Emergency Architecture

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Architectural Humanities III

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CONTENTE

ABSTRACT

In a chaotic world, witch country is structured enough to deal with a thousands of refugees?

The thing about large-scales, earthquake, floods, storms, hurricanes is that, institutions, policies and ways of thinking, which already exist in most countries, are almost never able to be effective. Because the scale is too big, the disasters are too sudden and the needs are too urgent.

Dealing with the problems that emerge, one of them is the idea of inhabitations that involves a need for intervention on the part of an architects or part of an institution's. Part of architect in this matter is important in a way to apply the resolution on the problems related in the transition to the permanence, through the transitory of a shelter that will promote the safety and the development of the community and country.

Emergency Architecture is constant field of study and not yet been explored and developed enough to reach the highest levels. Nowadays is constantly changing the needs, the problems and the structure of a country or a community. Emergency Architecture resumes in a way through analysing the economy, culture, differences in points of views and opinions about the impact of a disaster. Therefore, could be the answer of today and tomorrows needs.

Through research during this project were several points and paths about how to deal with large-scale of a disaster. Concepts that were approach in the area of a disasters, how to do it, what it needs, what could be done, what could be useful in this kind of situation. That includes debates and discussions about,

institutions, organizations, designs and architects that shows each one point of view and there place in a disaster.

And the most important point is how recycling materials can be huge impact in this matter. How they can change how you see the situation and how benefits to the catastrophe in better way.

ONE

INTRODUCTION

There are more than 50% of people in the world today than a few decades ago, which lead to increasing risks and vulnerability conditions. There is an exponential growth of the population in the past years, which lead to climacteric changes all over the world. These changes lead to and increase in poverty and catastrophes, increasing the world population vulnerabilities.

The humanitarian response to the scale of catastrophe has improved, however, it is still necessary to develop and expand the roles of reconstruction, shelters and housing.[1]

The reconstruction of the city, town or place and relocation of the people through these shelters requires time and organisations. A higher need for intervention to build temporary shelters are required to provide a provisional help on any emergency.

According to Ian Davis:

"Disasters are relationship between some type of risk, with a dangerous condition that increases the vulnerability of the system – such as the urban occupation model, where the poor occupy the worst land and the most dense and dangerous parts of cities."[2]

1.1. JUSTIFICATION

The motivation that led to the interest and development of this theme, Emergency Architecture, was due to be a theme that covers the past, the present and the future. Emergency Architecture today is a reality that needs to be developed and explored in certain points, such as the role of the architect in the face

[1] Dissertation Architecture, Arquitectura de Emergência Projectar para zonas de catástrofe, Rita Frade 2012, p. 14 / Dissertation Architectura, Arquitectura de Emergência, Maria Neto 2009, p. 4

[2] Ian Davis, Arquitectura de Emergencia, Barcelona, 1980

of a catastrophe, to understand the needs of the people and the event, and explore means such as recycled materials as a solution to various problems that we could encounter.

Disasters are like a relation between the urban part and the “non-urban” part, which has its risks that can lead to an imbalance between them and became vulnerable, as, to create chaos and making the conditions more and more dangerous. We can relate and mention that countries with more resources have the ability to control some of the natural phenomena, through construction, among other solutions.

In counterpoint, in developing countries the population often acts individually, which leads to more consequences, such as poor location and constructive defects that leave the population more unravel to catastrophes.

The architect’s role is important to build these emergency shelters, because there is a need of the presence of an “urban” recovery and also architects have a huge impact helping to prevent disasters thinking in a way about the future disasters. Also, to deliver better conditions, comfort, privacy, organization and security in these kinds of situations. Now we can value the importance of this study and the development of Emergency Architecture. This make, us reflect on its various phases, in view of their relevance and their conditioning facts: time (rapid and pragmatic response) and the existing resources.

Emergency Architecture needs to be interpreted in two concepts; order and chaos. Several, factors contribute and transmit this disorder, such as an emergency, scarcity, poverty, hunger and etc. We can relate these words to third world countries, but on the other hand there is need to organize so that society can enjoy

the fundamentals of architecture and urbanism.

Additionally, architecture can be related to technology and environment. This allows us to contextualize these themes to Emergency of Architecture towards the sustainable architecture, covering the socioeconomic and environmental aspects. An idea of an architectural challenge for a self-sustainable development and to establish an improvement in consumption, reduction of an environmental and ecological impact of human settlements in the planet.

We can say that we have the world in our hands, today we can't be certain of that. The world is changing fast and with it the increase of global warming, natural disasters and pollution. This made me develop this project in the scope of creating opportunities, interactions and to try to create a "home" where there is only people and a disaster.

Architecture allows to open the horizons and to create moments without barriers. It is important to focus and develop the idea of this project, which will incorporate the use of recyclable materials and develop the knowledge in the area of self-sustainability.

TWO

NATURAL DISASTERS

A natural disaster is defined as an event of nature, it's a catastrophe that occurs when there is an environmental disturbance, such as, hurricane, flooding, landslides or other natural phenomena that causes overwhelms local resources and threatens the function and safety of the people.

In this situations we can see the ultimate test of a community, the capacity of response in case of emergency, therefore the importance of emergency shelter that will allow the community get a quick adjustment and adapt to unforeseen situations and for their complications.

Disasters occur suddenly and are difficult to plan or predict, because they are innately different from some perspectives of emergency. Large-scale disasters can be a multitude of effects upon a community.

A natural phenomenon can affect 3 geographic situations with notion that each approach a different consequences, such as, economic to social, from physical to psychological. Each disaster must be evaluated individually in order to be able to recognise the features of situation at hand. It is a vital to appreciate a well-organized emergency strategy in order to provide a quick adjustment and adapt to the situations and complications. [3]

The right thing:

" We learn that doing good and doing the right thing does not always align, and that the world of rebuilding is fraught with vested interests and duplicitous work" [4]

[3] Natural Disasters on Health, Gerard March 2002, p. 1

[4] Architecture for Humanity, Design Like you Give a Damn (2), Building change from the ground up

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" We learn that doing good and doing the right thing does not always align, and that the world of rebuilding is fraught with vested interests and duplicitous work" [6]

[5] Natural Disasters on Health, Gerard March 2002, p. 1

[6] Architecture for Humanity, Design Like you Give a Damn (2), Building change from the ground up

Figure 1 - Earthquake Mexico, 2017

Figure 2 – Hurricane Cuba, 2017

architecture does not always doing the right thing show us the better solution for that most needed. Sometimes we have to put the various situations in order to give the best solution to the problem itself if not doing the right thing. Creating a better connection between architects and the process with the population could be the solution what it's need at the moment of impact. Eventually that reconstruction always involves the area of finance interest of a large print and even government of the world powers (countries like USA, Russia, Germany, etc.)

Figure 3 – Earthquake Mexico, 2017

2.2.
BASIC PRINCIPLES IN NATURAL DISASTERS

The importance in the first hours of a natural disaster is the immediate response of the people to the encounter. The following steps are in creating accommodation facilitation, assisting in the recruitment of necessary materials; especially the materials of medical assistance and that will be the first aid after a disaster.

This distribution is provided by several international organizations adapted for this type of actions, which allows them to intervene adequately with what, when and where. There are others means or other organizations that gives access to others needs such as shelter, survival, security, communication, as well as basic needs.[7]

Once you have done the main processes of action there is a beginning of importance in the shelter. The shelter is defined as an individual protection against any element or provides a sense of security and stability to the people. We have to take into account the best shelter type, in order to give the opportunity of the people the power to rebuild their own lives more viable. In this reconstruction they have to think of several risks in order to prevent more risk that may arise along this path.[8]

The impact of people's recollection, thinking what is the best option and where they can be put on the ground in order to give more quality and more correct way to re-enter society again. In this dissertation, we have to consider the importance of the space the ease of the

[7] Dissertation Architecture, Arquitectura de Emergência, Maria Neto, 2009, p. 33 – Translation by the author;

[8] Architecture for Humanitarian Emergencies, Jorge Lobos, 2011, p. 6;

access of transportation, basic needs, etc.

It will lead to a better organization on the ground, such as thinking of the best placement of the medicine camp, food and how to organize the shelter around this main sources in order to establish the best possible connection.[9]

[9] Dissertation Architecture, Arquitectura Emergência, Maria Neto, 2009, p.33 – Translation by the author;

THREE

POST-DISASTER

The nature of a catastrophe is that you can make sure that things are never the same afterwards.

"Trauma does not come from the outside. Trauma is not to be understood as the consequence of invasion. And yet incursions from the outside and invasions are traumatic.
Trauma involves a more complex sense of place." Philosopher Andrew

We are in a world that have a consistent scattering of a natural disasters and conflicts. Catastrophe, in fact consists in failure of the future, the absence of continuity.
Post-Traumatic, comes as a evidence of aftermath, that remains from institutions, individuals and ideologies. Because might give way to a transformation that brings progress and renovation to long side the inevitability of a trauma. [10]

"To avert an ecological catastrophe is for us to put ourselves into the position where it has already happened and ask: What we would have done to have avoided?" Theorist Jean Pierre[11]

One of the most important causes of a trauma in this situations are the perspective to a post-disasters, is relocation. That part is one piece of the puzzle that becomes a problem of vulnerability to external shock.

This matter raises a lot of questions about the relationship between architecture, about the

[10] Technology, post-disasters housing reconstruction and livehood security;
[11] Technology, post-disasters housing reconstruction and livehood security;

dominant cultural thrust in leading architectural way. Question, that over that architect's can learns from studying trauma, urban conditions and their most fragile, raw and unstable state. We start thinking what might bring to potentially contribute to those situations after a conflict or a natural disaster. [12]

Question: Can architects only ever have the best interest of the greater population in mind with a clear understanding that human tragedy is not inevitably architectural opportunity?"[13]

The object thing or structural to an architect, should not be seen like isolation, but as a part of complex assemblage, shifting sets of relations with people, spaces and other things, humans, non-humans, that are holding the gather social and political relations. [14]

"Us secretary of state Hillary Clinton acknowledges: We cannot be making decisions for people and their futures without giving them the opportunity to be as involved and make as many decisions as possible."[15]

[12] Technology, post-disasters housing reconstruction and livehood security;

[13] Post- Traumatic Urbanism, Architectural design, guest-edited by Adrian Lahound, Charles Rice and Anthony Burke and Article, ACHR – Tsunami updates 2005,2006;

[14] Article, ACHR –Tsunami updates 2005,2006;

[15] Article, ACHR –Tsunami updates 2005,2006; Adrian Lahound, Charles Rice and Anthony Burke;

Figure 4 - Sierra Leone's MudsidE Disaster

Starting to under if we can live in a chaotic world. A world, where you have nothing, nothing to grab, to tell it is yours or a place to call it home. Can we live this way? In that chaos that you feel like that you are nothing. In every story, there is always hope that will bring things to an end. In this story there is hope, hope to make something when nothing is there, to raise, to help, to build and to make us stay together. In a catastrophe, strange people stay together to build something new to call it home again.

No matter who you are, no matter where you have been, the only thing that matters is that you are strong enough to get up again and start over again. That is us, us like united society, us humans, that learn to live no matter what because we believe in hope, association to figure 4, 5 and 6.

Figure 5 – Tropical Strom Harvey

FOUR

ARCHITECT'S ROLE

"As architects we given an incredible opportunity to work in partnership with clients to transform a family, a community, and sometimes a city" By Architecture for Humanity[16]

What is the role of Architects in this kind of emergencies? There are some questions that we need and try to understand and respond what the importance the role of Architects in a situation of emergency. If we can get to give seconds changes to start over or if we give the solution for all the problems. So many ifs', when we have a lot information given to us that don't believe that an architect isn't necessary to build a short-term emergency shelter because they think the role of an architect should be rebuilding a durable and permanent buildings[17].

Architects have a crucial role, with a lot of knowledge, skills and abilities to solve a lot of issues in case of emergency, like, sustainability, variety of options and providing more safety about the challenge that are faced over the world.[18]

Reinforcing the idea that an Architect have a lot to offer, they have unique capacity to play a big role in a disaster, besides elaborating a shelter, they have the ability to provide control assessment, preparation for a correct respond for a recovery planning.[19]

We can show an example of a team of the most important roles in emergency with recycling materials, is the projects of, Shigeru Ban and Toyo Ito.[20]

16 Design Like You Give a Damn, Building Change from The Grounf up, Architecture for Humanity

17 Responsible Reconstruction: The Architect's Role, Madeleine Kelly , Gleda Calwell, 2004, p.19

18 Temporary Shelters: Desinging Emergency medical care centers for disasters relief is an emerging Design Challange for Architects, Akbar, Wadiah, 2016, p.36

19 Architecture Humanitarian Emergencies, Jorge Lobos

20 Arquitectura de emergência, Dirigido por Michel Quinejure, Shigeru Ban – Arquia/documental 19

We can agree that architecture don't need to be permanent, or a building so only proves that our role have the ability to explore every area, building, temporary design, emergency shelter, etc. Showing that we understand the need of each situation or the product to push forward. We show the ability of choosing the best materials, especially recycled materials that we can adapt for more structural ability and be more compact, easy to assemble in the same time to have the opportunity to adapt to a different use when doesn't need for emergency[21].

[21] Temporary shelters: Desiging Emergency medical care centres for disasters relief is an emerging Design Challange for Architects, Akbar, Wadiah, 2016, p.36

Figure 6 – Architect Toyo Ito

Figure 7 – Architect Shigeru Ban

FIVE

GO YOUR OWN WAY AFTER A DISASTER

"Providing adequate shelter is one of the most intractable problems international humanitarian response. Tents are too costly and do not last long enough. Plastic sheeting can be good but most often is low quality and falls apart immediately. Rebuilding houses takes years, even when land issues are not major obstacles." By Ian Davis[22]

We learn how complicated it is to deal with a disaster and the organizations involved on it. However, building a shelter brings a lot of comments, how it is expensive and occupies lot of time, energy and has a low priority associated with other resources. In a way they prioritise others angles and apply more resources to most important they think matters most.

There is not right to prioritise the resources needed in a disaster, because shelters could make a huge impact in how people look at the disasters, they would have at least a place to call it "home", when everything was taken from them.

A shelter needs to be more than a response to the disaster, is in a way to show that we are able to reach every aspect of necessary of the impact itself, that allows people to start finding they on way in the disaster, one detail can change the way you see your future.[23]

This topic is of most relevance because we area dealing with people's lives, sometimes we have to reassess how it will change and help the people in different ways, like giving an opportunity to the people to create a community, solving their own problems and giving them the power to change their own future, also allows them to

[22] Article, Enviromental Hazards, What have we learn from 40 years' experience of Disaster shelter?, Ian Davis, 2011, p.1

[23] Article, Enviromental Hazards, What have we learn from 40 years' experencience of Disaster Shelter?, Ian Davis, 2011, p. 198

understand what they really need in that kind of situation.

A disaster it is a challenge and new chapter in any community that suffers that impact. Shows how different aspects like, personal, community and understanding the capacity to build a hopeful future. Disasters brings people together despite what they lost, they will put their heads up and shows the humanity is real.

[24]

5.1 THE PEOPLE

Sometimes the help from outside couldn't or come to late in a way of saying that sometimes not always is the best solution or start resolving the problem itself. Asia's Tsunami is one of the examples; victims showed that against all the greed, corruption and ugliness that comes with that, sometimes are the problem. They didn't wait, they get together like a community and support each other to find a way to resolve the big issues around them, getting some opportunities of their own to rebuild the houses and manage to make a secure and healthy place to all.

The victims of the tsunami showed that even people who are battered traumatized can be extremely effective in a post-disaster, helping in rehabilitation, that will develop to a process to their lives and there future.

They proved that decisions about their own rehabilitation have to come with their involvement, knowing that they have to deal with governments and the organizations.

This is a especial matter, because make us start thinking and understanding when we study emergency architecture, everything involves a lot organizations, governments, money, all that and make us

[24] Article, Enviromental Hazards, What have we learn from 40 years' experencience of Disaster Shelter?, Ian Davis, 2011, p. 200 and 202

realize that sometimes in some cases that is not the most efficiency solution for a quick response.

One of the problems that they had to deal it was the rules that the governments applies, like coast regulations zone rules, that they knew that going to be used in a way to evict people, in order to make room to be explored in others ways.

We can realize that post-disaster relief and subsequent reconstruction brings together numerous national and international organizations, all of represent particular interests and priorities with different agendas. Often that can be chaotic and pressurised context, the voice of those who most need to be heard can be easily being drowned out. [25]

[25] Article, ACHR, Tsunami updates , 2006, Article, Housing by people, 2005 and Article, The Nation, Tsunami one year on, 2005

SIX

SUSTAINABLE AND RECYCLED MATERIALS FOR EMERGENCY

Primarily, the importance of a pre-disaster shelter, the planning and organization actions on re-use the recycled materials that give us option on a level that can be changed on a cultural, social-economical and environmental.[26]

In this area allows us too talk about sustainable buildings in a way that both themes complement each other. Sustainable building is to minimize the consumption of the recourses for all phases of the natural environment. Make us start thinking that we have choices, options because we area dealing with limited natural resources in this moment. Show us that exploring recycled materials give us the power to say is a good environment benefit for all, because can be remade and re-used that's why its call recycled, can be totally manufactured. [27]

A emergency shelter could be beneficial in terms to make it more environmental friendly, proving that emergency shelter should be made of materials that can be recycled, upgraded and re-used instead of those that are simply disposed of after use, because that ones cause more pollution, consume more energy, resources and is a negative impact on environment. [28]

There are three goals that have characteristic in common that reacts in a architect way in the aftermath of a catastrophe, like, Integration in the local building culture and customs, low cost due to use of recycled materials and a quick building of the shelter. [29]

[26] Reuse and Recycle potentials of the temporary houses after occupancy: Example of Duzce, Turkey, Hakan Arlan and NIlay Cosgun, 2006, p. 709

[27] Re-Design, re-use and Recycled of Temporary houses, Hakan Arlan, 2005, p.401 to 403

[28] An Overview of the Design of Disaster Relief Shelters, Abdulrahman Bashawri, Stephen Garrity and Krisen Moodle, p.928

[29] Reacting and Recycling, p. 86

SEVEN

CASE STUDIES

7.RECYCLED

7.1. Shigeru Ban – Paper Log House

The numerous projects of Architect Shigeru Ban demonstrate this idea and aim the cardboard as a potential material to be used. The reason that led him to use the card as a building object was his interest in using "weak" materials, which led him to explore that card to be an easy use and inexpensive material[30].

Solutions respond quickly to extreme circumstances, where we have to get a creative and innocent look to discover the feasible possibilities for the situation and taking into account the materials that lead to implying limitations in cost, energy and waste consumptions[31].

He used the cardboard tubes because they are recyclable. They can be disassembled and reallocated. They are homes for self-construction of economic means: the base is reinforced of beer boxes stuffed with and cardboard tubes constitute the walls. Each element elaborates its functions simultaneously: the cardboard tubes support structure of the housing that provides thermal insulation. The textile cover fits a trellis that is also a cardboard and can be removed in the summer to allow ventilation of the space.[32]

[30] Arquitectura de emergência, Dirigido por Michel Quinejure, Shigeru Ban – Arquia/documental 19

[31] https://inhabitat.com/shigeru-bans-ingenious-cardboard-and-bamboo-emergency-shelters-pop-up-in-sydney/

[32] www.architectural-reviw.com/rethink/profiles-and-interviews/the-case-to-build-in-paper-shigeru-ban-wins-2014-pritzker-prize/8662130.article

7.1.2. Toyo Ito – "Home-for-all"

"The relationships between architecture and nature, as well as among people is after all the only reason d'etre of architecture"
Toyo Ito[33]

Toyo Ito use logs to build the "Home-for-all" In Rikuzentakata, the logs were trees ravaged by the tsunami and left standing dead.
The logs were used as columns; they carry a symbol meaning, representation of the community and symbolize growth, initiation from an empty land. [34]

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33 http://www.architecturenorway.no/questions/cities-sustainability/ito-home-for-all/

34 http://www.architecturenorway.no/questions/cities-sustainability/ito-home-for-all/

Figure 8 – Kobe, Japan

Figure 9 - Emergency Shelter

7.2.TEMPORARY SETTEMENTS

7.2.1. SORT-TERM

Shigeru Ban – Paper Log House

The morphology and scale of each architect's emergency architecture design is based on the location, context, and availability of materials in each disaster area. The scale of refugees from the emergency by a number of factors. [35]

Shigeru Ban proved that innovative architecture and temporary shelters are not an exclusive concept despite changes in contextual issues, constraints and conditions. Explains his temporary emergency architecture through dwelling in Japan, Turkey and India and elucidating the spiritual consequences associated with construction and living in shelters that are not simply ready-made accommodations. [36]

[35] Arquitectura de emergência, Dirigido por Michel Quinejure, Shigeru Ban – Arquia/documental 19

[36] http://www.shigerubanarchitects.com/works/2000_paper-log-house-turkey/index.html

Figure 10 - Paper Log House, Kobe

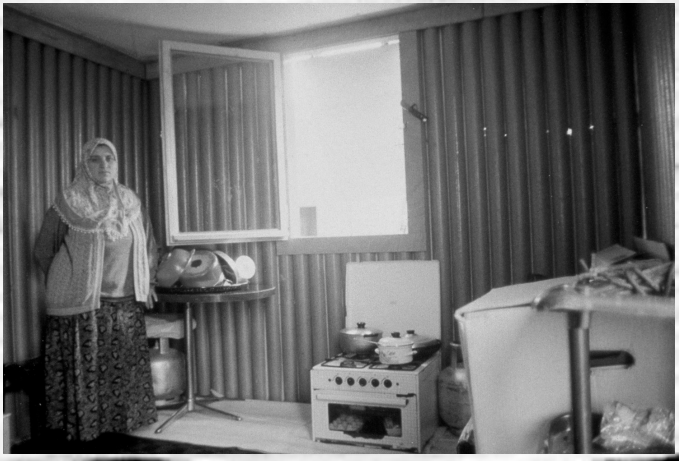

Figure 11 – Paper Log House, Turkey

7.2.2. LONG-TERM

Toyo Ito – “Home-for-all”

The Home-for-all is community house that are built in the areas of temporary housing and fishing harbours.

The people in the disasters areas, they lived first in relief centres such as gymnasiums, and they would move to temporary housing provided. [37]Therefore, temporary housing is for those made homeless after a disaster, the Home-for-all provides little focus on getting people together and in a society that has little else in terms of public space. The main goal was rebuilding the community with Home-for-all, showing what they really want and need in that moment. [38]

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37 https://www.domusweb.it/en/interviews/2012/01/26/toyo-ito-re-building-from-disaster.html

38 https://www.disegnodaily.com/article/toyo-ito-s-home-for-all-completes

Figure 12 – Home-for.all, Toyo Ito

Figure 13 - Home-for-all

7.3. COMMUNITY

7.3.1. Shigeru Ban – Paper Log House

Shigeru Ban works with volunteers from all over the world to find solutions to mega-projects of humanitarian sensitivity, opening up great potential and possibilities for other architects in the area.

He also, altogether gets two hundred people from all over Japan to volunteer. The community participation shows the solutions to the sensitive needs, expectations and local living standards.

His students from his program the Voluntary Architect's Network, helped with building the shelters out of paper tubes and plastic beer bottle crates and he ask for help and collaboration with the local architects to understand better the regulations and climate to facilitate.

The volunteers with the team of architects showed and teach the locals how to build and construct them in the way that they can do it for themselves.[39]

[39] SHIGERUBAN, emergency shelter, Vanessa Napiza, Nicholas Lane, Julen Ahching, Johnathan Terlato, Jonathan Tully

Figure 14 - Volunteers

Figure 15 – Volunteers building Paper House Log

7.3.2. Toyo Ito – "Home-for-all"

Toyo Ito had the opportunity to had contribution for the realization of this project with the student volunteer, local government officials and everyone involve.
The volunteers got nineteen log pillars from the forest that was damaged from the tsunami to help build this project. [40]

[40] http://www.home-for-all.org/soma-city-1-16/

Figure 16 – Volunteers heping

Figure 17 – Damaged Logs

7.4. ARQUITECT'S ROLE

Shigeru Ban – Paper Log House

For this profession to play a role in relation to post-disaster recovery requires a physical and social restoration in post-disaster communities. The different faces of the post-disaster nature work with different parameters of plans before that traditional architecture, on a practical basis verifying case by case, informs: 1) Contextual understanding; 2) Community involvement and 3) Local recourses.[41]

"Even in disasters areas, as an architect I want to create beautiful buildings. I want to move people and to improve people's live." Shigeru Ban[42]

A major factor in the profession's character building in the way architects serve society. This architect seems to be a model for the society of architecture, because it demonstrates a greet desire to create beautiful buildings and improve the quality of life of people, even in catastrophes.
[43]

8.1.2.

Toyo Ito – "Home-for-all"

Toyo Ito stands in this project as an architect that responds to the residents of the disaster area and shows that he would see from the victim's point of view first. On that position he connects both to approach of what he could be

[41] Arquitectura de emergência, Dirigido por Michel Quinejure, Shigeru Ban – Arquia/documental 19

[42] http://myweb.wit.edu/kiml1/590fall05/web-content/chris.pdf

[43] http://www.shigerubanarchitects.com/works/2000_paper-log-house-turkey/index.html

done as long term vision in that situation.

In an ordinary architectural project, there is relationship between an architect and his client, that in this case, as an architect and victim they become one and together they will focus on building something with meaning to each other. He as an architect believes that listening to the citizen's voice create possibilities to incorporate a plan to resolve the problems that emerge.[44]

"Architecture is to create a place that brings the hearts of people together" Toyo Ito[45]

Architecture about social involvement, shows that you can use architecture as a tool in this kind of situations and we should reconsider what architecture should be.[46]

[44] http://www.home-for-all.org/soma-city-1-16/

[45] https://www.domusweb.it/en/interviews/2012/01/26/toyo-ito-re-building-from-disaster.html

[46] https://www.domusweb.it/en/interviews/2012/01/26/toyo-ito-re-building-from-disaster.html

EIGHT

CONCLUSION

The world is changing, the growth of the world's population and social disparities in the world, urban expansion, the irresponsible exportation of natural resources and climate changes and the increasing number of catastrophes with some vulnerability are some of the factors that makes us reconsider what architecture should be.

All these factors create new challenges to the architecture before the onset of catastrophe. After the event, question are posed such as the transitional period and the choose of housing structure to adapt, that's why Emergency Architecture takes place as main mission topic in the world of architecture, making rethink what really is architecture today.

Emergency Architecture is becoming more and more an important part of architecture in the way that is evolution in many aspects not only serving for one proposes. In a way of exploring new areas, recycle materials, creating new studies and connecting with the problems and with the victims itself, showing an evolution of the architecture in many aspects.

And on of those examples of that evolution are one of the amazing architects, Shigeru Ban and Toyo Ito that show us one of the ways that Emergency Architecture can be use. Show is the importance of recycle materials this matter, making creation a part of a disaster. The bonds created by the architects and the victims allows them to connect and understand the both sides for best solution for the problem and working as a team with all the people involved, creating a dynamic and secure environment around the catastrophe.

In a point of this theme were a lot question surrounding the role of the architect in a catastrophe, I was able to research and explore this theme and realize that

architecture emergency is an area in development. Of course the involvement of an architect is always important, but in this situations we have to realize that everyone involve, such, organizations, design, engineers and the people, they all have a part on this situation to be able to create a community, to create new spaces, new homes and new security around it are the main goals.

Therefore, a quick responding could be or not be a solution at the same time, because we have to explore the factors around it, location, people, distance, disaster, lost, etc. That's why Emergency Architecture is important, to be able to study and development each factor as one to response the better way possible to a disaster.

That's why the article of Ian Davis, "What have we learn from 40 years' experience of Disasters Shelters?" shows us a great deal of impact about the role of architect's that had been question a lot a long this journey, how to manage to deal with a disasters with different views, aspects and evolution in that kind of chapter.

Describes a lot situations that are present in the past as a now, how to deal with a disaster, is the shelter is a solution or not, is the correct way to see a disaster in the same way or we are allow to try different approaches to get more solutions.

This article helps us in a way of understanding little bit more how to see and deal with this kind of situation complete different, helping to evolve in this matter.

NINE

LIST OF FIGURES

Figure 1 – http://danielhernandez.typepad.com/daniel_hernandez/2012/03/death-toll-mexico-quake.html

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