer participation in architecture.

Le Corbusier's *Maison Dom-ino* in 1914 is perhaps the first case where the theory of participation is translated into architecture. This building system was conceived as a solution to the housing scarcity in Flanders after the devastating World War I. Le Corbusier designed a system of independent reinforced concrete frame structures that carried only pre-manufactured elements such as floors and one staircase. With this framework being load-bearing, walls and partitions of any kind of material – even waste materials or ruins of war - could be added later by the war victims themselves. Dom-ino eliminated any technical anxiety and as Le Corbusier describes, 'there was no need for any specialist; everyone could go up his own house.'³⁵ This housing scheme was designed as a platform open to any infill and thus to any spatial interpretation. The combination of many frameworks together would reveal a diverse polymorphic 'Dom-ino of structures.' During the years, the regularity and adaptability of Dom-ino model has proved to be highly efficient for the formation of an affordable, practical and flexible housing scheme. It has become a fundamental apparatus for building typologies that have been produced under rapid economic and social pressure such as the famous Brazilian favelas or even the Greek *polykatoikia* – an archetypical multistorey apartment building for the Athenian bourgeoisie in 1930s.³⁶

Along these lines, Yona Friedman in 1958, a Hungarian-French architect published his manifesto '*Architecture mobile*' in which he developed the *Villa Spatielle*. This project was consisted of 'temporary, lightweight structures raised above the ground which could span across existing cities, countryside, bodies of water, creating a continuous landscape that could be appropriated and inhabited by the user.'³⁷ Friedman was the first who identifies the importance of the process of producing architecture. He emphasizes on the participation within the design and building processes rather than on the architecture as a final product. As an advocate of participatory processes, he mentions that 'people should build with their hands, [...] that's real self-planning. It is not good architecture, but it is the right process.'³⁸ His work was very much related to the freedom of the individual and the unpredictability of architecture as well as the empowerment of the non-specialist and the user³⁹ and this could be reflected upon the *Villa Spatielle* itself, which according to Friedman is perceived as an 'empty "space," with no overall enclosure, no definite floors, no ceilings; a space-frame structure[...] an antigravity device simply for hanging volumes freely imagined by the

³⁶ Aureli P.V., Giudici M.S., Issaia P., *From Dom-Ino to Polykaotikia* in Domus, <https://www.domusweb.it/en/architecture/2012/10/31/from-dom-ino-to-em-polykatoikia-em-.html>, [accessed 16 December 2018].

³⁷ The useful art organisation, *Spatial Agency*, <http://www.spatialagency.net/database/groupe.detudes.darchitecture>, [accessed 15th December 2018].

³⁸ Yona Friedman, interviewed by Vladimir Belogolovsky, 27 January 2016.

³⁹ *Spatial Agency*, <http://www.spatialagency.net/database/groupe.detudes.darchitecture>, [accessed 15th December 2018].

user.⁴⁰ In this context, nothing is planned or static, everything is unpredictable and only the individual is capable to decide upon the guided by trial and error production of space.⁴¹

Following that, Cedric Price designs the *Fun Palace* in 1964 in East London. It is the first project that connects the idea of participation with technology; a combination which under correct use could result a highly participatory, responsive and open to appropriation architecture.⁴² Fun palace became ‘a building that would challenge the very definition of architecture, as it was not even a conventional ‘building’⁴³ but rather an interactive framework that would encourage audience participation, allow to public to appropriate and have unlimited control over their environment. This building ‘could be responsive to visitors’ needs and the many activities intended to take place there’⁴⁴; a building that could be considered as a manifestation of democratized architecture that enables human activity rather than determines it. Apart from flexibility, Price also expressed the needs for buildings to have certain age limits as well as the importance of taking into consideration at an early design stage the building’s future demolition.⁴⁵ Along to his interest in the notion of uncertainty, Price also relates time with the design process and as he mentions; ‘inbuilt flexibility or its alternative, planned obsolescence, can be satisfactorily achieved only if the time factor is included as an absolute design factor in the total design process.’⁴⁶ His architecture revealed a time-based design approach that would allow a series of interventions that were both adaptable and impermanent with ultimate goal the people to occur control over the production of space and allow collectives processes to emerge.⁴⁷

This brief overview within these pioneer models of participatory architecture offered and insight within the theoretical background that the movement of participation was based upon and revealed the possibility for further exploration on participation. These cases could be considered as the starting point from which many contemporary participatory projects would evolve. They revealed many architectural qualities such as efficiency and flexibility, self-planning and uncertainty, time and technology; important qualities that would also be visible within the contemporary participatory cases that will be examined in the next chapter. The criteria for the choice of the following case studies have been mainly their different levels and types of participation within themselves as well as the variety of their architectural

qualities that might have the capacity to serve the human needs physically and socially within a contemporary environment.

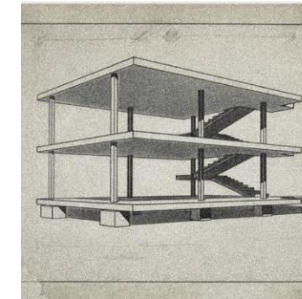


Fig.2. Maison Dom-ino.⁴⁸

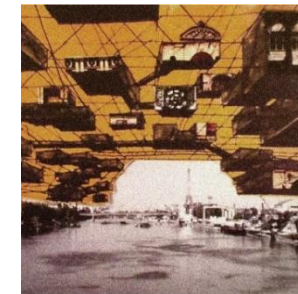


Fig.3. Villa Spatielle.⁴⁹

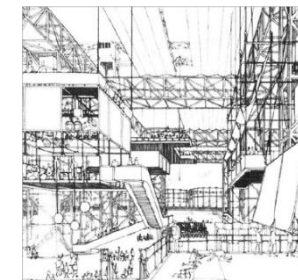


Fig.4. Fun Palace.⁵⁰

⁴⁰ Yona Friedman, interviewed by Vladimir Belogolovsky, 27 January 2016.

⁴¹ Ibid.

⁴² Stanley Mathews, ‘The Fun Palace: Cedric Price’s experiment in architecture and technology’, *Technoetic Arts: A Journal of Speculative Research*, 3, 2(2005), pp. 73-91. (p.75).

⁴³ Ibid, p.75.

⁴⁴ Ibid, p.75.

⁴⁵ Peter Blundell Jones, ‘Sixty-eight and after’, in *Architecture and Participation*, ed. by Peter Blundell Jones, Doina Petrescu and Jeremy Till, (Oxon: Taylor Francis, 2009) pp. 161-173, (p.130).

⁴⁶ Cedric Price, *The square book*, (Chichester: Wiley-academy,2003), p.56.

⁴⁷ *Spatial Agency*, <http://www.spatialagency.net/database/groupe.detudes.darchitecture>, [accessed 15th December 2018].

⁴⁸ Figure 2, Edited by author, https://en.wikipedia.org/wiki/Dom-Ino_House, [accessed 24 November 2018].

⁴⁹ Figure 3, Edited by author, <https://www.archdaily.com/781065/interview-with-yona-friedman-imagine-having-improvised-volumes-floating-in-space-like-balloons>, [accessed 24 November 2018].

⁵⁰ Figure 4, Edited by author, <https://de.phaidon.com/resource/fun-palace-cedric-price.jpg>, [accessed 24 November 2018].

CHAPTER 2_ CASE STUDIES

i. A participatory utopia

Following the footsteps of the above-mentioned pioneers, Belgian architect Lucien Kroll is one of the first that transforms this concept of user participation into practice with the design of MeMe, the Maison Medical student accommodation at the university of Louvain (1970-6).⁵¹ The university had already built a new hospital whose design was based on the typical architectural characteristics of the time, those of repetition and technology, and were planning to follow a similar approach to the design of the student accommodation right next to it.⁵²

After those plans were revealed, Kroll was approached by students who were seeking an alternative proposal to the monotonous design proposed by the university.⁵³ Kroll proposed an experimental self-generating architecture. He divided the large programme among his practice's staff and authorized the active involvement of the future users within the decision making on the production of space.⁵⁴ Students were involved at every stage of the design process and by being able to take some key decisions, the articulation of spaces was determined based on their needs and preferences. Specifically, decisions around the physical linking of functions both in the building and the neighbours, the creative way of using internal partitions as well as decisions around the common facilities and the terrace gardens;⁵⁵ decisions that really enriched the design development which in any other case would be taken entirely by the architect.

MeMe's design was based on a modular grid; a grid that with its rigid character that for many would be perceived as a mean to regulate an assembly of mass-produced components within the building. However, the same grid eventually became a proof that a systematic approach could offer maximum diversity instead of strict repetition.⁵⁶ As Kroll mentions, *'if you need to use industry and industrialised components, you can at least use different components and mix them so that it makes a difference.'*⁵⁷

The framework offered the gradual extension of various functions both vertically and horizontally creating a building system that was operating in a more humane way.⁵⁸ Within



Fig.5. Lucien Kroll's Maison Medicale, Meme⁵⁹

⁵¹ Awan, Schneider and Till, p.182.

⁵² Jones, p.134.

⁵³ Awan, Schneider and Till, p.182.

⁵⁴ Jones, p.134

⁵⁵ Peter Blundell Jones and Eamonn Canniffe, *Modern Architecture Through Case Studies 1945-1990*, (Oxford: Architectural Press, 2007), p.134.

⁵⁶ Jones, p.135.

⁵⁷ Lucien Kroll, 'Animal town planning and homeopathic architecture', in *Architecture and Participation*, ed. by Peter Blundell Jones, Doina Petrescu and Jeremy Till, (Oxon: Taylor Francis, 2009) pp. 183-187, (p.186).

⁵⁸ Jones, p.135

⁵⁹ Figure 5, Edited by author, <https://www.domusweb.it/en/architecture/2010/06/30/lucien-kroll-utopia-interrupted.html>, [accessed 18 December November 2018].

this unpredictable process, British architect and architectural historian Peter Blundell Jones states, ‘rather than imposing order, MeMe prevented the domination of any single ordering system, allowing the complexity of multiple decision-making to erupt by itself.’⁶⁰ For Kroll, architecture was a political and social act and he approached the design of MeMe as a ‘voyage of discovery whose end remained unpredictable.’⁶¹ MeMe evolved in a more organic and original way, similar to the way that old towns and villages had evolved. Both of them, as products of complexity and interaction, were shaped upon a series of human gestures and each of their parts were built according to peoples’ needs.⁶² Meme became a self-generated environment and just like in a traditional village, people themselves could observe how space accommodates life, evaluate it through experience and adjust it based on their needs. In that context, MeMe did not only reveal almost forgotten building rituals, those of engaging users to take decisions prior the building process, but it also cultivated a sense of ‘belonging’ where acts of care and collectivity started becoming visible.⁶³ It proposed the reconnection of inhabitants to the built environment which could also be translated as an attempt to ‘escape the alienation and expropriation brought about by modern technology and bureaucracy.’⁶⁴

‘When everything is designed, it too easily becomes a sort of concentration camp for the clients of the architect. The imposition is too much: we should instead try to organise a climate where a kind of friendly organisation is able to emerge spontaneously! I think the definition of a good architecture is one where people are friendly because of the architecture.’⁶⁵

Lucien Kroll

Meme was a materialisation of Kroll’s critique on the practice of architecture of the time. He designed a building from the perspective of how things might become; a building that challenged the perception of buildings as solidary objects. He evaluated the process of generating architecture as a crucial stage within the build environment and proposed a building that has the capacity to evolve both in form and function. Meme became an icon of antihierarchical architecture and ‘suddenly gave participation a dramatic new image.’⁶⁶

For Kroll, this building was ‘good architecture’. For some, MeMe is an exemplary version of participatory architecture. It allowed students to involve in the production of space creating a strong sense of community and collectivity. Most importantly, it directly related the participation processes with the actual evolvement of the built environment revealing an architecture creation closer to human and body experience; a relationship that could become

⁶⁰ Jones and Caniffe, p.134.

⁶¹ Jones, p.135.

⁶² Jones and Canniffe, p.130-131.

⁶³ Ibid, p.138.

⁶⁴ Ibid, p.138.

key for the [re]formation of the contemporary environment. However, at this point some may wonder, could we go beyond this level of participation? Can we go towards a model of ‘absolute’ participation in which the users become the builders too? How would this model influence the social and physical form the contemporary built environment?

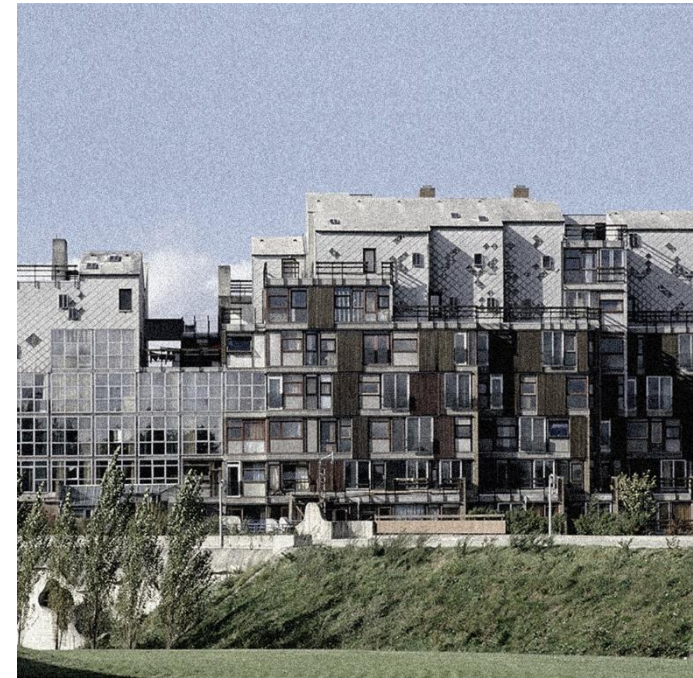


Fig.6. A self-generative diversity.⁶⁷

⁶⁵ Kroll, p.183

⁶⁶ Jones and Canniffe, p.127.

⁶⁷ Figure 6, Edited by author, <https://www.architectural-review.com/essays/viewpoints/few-architects-have-embraced-the-idea-of-user-participation-a-new-movement-is-needed/10008549.article>, [accessed 18 December 2018].

ii. An absolute participation

To answer the above questions, we will have to explore a system that would allow a model of absolute participation. Walter Segal was an architect who is known for formulating a self-build housing system which was later called the '*Segal Method*'. This system was based on a timber frame construction and it was initially designed as an experimental cheap housing solution for his family. Very soon, Segal managed to transform this system into a building method that could be followed by anyone who would like to involve within self-build processes. The innovative modular grid that the system was developed upon offered flexibility and user interpretation, both in use and design/construction process. Prior to the building process, Segal proposed an open tartar grid in which the users were now able to decide the spatial arrangement based on their preferences. After the final decisions, each self-builder was provided with a set of basic architectural drawings (plans, sections) that were describing the assembly sequence.⁶⁸ The general concept of Segal Method was that of Meccano, 'in which mass-produced materials are assembled in their market sizes.'⁶⁹ Segal perceived the existing market of mass-produced materials as a source of dimensionally coordinated elements and his job was only to think of assembly methods within the pre-proposed grid. As Segal describes, this 'method is not an invented system but a design of assemblies.'⁷⁰

'Segal reinvented building construction from first principles and reduced it to its simplest elements.'⁷¹ The result was a lightweight timber frame construction whose overall assembly was based entirely on dry construction methods, with simple screws and bolts. On this basic grid layout, the structure was assembled in parts and put together in a sequence; the wooden frame was assembled at first, followed by roof and floor, then walls and services while the interior was the final addition. This flexible and demountable, open to alterations system proposed that the built environment should adapt to the needs of its occupants; it used technology as a way to allow people to design and build for themselves simply and economically without any specialist skills.⁷² It became a building method highly related to body experiences and human scale due to the physical act of the self-build process as well as in the actual occupation of the building after its completion.⁷³ As Jeremy Till describes, it was an empowerment of 'the user-builder to take control of their environment and can be seen as a critique of the homogenous mass housing of the time that lacked any



Fig.7. Segal method made self-build accessible to everyone. ⁷⁴

⁶⁸ Awan, Schneider and Till, p.196.

⁶⁹ John McKean, *Learning from Segal*, (Basel: Birkhäuser,1989), p.132

⁷⁰ *Ibid*, p.132.

⁷¹ Alice Grahame and Taran Wikhu, *Walters Way and Segal Close : The Architect Walter Segal and London's Self-Build Community*, (Zurich: Park books, 2017), p.42.

⁷² *Ibid*, p.42.

⁷³ McKean, p.138.

⁷⁴ Figure 7, Edited by author, <http://www.uncubemagazine.com/blog/16519151>, [accessed 18 December November 2018].

capacity for participation or personalisation.’⁷⁵ Now, whole families and people from various backgrounds could act collectively and build their own houses; processes that could allow a strong sense of community to emerge.⁷⁶

As in every construction method, Segal Method has its own advantages and disadvantages. On the one hand, its greatest advantage is the level of flexibility it offers both in construction and use. With its assembly sequence and dry construction methods, any individual regardless of strength, sex and age is able to practice Segal’s self-build. Overall, it is an economic and efficient way to build that also have a positive impact on the social lives of the people that first build and then accommodate the buildings.⁷⁷ On the other hand, due to its typology, construction elements are very visible, especially in the interior, fact that disrupts any internal wall decoration. Poor internal sound insulation and some assembly defects occur due to the lightweight and self-built construction assembled by unskilled people.⁷⁸

Overall, some may argue that this method’s advantages could be described as more substantial than its disadvantages. For many, ‘Segal’s method has become an exemplary early model both in terms of construction and participation in housing design’⁷⁹ and it is not by chance that these methods are still very prominent. Segal Method became a point of reference in participatory and self-build architecture and among other projects that were built on Segal method the thirteen dwellings in Borough of Lewisham in London (1970s) is probably the most popular. However, a manifestation of Segal Method and the absolute celebration of self-build is the Bauhausle student accommodation in Stuttgart (1981-83).

Bauhausle started as an experimental project from Peter Sulzer and Peter Hübner, two professors of the university of Stuttgart. For many years, the design brief for the first-year architecture students was to design their rooms. After Sulzer and Hubner managed to obtain an experimental ground within the campus of the university, they set up the project brief based on their query whether the students were able to build what they draw.⁸⁰ The result was an experimental self-build project that became ‘both a form of participation as well as a pedagogical technique.’⁸¹

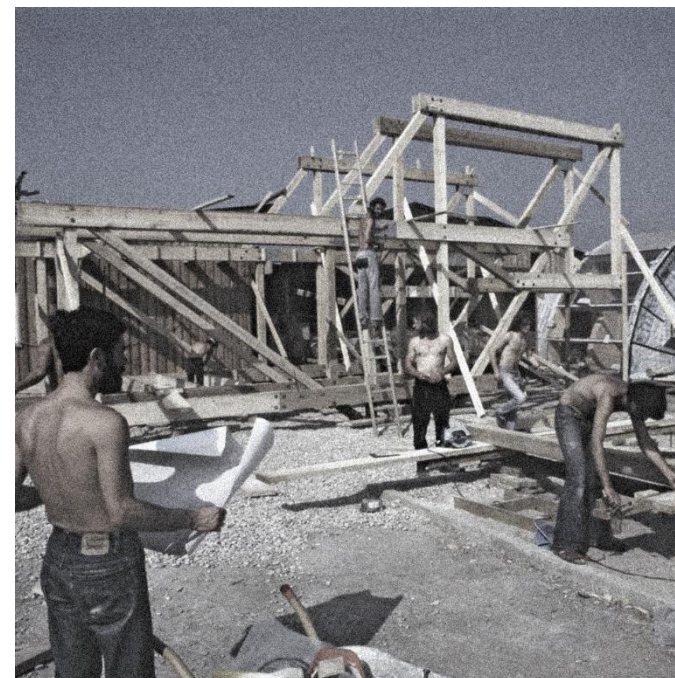


Fig.8. The collective building process of Bauhausle⁸²

⁷⁵ Awan, Schneider and Till, p.196.

⁷⁶ Ibid, p.196.

⁷⁷ McKean, p.148.

⁷⁸ Ibid, p.148

⁷⁹ Awan, Schneider and Till, p.196.

⁸⁰ Peter Sulzer, ‘Notes on Participation’, in *Architecture and Participation*, ed. by Peter Blundell Jones, Doina Petrescu and Jeremy Till, (Oxon: Taylor Francis, 2009) pp. 149-161, (p.150).

⁸¹ Awan, Schneider and Till, p.183.

⁸² Figure 8, Edited by author, <http://www.irge.uni-stuttgart.de/einszueins/projekt/bauhaeusle/?lang=en>, [accessed 18 December November 2018].

Initially the brief was to design a student hostel, 'in which the students would become designers, then builders and finally inhabitants.'⁸³ The construction of those structures was based on the principles of Segal method.⁸⁴ Sulzer himself formulated a masterplan for the overall spatial arrangement which was consisted of thirty rooms – student rooms and common spaces –organized in a modular grid. In this spatial 'grid arrangement' proposed by Segal Method, each student would get a 'grid square' that would become his own room.⁸⁵ 'Rooms were grouped in threes and fours to make "houses" in-between which were open gaps, so that they could built independently.'⁸⁶ As a result, all the spaces were interlinked creating a network of interrelations and interdependencies. Within this shared – living, interdependent environment, students were capable to decide upon their own rooms as well as the common facilities both in construction and use resulting a high level of responsibility distribution along the users. As Peter Sulzer mentions 'now each student can do as he wants to get what he needs inside, but he has to negotiate with the others.'⁸⁷ For Till, this absolute level of participation of students in the design and the construction of their own environment revealed 'the advantages of involving users in the design of their buildings, as well as learning hands-on the design, technical and constructional aspects involved.'⁸⁸ Similarly, Jones, sees Bauhäusle as a process that enabled student to 'test and enact their ideas at unprecedented scale, and to see how materials and details performed.'⁸⁹ The result was a building that was generated from collective acts; a building consisted of smaller spatial clusters with different material characteristics. However, Bauhäusle was not just an experiment in material and self-build processes but as was proved by the building itself, it was a framework that immediately formulated a community atmosphere and allowed social and physical interaction.

Initially, Bauhäusle as an experiment, had a permission to stay only for 15 years. However, its positive impact on the well-being and social life of the students, drove students to ask from visitors to sign a petition in order to extend this permission period.⁹⁰ Sulzer visited again the building many years after its completion, and even though none of the students that participated in the construction of the building was living there anymore, the spirit of community, participation and self-built was still prominent. If something was coming loose or if there was a leak on the roof, the inhabitants would fix it. It was the participation and the self-built process that give users a sense of ownership⁹¹ and resulted the Bauhäusle to persist this communal atmosphere for so long after the original users/builders left.⁹²



Fig.9. The Bauhäusle⁹³

⁸³ Jones, p.137.

⁸⁴ Ibid, p.137.

⁸⁵ Sulzer, p.153.

⁸⁶ Ibid, p.151-152.

⁸⁷ Ibid, p.153.

⁸⁸ Awan, Schneider and Till, p.109.

⁸⁹ Jones, p.138.

⁹⁰ Sulzer, p.155.

⁹¹ Awan, Schneider and Till, p.109.

⁹² Ibid, p.109.

⁹³ Figure 9, Edited by author, <http://www.irge-uni-stuttgart.de/einszueins/projekt/bauhaeusle/?lang=en>, [accessed 18 December November 2018].

At this point, it might be rather valuable to understand the contribution and the role of the architect within this participatory project. It was Hubner and Sulzer who proposed the masterplan for the project and became totally responsible of the site and the project⁹⁴; it was them that initiated the project by arousing the question of what students need in order to fulfil the project.⁹⁵ Even in this case of an absolute participation and self-build we see that architecture cannot be done only by the users. It was the architect that initiated a structure; a framework of ordering that allowed an essential discussion with the users for the formation of spaces.⁹⁶

Some may see this absolute, self-build participation as an ideal, almost utopian model of participatory architecture. For that reason, the establishment of a framework that balances the user's and expert's contribution could be considered as necessary; a framework in which participation can evolve within. This model of participation will be investigated within the next chapter; a model in which an ordering structure is developed by the architect in order to be infilled in a second phase by the user. However, it is essential this structure to remain open to the participation process.⁹⁷

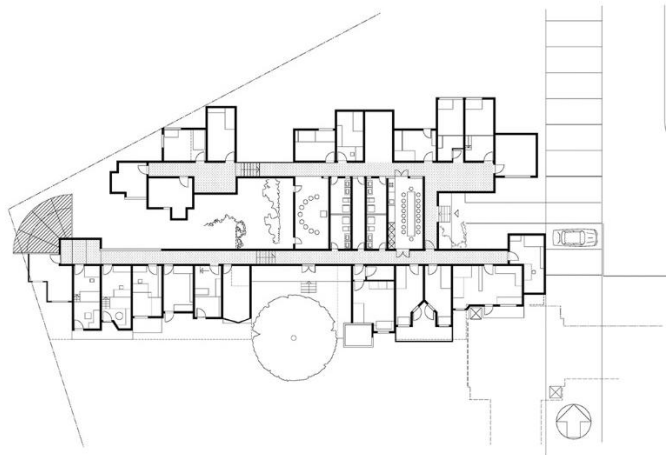


Fig.10. The spatial arrangement of living and common spaces.⁹⁸



Fig.11. An image of an interior space for common use.⁹⁹

⁹⁴ Sulzer, p.152.

⁹⁵ Ibid, p.152.

⁹⁶ Ibid, p.156.

⁹⁷ Ibid, p.160.

⁹⁸ Figure 10, Edited by author, <http://www.irge-uni-stuttgart.de/einszueins/projekt/bauhaeusle/?lang=en>, [accessed 18 December November 2018].

⁹⁹ Figure 11, Edited by author, <http://www.bauhaeusle.de/live.html>, [accessed 18 December November 2018].

iii. A framework for participation to unfold within

John Habraken, Dutch architect and theorist was the first who identified Open Building strategy in the 1960s. In his book *Supports: An Alternative to Mass Housing*, he proposes ‘that the external form of a building should be decoupled from its interiors, which should be ‘possessed’ and altered by its users at will.’¹⁰⁰ Within this strategy, as it is described by Till, ‘the professional’s role shifts from being one sole author to that of empowering others in enabling physical relations.’¹⁰¹ Habraken’s strategy could be briefly described as an organised distinction of different components within a building, each of which would be tackled separately.¹⁰² The building is separated into two different levels in order to distribute technical, aesthetic, economical as well as social aspects into different levels of decision-making.¹⁰³

It proposed a ‘clear distinction between the “shared” parts and the “individual” parts’¹⁰⁴ of the building. Specifically, the Support Level (load bearing infrastructure) is designed and ‘built’ by architects and engineers. It is the most enduring part of the building, includes all the parts of the building that are common to all occupants and cannot be altered by the tenants.¹⁰⁵ The Infill Level is designed under a more individual approach and consists a transformable part of the building as it can be ‘determined or altered for each individual household or tenant without affecting the common Support Level. It involves all components specific to dwelling unit such as partitions, kitchen and bathroom facilities as well as heating and service facilities.¹⁰⁶ In other words, a standard framework is provided in which user’s participation will evolve; a framework which according to Till ‘allows to users to have meaningful participation in the design of their homes, can accommodate self-building and is a highly flexible building model that can be adapted as required.’¹⁰⁷

Stephen Kendall, in her *Residential Open Building*, is praising the ability of those buildings to disentangle specific parts of buildings and their sub-assemblies, in order to ‘minimise interference and conflict between subsystems and the parties controlling them.’¹⁰⁸ As a result, each part of the building could easily be replaced both during design and construction process.

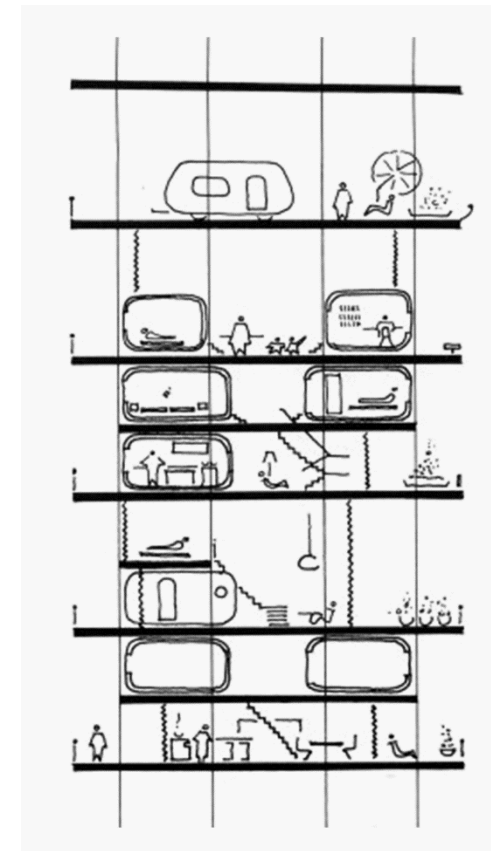


Fig.12 Habraken’s Supports’ theory
[Habraken’s archive].¹⁰⁹

¹⁰⁰ Stephan Kendall, ‘Four decades of open building implementation’, in *Loose-Fit Architecture Designing Buildings for Change*, ed. by Alex Lifschutz, (Oxford: John Wiley & Sons, 2017), pp 54-64, (p.61).

¹⁰¹ Awan, Schneider and Till, p.60.

¹⁰² Ibid, p.153.

¹⁰³ Stephen Kendall and Jonathan Teicher, *Residential Open Building*, (London: E&FN Spon, 2000), p.11.

¹⁰⁴ Stephen Kendall, ‘An Open Building Strategy for Achieving Dwelling Unit Autonomy in Multi-unit Housing’, *Housing and Society*, 31 (2004), pp.89-99, (p.90).

¹⁰⁵ Kendall and Teicher, p.12.

¹⁰⁶ Ibid, p.12.

¹⁰⁷ Awan, Schneider and Till, p.153.

¹⁰⁸ Kendall and Teicher, p.12.

¹⁰⁹ Figure 12, Edited by author, <http://www.vitruvius.com.br/revistas/read/entrevista/13.052/4542?page=4>, [accessed 18 December November 2018].

As we can see, Open Building have numerous possibilities to offer within the built environment in general, but how would the application of the same strategy influence the actual dwelling environment. To elaborate on this, I would start with another of Kendall's quotes:

'Living is an act that takes place in both spheres.

A home connects the two spheres:

A home is the environment of a family and is part of a communal environment:

A home has an interior and an exterior:

Terminus of a series of communal services:

*Start of a personal enterprise.'*¹¹⁰

Habraken's strategy was not a re-approach to a housing type, on the contrary, it proposed an alternative way of approaching design within dwelling environment. A design that combines local culture and architectural character in a harmonious way, as well as allowing acts of responsibility and decision making between the community.¹¹¹ Open buildings' demountable supporting structures and flexible plans enabled to the users to be responsible of the formation of the environment they live, but also allowed the possibilities for the formation of a sense of community among the inhabitants. It is a revolutionary strategy to approach the design of a building that offers a high level of flexibility within both the design and construction of the building. It made clear that users and inhabitants are capable of and should be making decisions in the design process which is now consisted of multiple actors, both professionals and participants. It offered the possibility for the building to be perceived as a framework that has the capacity to change overtime and to adapt within the constantly changing urban environment; the building becomes 'an ongoing, never ending, design process in which environment transforms part by part.'¹¹²

Among other projects that have adopted Open Building strategy such as the pioneer Molenvliet project in Papendrecht or the contemporary Superlofts in Amsterdam, perhaps the brightest example of the open building projects is the Next21 building in Osaka by Utida Architects (1994), an experimental 18-unit housing project that intended to propose a more comfortable life within the urban environment. Following the principles of Open Building strategy, Next21's design was consisted of two phases in which a single architect designed the shell (Support Base) and 13 other architects designed the apartments (Infill).



Fig.13. A view of Next21.¹¹³

¹¹⁰ Kendall and Teicher, p.13.

¹¹¹ Ibid, p.14.

¹¹² Kendall, 'Open Building Strategy for Achieving Dwelling Unit Autonomy in Multi-unit Housing', p.91.

¹¹³ Figure 13, Edited by author, <https://www.pinterest.co.uk/pin/67976275611025048/>, [accessed 18 December November 2018].

In this two-phase system the infrastructure is consisted of an in-situ concrete frame structure and is designed to be permanent, while the infill elements which will be shaped under inhabitant's needs and added in a second time, will have a shorter life span and consecutively will be easily replaceable. This is an assembly of interdependent building components, easy to assemble and disassemble, remove and repair, that would result a lifespan of 100 years.¹¹⁴ This separation enabled to architect to be flexible in the position of the wall elements and the spatial organisation of each unit offering an environment adaptable to various uses and living arrangements. Within this two-phase process the design of the dwelling units took place along the Support's construction. This separation also offered the freedom in the individual design of the interior while retaining a unified building image on the outside.¹¹⁵

Open building's flexible characteristics allowed an interactive approach in its own design process. Specifically, during the early stages of the project, interviews of prospective inhabitants were conducted in order their potential needs and desires to be identified. Among the responses, people asked for '*a home that accommodates individual lifestyles, a home that allows for social gatherings and interaction communal living, and a house that grows.*'¹¹⁶ The response to these desires was the design of a building '*that responds to changes in the lifestyles of occupants within individual units, that is flexible in adapting innovation in building technology, that provides spaces in contact with nature.*'¹¹⁷ At the end, Yoshichika Uchida, the main architect of the project, approached the design of Next21 as a 'home in which a person can live a more independent way of life.'¹¹⁸ Initially, 2 types of dwellings were proposed; the first was designed by the architects based on the assumption of a specific kind of lifestyle while the second was designed in collaboration with the future users. Although in the first case the dwellings were designed in the most flexible and adaptive way to serve various individuals, its inhabitants started becoming more and more dissatisfied with their homes because their lifestyles did not fit with them anymore. On the contrary, in the case in which the house was designed along with the users, they had accepted both negative and positive aspects of the dwelling resulting a more successful tenancy. For instance, one a flat was designed under the tenants' desires to carry a broad verandah so they can grow their bonsai trees; a proof that the high level of flexibility contained in Next21 was capable to fulfil individualised lifestyles and desires¹¹⁹ and as Jong-Jin Kim, associate architecture professor in University of Michigan states, this diversity in the dwellings units became an 'epitome of its ability to adapt to various lifestyles, family composition and occupancy patterns expected to occur during the course of its occupancy after construction.'¹²⁰



Fig.14. A view of a flexible interior on an infill unit.¹²¹

¹¹⁴ Kazunobu Minami, 'Japanese Innovation in Adaptable Homes', in *Loose-Fit Architecture Designing Buildings for Change*, ed. by Alex Lifschutz, (Oxford: John Wiley & Sons, 2017), pp 38-46, (p.42).

¹¹⁵ Jong-Jin Kim, Ryan Brouwer and Jennifer Kearney, *NEXT21: A prototype multi-family housing complex*, College of Architecture and Urban Planning University of Michigan, p.17.

¹¹⁶ *Ibid*, p.4.

¹¹⁷ *Ibid*, p.4.

¹¹⁸ *NEXT21- an experiment*. dir. by Beate Lendt (2009). [Online documentary].

¹¹⁹ *Ibid*

¹²⁰ Kim, Brouwer and Kearney, p.17

¹²¹ Figure 14, Edited by author, <https://www.pinterest.co.uk/pin/67976275600890216/>, [accessed 18 December November 2018].

It is equally important to mention the positive impacts of the Next21 in the everyday ‘common life’ of the inhabitants. Many spaces within the building were designed as spaces of common use; spaces that would embrace people to gather and co-use such as shared gardens and a conference room. Another element that played a significant role in the common life within the building was the establishment of an external three-dimensional network of common circulation routes connecting all levels; from common spaces on the street level up to the roof garden. This combined with the proposed vegetation on the outside of the building would create ‘a green inner-city oasis for human occupants as well as for wild birds and insects’;¹²² a three-dimensional space closer to nature that would offer high levels of satisfaction and well-being to the occupants who would be able to feel in a such.¹²³

To conclude, Next21 became a multi-family housing prototype based on new sustainable and innovative building systems and demonstrated ‘a new collective housing’ that has the capacity to facilitate the preferences and meet the desires of individual occupants. The distinction between its infill and support levels as individual building entities allowed people’s participation in the design process, adaptability to future technological changes as well as flexibility in the internal layout and external appearance based on any individuals’ preferences. Finally, the modularity offered by the open building strategy, revealed a harmonious hierarchy of units as an integrated system celebrating the idea of a mixed-use shared living environment.¹²⁴

So, is this the model of participation we seek? An open structure provided by the architect which will be infilled later? Next21 proved that this level of participation has the capacity to improve the well-being and social life of people, as well as to reconnect them with the natural and built environment. However, the overall analysis of all three case studies along with the architectural methods that were established upon, revealed the possibilities for an alternative model of participatory architecture; a model which would be assembled upon the strengths of those cases studies in order to achieve the initial requests of this research; a living environment that would alter the contemporary approach to architecture and propose a shift towards the formation of a more human and socially driven living environment and architectural creation.



Fig.15. An external three-dimensional network of circulation routes integrated within the building,¹²⁵

¹²² Ibid, p.5.

¹²³ Ibid, p.5.

¹²⁴ Kim, Brouwer and Kearney, p.5.

¹²⁵ Figure 15, Edited by author, <https://www.pinterest.co.uk/pin/67976275602838600/>, [accessed 18 December November 2018].

CHAPTER 3_ CONCLUSION
A ‘Compromised’ participation

To propose this new model of participation, the cases studies had to be examined through a set of architectural and social aspects. This process will allow us to identify their strengths and weaknesses. These aspects would be a collection of qualities gathered from the preceding analysis of the case studies; aspects that would also operate as the criteria for the formation of the most suitable model of participatory architecture. To start this evaluation process, we first have to identify the most prominent strengths and weaknesses of each project. [fig.16]

Briefly, MeMe became a symbol of participatory architecture. It proposed the notion of **self-generating** architecture and revealed the grid as a tool for **diversity**; as a tool that will allow to the building to evolve both in form and function. MeMe revealed forgotten building rituals and cultivated a sense of **community** and **collectivity**. At the same time, its unpredictable design concept might cause uncertain outcomes. Along those lines, Bauhäusle introduced the absolute level of participation in the built environment; the **self-build**. This model of architecture offered high levels of **flexibility** both in **use and construction**. It revealed high levels of **social interaction** while it established a strong sense of **community**. It is important not to forget that in this case the presence of the professional is necessary while some of the self-built defects cannot be avoided. Finally, Next21’s typology limited people only to participate in the design process of their own units. However, the same typology (Open Building) offered high levels of **flexibility** both in use and design process, **adaptability** to individualised lifestyles as well as possibilities for the establishment of a **natural** epicentre within the contemporary city environment.

This model of participatory architecture we seek has to be established upon the strengths of the above projects while it will minimize or ideally eliminate their flaws. Therefore, to be able to propose this alternative model of participatory architecture we need investigate all three cases studies through the same aspects; aspects that have been chosen under their capacity to facilitate a new living environment that will reconnect human to natural and built environment while it will re-establish social relations within the urban environment. [fig.17]

Let’s have a closer look. **The participation level** within Bauhäusle seems to be superior than the other two cases, simply because it is a self-built/self-designed project in which people are entirely responsible on the production of space. When it comes to aspects of **use flexibility** and **adaptability**, Next21 is winning; its Open Building strategy enables it to

Meme	Bauhäusle	Next21
+ Self-generation	+ Self- built	+ Adaptability
+ Grid for diversity	+ Flexibility	+ Flexibility
+ Community	+ Community	+ Community
+ Collectivity	+ Socialisation	+ Nature Presence
+ Socialisation	+ Low Tech	+ Innovation
- Unpredictable design	- Architect’s presence necessary	- High tech
- Uncertain outcomes	- Self-built defects	- Individual level of participation

Fig.16. A brief presentation of the identified strengths and weaknesses of the above cases of participatory architecture.¹²⁶

¹²⁶ Figure 16 made by author.

accommodate various uses as well as to adapt to any [future] scenarios. I feel that the levels of **design flexibility** are relatively even distributed within all three cases, as people are taking crucial decisions around the production of space no matter the level of participation. Similarly, MeMe and Bauhäusle are preferable in the levels of **construction flexibility**. MeMe's self-generating, constantly evolving character and Bauhäusle's self-built processes offer a natural organically evolved architecture as well as easy assemble, disassemble and [re]arrangement of space. Next21 is also able to assemble and re-arranged but these processes seem to be more depended upon external forces – architects, machinery – compared to the other two cases in which the same processes seem to be more related to human scale and body experience. From the perspective of **socialisation** and the formation of **community essence**, all three cases show similar levels, however Bauhäusle is evaluated slightly higher simply because within its self-build, collective character people need to discuss, decide and design together the spaces they occupy and consecutively to socially interact to an even larger extend. Finally, in the presence of **nature**, Next21 is higher than the other two cases only because, the notion of nature itself was considered as key quality during its design process. [fig.17]

In this context, according to the above analysis, the self-generating, self-built and self-organising practices that were established within MeMe and Bauhäusle consist them as the most appropriate models of participatory architecture in order to achieve a connection of the human to the built environment. Similarly, the integration and constant evolvement of nature within the building envelope, like in the case of Next21, indicates its capability to directly connect inhabitants to nature. Finally, within self-built environments in which all the actors have 'equal power to determine the outcome of the decisions',¹²⁷ the generation of social relationships is imminent and inevitable. In a product of democratized architecture like in Bauhäusle people need to physically and socially interact in order to build the spaces they occupy collectively. [fig.18] Therefore, now that we know the strengths of each of the case studies and after we identified what each of these case studies could offer in the re-approach of the living environment in the contemporary architecture, we could propose this new model of participatory architecture.

A model that would combine the self-generative character of MeMe and is constructed upon the self-built practices of Bauhäusle; a model which combines the rigidity of its exterior with the fluidity of its interior similarly to Next21. A model in which, the building product will not rest on the architect only,¹²⁸ but the architect will operate as a distributor of power within

Key aspects	Meme	Baushaule	NEXT21
Level of Participation	+++++	+++++	+++++
Flexibility [use]	+++++	+++ ++	+++++
Flexibility [design]	+++++	+++++	+++++
Flexibility [construction]	+++++	+++++	+++++
Adaptability	+++++	+++++	+++++
Socialisation / Community Essence	+++++	+++++	+++++
Nature Presence	+++++	+++ ++	+++++

Fig.17 The most prominent architectural and social aspects of the case studies; aspects towards a shared, human orientated living environment. ¹²⁹

Level of Capability	Meme	Baushaule	NEXT21
Connection to the built environment	+++++	+++++	+++++
Connection to the natural environment	+++++	+++ ++	+++++
Social Regeneration	+++++	+++++	+++++

Fig.18 The level of capability of each of the case studies to serve the needs for connection of human to built and natural environment as well as to regenerate social relations. ¹³⁰

¹²⁷ Jeremy Till, 'The negotiation of hope', in *Architecture and Participation*, ed. by Peter Blundell Jones, Doina Petrescu and Jeremy Till, (Oxon: Taylor Francis, 2009) pp. 23-43, (p.27).

¹²⁸ Till, 'The negotiation of Hope', p.27.

¹²⁹ Figure 17 made by author.

¹³⁰ Figure 18 made by author.

the built environment and participation itself become a tool that keeps a balance between power and knowledge. For this balance the existence of an ‘ordering structure’ is necessary; a frame in which all the participatory acts will unfold within. As Sulzer describes, ‘when this frame is erected, and the roof is added, there should be time for a second process of participation in which the users start properly to understand the building’¹³¹ I would like to refer to this model as ‘**compromised participation**’. This combination of a rigid framework with participation acts will introduce ‘a hybrid typology of self-build construction and multi-storey housing.’¹³²

To be more specific, a concrete frame will provide the structural, rigid skeleton while each floor ‘can be individually filled out spatially and over time, employing self-build methods’¹³³ inspired by Segal Method. The inhabitant will be able to have access on materials and tools are needed to develop their infill into dwelling. Just like in Next21, internal partition elements will be independent of the load bearing structure allowing multiple floor plans. A basic layout will be offered in the first stages of the design, offering neutral spaces that can be accommodated in various ways; alternatively, inhabitants will be able to develop their own personal spatial arrangements. Within this self-build context, the building process will be supported by professional supervision; the users [self-builders] will be trained and guided if needed by professionals while the finished work will be inspected by experts.¹³⁴ Therefore, the spatial evolution of the structure becomes a self-generating process that will formulate a diverse character along the building.

In conclusion, maybe this compromised participation is the model we seek; a model that contains the high levels of use flexibility, adaptability of Next21; the high level of participation, construction flexibility and level of socialisation of Bauhausle as well as the high levels of design flexibility, self-generating and organic evolution that could be found within MeMe. In other words, a model of participatory architecture that would allow a socially driven, organically evolving production of space based on self-build techniques, while the rigidity of its building frame will minimize the possibility of undesirable outcomes revealing a unified image. In this context, functionality as well as diversity and flexibility will be revealed. This model will bring the individuality of ‘self-build and the orderliness of planned urbanism come together, while ensuring future adaptability.’¹³⁵ Buildings like these can be ‘altered, extended and relocated;[...] provide spatial integrity, while still allowing adaptation and modification’¹³⁶; buildings that have the capacity to allow a strong sense of

community to emerge within the urban fabric. In this environment, the inhabitants will be absolute responsible upon the production of *their* space achieving high levels of satisfaction responding to the previously mentioned ‘*we,want,live*’ question.¹³⁷ We can finally see that in such a model of compromised participation people are directly involved in every process that is necessary for the creation of the built environment; processes that can only take place under social interaction, collective decision-making and acts of self-organisation. The building itself becomes a framework whose establishment is based on human relationships and socialisation; a framework that would reconnect human to natural and built environment and as Winston Churchill said; ‘*We shape our buildings, thereafter they shape us*’¹³⁸



Fig.19. An ordering structure that will enable participation; a compromised participation in which the essence of community will evolve.¹³⁹

¹³¹ Sulzer, ‘Notes on participation’, p.160.

¹³² Anne-Julchen Bernhardt and Jorg Leeser, ‘NEUBAU Flexible Self-build cities in Germany’, in *Loose-Fit Architecture Designing Buildings for Change*, ed. by Alex Lifschutz, (Oxford: John Wiley & Sons, 2017), pp. 30-38, (p.34).

¹³³ Ibid, p.34.

¹³⁴ Ibid, p.34.

¹³⁵ Ibid, p.32.

¹³⁶ Ibid, p.36.

¹³⁷ Doxiadis, p.38.

¹³⁸ Ibid, p.25

¹³⁹ Figure 19, Collage created by author.

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