PARTICIPATION OF THE USER IN THE DESIGN PROCESS REGARDING TO SHELTER IN THE DEVELOPING WORLD
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BY IMKE VAN LEUKEN
You did make a difference and your input was worth a lot to me and to everyone else here. (..) You should remember the ancient Jewish proverb attributed to Hillel:

“If I am not for myself, who will be for me? If I am only for myself, what am I? And, if not now, when?” – Hillel
In the last stage of my studies at the Faculty of Architecture of the Delft University of Technology I had the opportunity to graduate in the Explore Lab. This graduation lab makes it possible to do an individual research and design by a personal fascination. “Already as a young girl I knew I wanted to become an architect; not just an architect, but a ‘good’ architect. I dreamed of designing well known and gorgeous buildings on the most beautiful places on the world. I even imagined these buildings still being there, long after I died and my name became famous because of the work I left behind.”

However, growing up and learning about the strong differences between my ‘western’ world and the poor, developing world, made me realize I wanted to leave more than just beautiful buildings behind. I felt it is the duty of an architect to provide basic dwellings for everyone in the world, so all of us can enjoy the safety of a home. The will to improve the world of those who are less fortunate grew further during my Master in Architecture, which resulted in my fascination in Architecture in the developing world. This essay is a reflection on the research I did, regarding to my fascination of housing the poorest in the world. Since most of my potential clients live in the developing world, I was forced to design outside of my own country. This meant I had to design houses for people with another climate, language, other materials, living habits and so on. To do this properly, I think it is important to fully understand the culture. A common design method which can help a designer to overcome these differences is ‘participation design method’. This method is based on a strong participation between the designer and the end-user.

In this essay, I reflect on this ‘participation design method’. I describe the method, its benefits and consequences. To create an image of such a design process, I describe five case studies. Coherent to this research I will make an architectural design during my graduation in Explore Lab. I had the opportunity to go to Ghana to work with actual clients, who are currently trying to find the financial means to built my design. I stayed in Ghana for two months, where I worked intensively with them. This experience gave me more insight in the method and is detailed described within this essay.

I would like to thank the employees of Trashy Bags for sharing their time and thoughts with me. But of course also Stuart Gold, owner and founder of Trashy Bags for inviting me to Ghana and working with me.

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INTRODUCTION
INTRODUCTION

While in the developed Western World, we have the possibility to live in luxury villas, the majority of people in the developing countries, so-called Third World, lives under harsh conditions. People all over the world still live without basic shelter, sanitation and security and a billion people live in a slum or refugee camp.

‘Currently one in seven lives in a slum or refugee camp and more than three billion people do not have access to clean water or sanitation’

My fascination is about the low-cost housing within this developing world, where the economical means and the political organizations are insufficient to provide citizens with basic shelter. People tend to build their houses themselves by putting metal sheds together, without any planning nor legislation. This kind of ‘self-providing architecture’ leads to unhygienic neighborhoods, without any sanitation and criminality can easily occur.

For the residents it is very difficult to improve their situation without any support from the government or other organizations. Unfortunately these institutions are also short of means and unable to help their citizens.

Today more and more western architects are getting aware of this problem and are willing to take action. With the best intentions they intrude in the developing world and work as volunteers to help the needed. This may sound great, but is it? What is the ground of these good intentions, who are the real beneficiaries of the aid (the helping of the helped), do people in the developing world want to be helped and so on. The answers to this questions are of a moral kind and impossible to find within the timespan of my research.

PROBLEM DESCRIPTION

Western architects, with their best intentions, travel to this developing world to help the needed, often without knowing what to expect. They are unfamiliar with the different culture, which has specific peculiarities and still they will shape the environment there. Especially while constructing dwellings, the homes of families, it is important to take these cultural differences serious.

A way to overcome this problem, is to involve the user in the design process. They know their own living habits the best and can advise the designer. At the same time the designer can use his professional knowledge to end up with a sufficient project. A common design method, used by developing architecture is therefore Participation Design Method. Unless this method might overcome the cultural differences in design decision, it brings other social and management problems often unknown for the architects. A close cooperation between the architect and user is necessary by Participation Design Method, the method is very sensitive and should be used with care.
RESEARCH GOAL

With my research on the Participation Design Method I will firstly clarify the method itself and the importance to apply this method in general and particularly when designing low-cost housing in the developing world. With a description of the benefits, the disadvantages and process-analysis of different projects I will give an overview of what Participation Design Method implies. This research in combination with my own experience in Ghana, will hopefully result in a manual for architect to apply Participation Design in an effective and sensitive manner.

RESEARCH QUESTION

With this research goal I hope to answer the following research question:

How can the Participation Design Method help a designer, in an effective and social manner, during a design process within a different culture than his/hers own background?

To answer this main question the following sub questions should also be answered:
What is Participation Design Method?
Why is it important to involve the user in the design process?
What are the (dis)advantages of Participation Design Method?
Where should you be aware of, using Participation Design Method?

LOW-COST HOUSING IN THE DEVELOPING WORLD

As architects we have the power to shape the actual environment. Most of us are aware of this power and are well-aware of the consequences of our acts. However, we tend to forget the ones who are not affected by our services.

Today, around a billion people on the planet do not have access to adequate housing and lack access to clean drinking water of proper sanitation. For this reason it is important architects are aware of their power to change the lives of human and should not wait for them to come to us.

Since 90% of this billion people live in the developing world, I chose to focus my research on low-cost housing in this world.

“Everyone has the right to a standard of living adequate for health and well-being of himself and his family, including food, clothing, housing and medical care and necessary social services, and the right to security in the event of unemployment, sickness, disability, widowhood, old age or other lack of livelihood in circumstances beyond his control.”

fig 1.4 - 1.5
Informal Settlements of Accra showing the poorest and polluted areas of the city.
4 Architecture for Humanity 2006, cover
5 United Nations 1948, article 25.1
Unknown Client working together with the locals can benefit a design process in a different culture of the designer.
WHAT IS PARTICIPATION DESIGN METHOD?
In the literature on participation design, the term has many different meanings. Another issue which complicate things is that there exist a lot of synonyms for participation. These synonyms are used through one and another meaning the same or something different in various sources. Popular synonyms from the bibliography used for my report are: community-led design, participatory or participation design.

Because of these two complications in vocabulary it is important to define clearly the term ‘participation’, which I used in my report.

On the basis of the literature I will explain also other terms, relating to my topic, which hopefully will give a clear insight on what is meant by participation design method.

Various authors wrote books or articles on Participation Design. They give their view on the topic, describe the role of governments, architect and users, mention different architectural project. In the literature I used for my research I recognize three different movements, which are divided by the time they are written:

1970’S Many working dwellings are based on a community living, and ‘living together’ became the modern way in the western society. To design these projects, architects used participation design method, since it fitted with this new way of thinking. The literature, written around this decade, reflects on these types of projects. The general atmosphere indicates people should have a say in decisions that affect their lives and give design assistance techniques to do so. The main view of this movement is utopian and focused in the developed world.

1990’S Most theorists in this period write about the management of these kind of projects. Their focus is the role of the government, the designer and the user in the whole process. Writers like V. Desai and M. Choguill give an overview of these organizations, but do not devote a word on the design process itself. The stream is mostly utopian on the method, but with a caution of the role and responsibility of the government in developing countries.

2000-10’S In the current time, human architecture, seems to be an hype. Writers are very much utopic on the method and give the impression participation design method might be the only method to come up with a helpful, innovative and effective design. While in the past no interesting projects where shown, books as Design Like You Give a Damn and Design with the other 90%, are full of beautiful pictures of inspiring projects. However, the actual design method and used techniques are scarcely described.

While most writers are very utopian, some writers like H. Bhabha and McKnight give their critical opinion and recognize the dangers in participation design. They question who is the real beneficiaries (the receivers of aid) or even think we disable the communities by involving them in such a process. These will be described in the chapter ‘What are the Dangers of Participation Design Method.'
DEFINITION PARTICIPATION DESIGN METHOD

By the term Participation in Participation Design Method many questions arise: Participation between who? What has this to do with a design method? In contradiction to Uphoff who state that the concept of participation cannot be contained in a single definition\(^9\), I will try to do this anyway.

‘Participation can mean whatever one wants it to mean’\(^10\)

The dictionary Euroglot Professional gives three main synonyms of participation which are:
1. contribution/interest/attendance
2. say/control
3. profit sharing\(^11\)

Since I will focus on the participation in a design process, the first two meanings are of my interest. Unless the third is probably the utopian goal of participation in any kind of development, in the design process it can be left out of consideration.

‘Sharing by people in the benefits of development, active contribution by people to development and involvement of people in decision-making at all levels of society’\(^12\)

Contribution of the users in the design process means that a designer listen to their ideas and this implements in the final design. When we talk about the say or control of the user we involve them in the decision-making of the process. Unless Tri states that participation can mean whatever one wants it to mean, I will use it only in relation to the design process with the following meaning: the contribution of the future user in the design process and the say and control in decisions in this process.

Still with this definition I have to agree with Verdana Desai, who state that the term ‘participation’ is pretty useless, and even disabling, for clear though.\(^13\) The effects, goals and manners of participation in any kind of development are of an endless variety.

Decision-Making Process and Action Process

In principle, we can speak of two sorts of participation of the user in a design process. Firstly, the user can be actively involved in the actual design stage; drawing and inventing the project. This means the user has a say in what is to be achieved. In this kind of participation the user is also involved in making decisions during the whole process.

The other participation is of a more practical kind. Hereby the user is involved in the realization stage of the project and has no say in the outcome of the project. The user basically helps to achieve what is already decided upon.\(^15\)

In the rest of this research the focus is on the decision-making process, since the user has an influence in the outcome of the design.

Bottom-Up vs. Top-Down

Participation of the users can arise from two different directions; bottom-up and top-down. In the utopian bottom-up situation (also

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9 Desai 1995, p. 43
10 Desai 1995, p. 43
11 Euroglot Professional 2012
12 Desai 1995, p. 43
13 Desai 1995, p. 43
14 Desai 1995, p. 43
15 Desai 1995, p. 41
known as spontaneous participation or grass-roots-initiated), the user (the ‘lowest’ of the corresponding parties) is the engine behind the project. The community recognizes his own problems and is initiator of the project. They contact project developers, (non-)governmental organizations, designers, founders to help the realize the project.

The top-down (state-initiated) strategy works the other way around. The ‘highest’ party, which can be the state or an non-governmental organization, takes initiative to involve the community in a design project which will affect their situation. Top-down and bottom-up are obviously contrasting to one and each other, but can both occur within one project. This can happen in two different occasions.

1. The initiator is nor the highest nor the ‘lowest’ party of the project. For example, an architect has to approach the user (which is ‘lower’) and the (non)governmental organization (which is ‘higher’)

2. In different stages of the project one can be the initiator, while in another situation he is not.

For Verba, meaningful participation is inevitably voluntary. So if participation is voluntary, some will be active and others will not.\[16\]

Although the bottom-up approach is most likely less efficient, it is preferably than the top-down approach. The inexperience initiator (the user) is the main reason why bottom-up is less efficient. Each step of a design project is new for them. Mostly the fundraising is the main challenge, which in a top-down approach is probably unnecessary since the initiator will fund the project. The advantages of bottom-up approach are the willingness and perseverance the community has, if they take initiative for a project. They feel more responsible and do not have to be motivated. In both approaches at least the users would not get paid for their work. In top-down approach, this can be a problem, while in bottom-up approach the community (if only partly) will cooperate anyway, since they started the project. In both approaches the user is assumed to collaborate voluntarily. When the user is initiator (bottom-up) approach it is naturally easier for him/ her to actively participate in the process.

LEVELS OF PARTICIPATION

The amount of participation in a process makes the term of participation extremely vague and according to Verdana Desai even useless. To clarify this a little bit, Marissa B. Choguill\[17\] proposed a ladder of participation in which she arranged different levels to the amount of participation between the government and the user in underdeveloped countries.

Hierarchy level 1: Empowerment

The highest level of the ladder is when community members receive the power of formal decision-making over a particular project, when municipal authorities are unable or unwilling to undertake these
themselves. The community becomes responsible for the project, possible with assistance of outside organizations as NGOs.

Hierarchy level 2: Partnership
At this level members of the community and outside planners share the responsibilities of a project and make decisions together. The involvement of government in this level is more than in the case of empowerment.

Hierarchy level 3: Conciliation
The third highest rank occurs when the government proposed solutions which have to be approved by (often an advisory group of) the community. Meetings are arranged where the community can be heard, but often also where they are forced to accept the decisions of the government.

Hierarchy level 4: Dissimulation
In this level participation is only used to improve the image of the project; a type of manipulation. Communities are placed in an advisory committee to educate them and engineer their support. From this level down, the government increasingly leaves the community to themselves.

Hierarchy level 5: Diplomacy
The government expect of the community to make its own improvements and if they accomplish the government change its attitude and provide aid for tactical reasons. In this way they support some kind of improvement to the neighborhood, while there is no assurance that new projects will be supported.

Hierarchy level 6: Informing
With a top-down approach the community gets informed of their rights, responsibilities and options, without allowance for feedback of negotiation.

Hierarchy level 7: Conspiracy
No participation is allowed whatsoever, since the government seems to reject any idea of helping the poor. Actions of these kind of governments can even disadvantage these communities.

Hierarchy level 8: Self-management
In the lowest level of ladder of ‘participation’ communities are self-reliant. The government will do nothing to solve local problems of these communities. The only help they can get is from NGOs, which may totally replace the government. Eventually, people’s initiatives my influence the processes and outcomes of development and in the best scenario achieve a political change.

Fig 2.1
The arnstein ladder of citizen participation
In product design it is more common than in architecture, to involve the end-user in the design process and in this field many academic researches and methods are known regarding participation design. In the thesis of F. Sleeswijk Visser of the Industrial Design Faculty in Delft, ‘Bringing the everyday life of people into design’, she reflects on different approaches such as people-centered design (Wakeford), user-centered design (Vredenburg), customer-centered design (Chandler and Hyatt) and human-centered design (ISO). All of these claim to get a better insight of the wishes of the user, which will result into a product that fit better to their needs and therefore have less chance to fail when they hit the market.\(^{18}\)

The success of a product is often measured by the sales of this product, while in architecture this is less the case, especially when adopting participation design method. Since participation design will end in a specific architectural product for this particular client, it is unlikely to be copied into other cases (like mass-housing). The success for these kind of architecture is therefore more about quality than quantity. However, in product design quantity mostly will not arise without quantity, which makes the design processes of product design and architectural design comparable.
WHY SHOULD WE APPLY PARTICIPATION DESIGN METHOD?
WHY SHOULD WE APPLY PARTICIPATION DESIGN METHOD?

Many reasons are known why it is important to involve the end-user of a design, whether it is a product, architecture or any kind of design. From the designers perspective it is impossible to know the target group by heart, participation can make this easier. From another perspective it can help the user to accept the shortcoming of a product, when they understand the reason behind these imperfections.

In this chapter you will find why close collaboration between user and designer can benefit in a design process. The purpose of this chapter is not only conviction of the importance of the method, but also understanding the method.

WE DESIGN THEIR ENVIRONMENT

As architects it is our task to literally shape the human environment. Especially when we design dwellings, the impact of our work is enormous. We design a building where people will live their lives and call it their home. Shouldn’t they have the right and duty to participate in decisions that shape these dwellings?

For most people the largest investment they do in their life, financial but also in duration, is buying a house. It is unbelievable and unacceptable that only 2% of new homebuyers can afford to work directly with the architect of their house to ensure it suits to their needs and wishes.

OVERCOME CULTURAL DIFFERENCES

When an architect is working on a project in a different environment than is own, it is difficult to understand the habits of the end-users by heart. This can even occur within the home country of the architect, working for example with people from a different social or economic level, or a community which is isolated from the society because of many possible reasons.

The difference between architect from a so-called ‘developed country’ and his clients, living in poor, rural community in the developing world are probably the largest. Firstly the political situation to understand legislation and construction codes. But also the climate, available materials, local architecture and so on should be analyzed to get familiar with the general needs and possibilities for architecture. This is all possible without even meeting the clients, but to understand their cultural behavior, traditions, living habits it is necessary to meet the clients and spend time together.

Tailored Design

Another advantage of working with the clients is to completely understand their needs and wishes, regarding to their houses. If we combine these with the cultural habits it is possible to come up with a design that is satisfying the clients.
LEARNING ASPECT

The architect will learn the characteristics, habits and needs of the clients through participation of the clients. The other way around the clients will even learn more. Of course this is different in every process, which is dependent on the amount of participation and the stages in which participation is used. In many cases the users were unaware of design at all and the influence it can have on their daily living. This goes for architectural design, but is perhaps more obvious by a project design like the roll able water container for developing countries, the Q-drum.21 In developing architecture, the real labor of constructing the building is mostly done by the residents themselves. In this phase they can learn innovative methods of a more practical kind as for example in the Sustainable Urban Dwelling Unit (SUDU-Project) in Ethiopia by EiABC.22 In this project the residents have learned how to make soil bricks and how to use them to construct a roof. These learning aspects can have a positive long-term change in the lives of the people after completion of the project. Some participants of the project in Addis Ababa started for example a small entrepreneurship with which they produce the bricks of soil.

SUSTAINABILITY

Participation of the user in the design process can increase the sustainability of the project in many ways, which are already mentioned earlier in this chapter. Nonetheless it is of such an importance to illuminate this subject by itself. This sustainability is a side effect of the different reasons why it is important to achieve active participation of the end-user of a design in the process.

“It is in my belief that many environmental problems requiring technical guidance can best be solved through the active participation of those affected by the design decision.” 23

Tailored Design
By participation of the user in the design process, the design will fit properly to the specific user. This can increase the lifespan of the building, since it will longer meet the needs and wishes of the residents.

Learning Aspect
When a sustainable, energy-efficient building is realized, without explaining the users how to deal with the building, the effects can disappear out by wrong use of it. The role of people is crucial for the working of sustainable systems. For example, a low flush toilet can reduce the water consumption up to 30 per cent, but if a tap is dripping within the same household the benefit it is completely eliminated. By evolving the users in the design process and involving them in sustainable decisions, they will get aware of

COSTS

I believe this subject should not be a reason to participate users in the design process, but is definitely a positive side effect. Most of the parties, but definitely the users who most of the time are also the construction workers, in a participation process will work as volunteer and labor costs will maintain low.
these kind of things. In this manner they will learn how to use their house in a sustainable manner. The technical sustainable solutions implemented by the designers can only work and be efficient with the people.

**Maintenance**
People who worked intensively on a project will appreciate the end project more, since they know the effort put into it. For this reason it will be more obvious to maintain the building and take good care of it.
WHAT ARE THE DANGERS OF PARTICIPATION DESIGN METHOD?
The literature on participation design method mostly describes advantages of the method. As a result many tend to believe this is the only acceptable approach towards sustainable development in poor countries. Tony Emmet explains the limitations and dangerous in his essay *Beyond community participation?* which should be considered before adapting the method in reality.  

**Bring false hope**

Whenever someone enters a poor community with the intention to improve their conditions, members of the community will grow hope and expectations. Promises are made to help the community. After participating actively on a project, people trust receiving a return for their effort. If the promises turn out to be overestimated, the designer will return to their own live and leave the community behind with a unanswered desire for improvement.  

It is possible this desire will stimulate the community to improve their situation by themselves. However it is also possible the community loss faith at all and is now aware of its shortcomings which they did not recognize before.  

**Focus on Shortcomings**

Whenever help is given to a poor community it is easy to focus on the shortcomings of these communities instead of their richness in perhaps culture, particular heritage or powerful craftsmanship.  

The focus on these negative aspects of their lives can bring a community in a negative spiral and according to McKnight even disable the community.  

**Lack of knowledge and own interest**

Participation design method assumed that there is a community which are able to participate in a design process. This community exist of laymen who are the future user of the project. Besides that they know nothing on architectural design they are also subjective and have their own interests. Each individual of this community will think of his or her interest at the first instead of the whole project.
To gain knowledge on how participation of the future user in the design process can influence the out coming architecture I analyzed five case studies. Four of these cases used participation conscious as a design method, all for their own reasons. The fifth case study did not use any kind of participation of the future user in the design process.

In this chapter the analysis of these projects are described and visualized. I reflect on multiple issues regarding to the process such as: Who initiated the project? Who designed and who took design decisions? Were there cultural differences between different parties? And I will also reflect on the architectural results due to the participation of the users and the influences the architect himself had on the project.

The first case study is a Fisher Village in Tamil Nadu, India. This one is built as reconstruction after the Indian Ocean Tsunami in 2010. In this project participation of the end-user in the design process is not an issue at all. The failure of this project, was for me a starting point for the topic of my research.

The other four project used participation design method and are ordered by chronicle order. The first, also in India, is an urban development as a result of the urbanization and started in the 1980s.

The project done by Jeff Hou, on an island of Taiwan, can be seen as a prototype to bring knowledge to a community. The most recent project is done by ELEMENTAL. The scheme which was used, is since then used more often by the architectural office. The project I analyzed is the first project realized by this scheme in 2004, known as the Quinta Monroy Project. It is located in Iquique, the capital in Chile.
The design process of each case study is described and visualized in a matrix. The most important moments (meetings, decision-taking, construction and so on) in these processes are described and displayed with an icon. The meaning of these icons are explained opposite.

The action is placed in the row of the initiator. The colour of the icon indicates the party who is approached. When the colour of the icon is yellow, the action has a direct consequence on the design.
When the Indian Ocean tsunami, hit the coast of India dramatically in December 2004, the world was shocked by the images shown in the media. In a short timespan so much money was donated, the process of recovery became complicated, competitive and even suspicious. The government of India decided to resettle all the communities, who were affected by the disaster, to a safer distance from the coast line. Roughly calculated 130000 houses were destroyed by the tsunami and needed to be rebuilt. Another 10000 were only damaged, but since the government had enough money to rebuild all of them, these were demolished as well out of convenience.

**Initiator**

The government encouraged each family to leave their home, even if it was not damaged by the disaster. They had to move to a safe distance of the coast, where the government built new houses for them with a totally top-down process.

**Design**

Originally the fisher families have an ancient tradition on constructing their kachcha houses. At the marriage of a son, the exact site of the dwelling is located by a pandit (priest). In the doctrine of Vastu Shastra specific characteristics of the houses are described: “the house has to be symmetrical and constructed with specific measurements, proportions and a certain orientation. The bright, colourful decoration of patterns, flowers and animals reflect the family. The house exists merely of two rooms: one inside storage room and one veranda, where they spend most of their time and sleep during the night. A fence encloses the outside space, where cattle is kept, fish dried or other activities happen. This space is of high value for the welfare of the families but also the community.”

While rebuilding the houses on Tamil Nadu, the government could not find the time to look at what kind of people lost their homes. The new houses exist out of white concrete blocks with a surface of 30 m². Every dwelling, regardless this small size, is divided in a dining room, two separate bedrooms, a kitchen and a bathroom. No single room is big enough for a total family to come together. The houses are placed on a small distance from each other, due to the small amount of land. Space to build an extension or plant trees to sit under is impossible. The result of the new fisher village is an endless row of matchbox houses without a single tree.
The quotes of a young mother and a fisherman represent the failure of this project the best.

“Before, I could share my sorrows, now I cannot and it affects me mentally and physically; sometimes I cannot sleep and sometimes I cannot eat food, because I keep everything in my heart; sometimes I think about suicide and what is going to happen to my children” – A young mother of three children

“The trees are missing. Now the friends are not sitting together and helping each other with the nets, and maybe this is why the people drink. The fact that there are no trees and that people are either inside the house or in the hot sun when they work on the nets leads to more tensions and this in turn leads to a higher consumption of alcohol.” – A middle-aged fisherman
After the tsunami of 2004, charity money was given to the Indian government. Without any research on the communities of the islands, the government designed and constructed a project on a safe distance from the Indian Ocean. The fishermen could not adapt at all to their new homes.
In the 1980s the amount of homeless people in Hyderabad grew immensely due to extreme urban poverty. A non-governmental organisation, Hyderabad Development Authority (HDA) was founded to deal with this problem. The organization came up with a new scheme, called The Incremental Development Scheme of Hyderabad, to reach their homeless clients and give them the chance to own their own property. The idea of the scheme was that people first settle on the land, and later a house and acquiring infrastructure would be built. With this they followed the scheme of illegal settlements, where occupiers settle on vacant ground before constructing their shelter. This approach guaranteed an easy entry to the project for households in most urgent need of shelter. The incrementally approach was not only used for housing but also for infrastructure and therefor discarded almost all standards, which decreased the need of loans to residents.

Initiator
The initiators of the project first founded a non-governmental organisation, HDA and approached the government of Pakistan to provide the land which was required for the project. As soon as the government agreed to cooperate, the land, a flat area close to the town of Hyderabad and the industrial area of Kotri, was divided in around 3000 plots organized in 52 blocks. Immigrants entering Hyderabad had to register by the HDA and after screening and a down payment, they were assigned to a plot of land. To own the plot of land the owner will repay the entire costs of land in the next eight years. After receiving a plot of land, the families had to start with the construction of their house, otherwise the allotment was cancelled and the plot was re-given to another family.

Whenever a total block of plots was allocated, the residents chose a community leader who had contact with HDA and had the responsibility for the maintenance of communal services. Each family was responsible for their own plot.

Design
The main design done by the initiators of HDA, was the division of the land. They made a geometrical grid. This main objective was to contribute to a better organisation of the migrants, and therefor easier manageable blocks. But also because of time-management, it was impossible to do research for an alternative grid. The priority was given to deliver the plots rather than an innovative design for the grid.
On these strictly divided plots, the residents had the freedom to build their houses to their own needs. There were no restrictions to size, form, height nor materials. The only restriction they had was their own limited budget. As a result of this restriction in the beginning the houses existed mainly of a simple, wooden, reeds or cardboard shelter. Slowly these simple shelters were transforming into more solid houses from brickwork or cement.

**Architecture**

In this project the distinction between the design by HDA and the informal design by the residents is very clear. The strict grid, with water and electricity facilities and the infrastructure, are designed by the architectural team, while the residents are totally free in the style of their homes.  

‘Standards are imposed to safeguard public health, but, if standards are enforced in a low-income housing scheme, the poor cannot afford to live in the scheme and are forced to live in illegal settlements below acceptable conditions.’

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37 Davidson 1995, p. 56 - 63
38 United Nations 1991, p. 57 - 63
Scheme Khuda-Ki-Basti

Hyderabad Development Authority (HDA) assigned and received a plot of land by the Indian Government. HDA designed a strict grid and opened an office where residents could sign in. The families had to start the construction of their house within 14 days otherwise the plot was given to another family. Once a total block was inhabited, a community leader was chosen by the community. Together with HDA, he would organize the maintenance of the communal areas, while each family was responsible for its own dwelling.
RURAL VILLAGE OF BAYVIEW
Bayview, United States of America

The community of Bayview, living on the Eastern Shore of Virginia is physically isolated from the rest of the state by the Chesapeake Bay. The only connection between one part of the river and the other is a ten-mile bridge or tunnel. The result of this isolation is an economical, psychological and physical arrears from the community compared to the rest of the state. This is expressed in their substandard living conditions, often without running water or indoor plumbing. Only six out of 52 houses had a toilet.\(^39\)

In 1994 the government planned a maximum-security prison on the ground of the Eastern Shore, which started a three-years battle between the community and the state of Virginia. After this struggle, led by two African-American women from the community, Alice Coles and Cozzie Lockwood, they were able to stop the construction of the prison.

Initiator
After the success of the battle to stop the construction of the prison, Alice Coles realized the community had to take action if they wanted to improve their quality of living. She visited a design workshop and approached Maurice Cox, an architect in Virginia, in person. Her courage and drive were enough to convince him to work with her. After this agreement, Steve Parker, who was also active in the fight against the prison, contacted Maurice and together they collected a grant to solve the serious problems regarding clean drinking water and sanitation. After a visit to the site, the architectural team realized also the houses needed to be reconstructed. At that moment the residents were living in small two-room shacks which were in very bad conditions.

The National Association for the Advancement of Colored People (NAACP) was already familiar with the community of Bayview because of the protests against the state prison. From the beginning of the project they were involved and worked as partners with the architectural team of Maurice Cox. They issued a national press release of the project, which gained a lot of national attention. This publicity and the drive of the Bayview people, who were very clear that they wanted quality in their project, resulted in an incredible number of financing sources. These different actors complicated the project, since they all had different wishes, but simultaneously brought financial possibilities.

After nine months of working with the residents, a design was presented to fundraisers which rejected the project at first. After a battle between the fundraiser on one side and the architectural team and the passionate Alice Cole on the other, they mediated some design issues and the construction of the project could start.
Design
At first, the goal of the project was only to solve the issues regarding safe drinking water. After a visit to the community and one of the residents saying “Why would you even bother bringing water to shacks like these? This place is nothing like the Bayview we grew up in,” the architectural team realized the houses of Bayview Village needed to be reconstructed as well. They organized nine meetings on a monthly basis. Maurice Cox and his team visited the community once a month. During these meetings the residents told their story about their rural lives on the Eastern Shore in houses without bathrooms. During these visits they literally cleaned up Bayview by demolishing burned-out buildings and other garbage. In one of these weekends even more than 12,000 kg of trash was removed and people started realizing they could change their community by themselves.

Meanwhile the team worked on a design at their office and only after five months they showed the residents their plans and by voting decisions were made. To ensure they could make considered decisions all aspects of the designs were explained and the team always presented at least three options to force them to evaluate the options with one and another. At the end of the day a decision was made and the team would have to live with that.

From the stories of the residents the designers learned much about the life in Bayview. It became clear that the porches of the house took an important role in their lives, that was where they had learned to read or heard stories from their grandparents. When the project was presented to the fundraisers these porches became an important point of discussion. For these fundraisers a porch is just a luxury facility which is superfluous in affordable housing. After a battle between them and the architectural team who was supported by Alice Cole with her passionate stories, both parties approved on a smaller porch.41

41 Architecture for Humanity 2006, p. 155 - 163
Alice Coles approached Maurice Cox, because she felt her community was in need for architectural service. The architect was amazed by her courage and agreed to improve their sanitation problems. He and his team brought a first visit to the village and realized also the houses needed to be repaired. Once a month they would visit the community and only after the fourth meeting they proposed their first design-options, which was made in their office. By voting each month a design was chosen and the team would accept this decision. In the end the design was presented to funders, who rejected the project. Alice Cole was able to use her passion and convince the funders of the need of for example the porch and a mediate design was made and realized.
In the 1970s and the early 1980s the Taiwanese government intended to upgrade the standards of living on the Pongo-No-Ta’u islands. The traditional Ta’u villages were destroyed and replaced by rows of concrete barracks. This well-intentioned modernization caused profound and traumatic changes on the residents of the islands.

Initiator
When the government built also a nuclear waste depository on the Pongo-No-Ta’u islands in the 1890s, residents started a demonstration together with the National Taiwan University (NTU). The government admitted their mistakes and approached a team of NTU to do research to the living conditions on the islands. The team was already familiar with the mental problems caused by the government-built housing cause, but now discovered also an immediate physical danger to the residents. The sand used in the concrete had caused the rebar to corrode, which made the walls and ceilings burst open. Most families lack the economical means to repair these cracks and since the houses stand on an earthquake-prone region, the families were in serious danger. The NTU team organized public meetings in which the residents were informed about the dangerous situation of their living and the Ta’U leaders decided to protest and demand compensation and reconstruction of their homes. In 1994 the Provincial Bureau of Aboriginal Affairs contracted a group of design professionals at National Taiwan University to develop and improve the living conditions on these islands.

Design
At first the NTU team made a close analysis of the traditional houses of the Ta’u tribe. They wanted to use the original building practices and local culture as a base for their new design. However in two villages where the traditional houses were not demolished by the government. The villagers had started to replace these houses partly by modern concrete constructions. A mixture of this new technique and the traditional dwellings resulted in a hybrid form. This inspired the team to integrate traditional designs with the need of contemporary needs.

After this insight, two obstacles occur. First the provincial government demanded a standardized design for all houses to ease planning and construction. According to the team this would lead to the same negative effects as the concrete barracks built in 1970s, so they refused to meet this demand. To understand the needs of the residents, the team wanted the residents to participate in the design process. However, from their culture it was taboo to tell others about their future plans. According to their religion, evil spirits on the islands would sabotage these plans once they were talked about. The team tried to organize
secret ballots, but to maintain the trust they established, they decided to respect their culture.\textsuperscript{42} This made participation of the residents difficult in the design process. The team stayed on the island to research the traditional dwellings. Meanwhile the principal of the elementary school was planning an extension for his school building. The NTU team were able to convince him to build a dwelling prototype based on the ideas they had generated in their stay on the islands. With this prototype they hoped to engage locals in the design process. Once this prototype was completed, traditional rituals were organized to celebrate and invite the locals to the building. Despite the efforts of the team, the prototype was still rejected by the residents as a house. They preferred to construct their houses out of concrete instead of local materials.

Meanwhile the residents retrieves the promised subsidies from the government and they were able to start the construction of their own homes. These dwellings, constructed with modern techniques reflect the morphologies of the traditional homes, which is the opposite of the prototype built by the NTU team.

Due to difficulties in collaboration with the residents, the team was unable to fully understand the needs and wishes of the locals. Although both projects, the prototype by the team and the houses by the villagers, share the same interests – a hybridity between traditions and modernization – they are completely opposite from one and each other. The team used traditional techniques (bamboo) and a modern morphology, while the residents used modern techniques (concrete) and a traditional morphology. In contrast to what is written in Design Like You Give a Damn, I believe this made the efforts of the team still not successful. Since I do not believe the prototype influenced the design of the houses by the residents at all. However, the teams research on the government-built barracks was necessary to generate the project, which makes it successful anyhow.\textsuperscript{43}
As a result of concrete barracks built by the Taiwanese government, the living conditions of the Ta’U tribes became even worse than before. Only after a strike by the inhabitants, the government sent Jeff Hou to do research and improve the housing on the islands. When the team visited the tribes, communication was complicated because of religious reasons. The team studied the traditional houses and built a school for the village, which was supposed to work as a prototype for their houses. However, once the money of the government was given to the residents, they built houses as they liked it.
In the 1970s ninety-three families established the Quinta Monroy district close to the centre of Iquique. At this expensive location they built up an illegal settlement. In 1998 the government of Chile decided to improve the housing conditions of the low-income households and invested $10 billion with the so-called Chile-Barrio Program. Each family living in the Quinta Monroy district received $7,500 to invest in their new home. In this case it meant they also had to finance the land-costs with this amount of money since they were living illegally on this ground till now.\textsuperscript{44}

Initiator

Alejandro Arevena, who worked with his team on a low-cost housing concept for years, so this Chile-Barrio Program as a chance to realize his ideas. He approached the government and presented his idea to design only half the house. The government decided to let him design the Quinta Monroy Project.\textsuperscript{45}

Alejandro Arevena approached the government when the Chile-Barrio Program was launched, this program required a project had to be developed by participation of the community. The team devised three ways to ensure this participation:

1. Communication of Restrictions: The team saw it as their professional responsibility to inform the families of their limited options and thereby avoid false expectations.
2. Joint Decisions: By informing the families thoroughly and showing them the sacrifices of some decisions, the team believed the families could make key issues.
3. Bi-directional participation: Information and communication could happen top-down as well as bottom-up.\textsuperscript{46}

To take these decisions meeting with the architectural team and the families took place. After informing the community about the problems and possibilities questions like ‘Do you agree to not getting a room?’ and ‘Water heater of land? (because there is no money for both)’ were submitted to the residents and decided by voting.\textsuperscript{47}

Design

The team of Alejandro Arevena, ELEMENTAL, worked on the theoretical concept of “social housing” together with the students of the Harvard Graduate School of Design and the Chilean Catholic University to design only half the house. With the Quinta Monroy Project this theoretical idea became real and the question ‘which half house where they designing?’ was raised. They decided to design and built the half which was for the residents the most difficult to construct by themselves: the kitchen, bathroom, staircases and partition walls. The houses could at least double the initial built space which increase the land value enormous.

The blocks of row houses form an architectonical grid which allow
expansions to the side. These expansions are designed and built by the residents after moving in to their new homes. To guide this, the team organized a workshop, whereby the residents learned how to expand and design the structure. Only within four months almost every family was able to expand their house, due to the efficient structure which was designed by the architects. 48

The team believes it is essential a kind of order and structure exist in a city. Their building provides this order, unless fifty per cent of the façade is uncertain. They organizes a façade workshop, where they showed possible extensions to the community. Almost ninety per cent of the expansions, built by the residents, left space for balconies, just like was presented in the workshop. 49

At this moment the distinction between the strong architectural form designed by the architect and the informal form the expansions made by the residents is very clear and is according to me the strength of the project. The work of the architects ensures hygiene and order, while the informality of the residents makes the project lively and ensures identity.

48 Architecture for Humanity 2006, p. 167
48 Aravena 2012, p. 129
ninety-three families established the Quinta Monroy district in the 1970s in the centre of Iquique. For thirty years they lived in this illegal settlement. Meanwhile ELEMENTAL worked on an affordable housing scheme and when the government decided to invest $10 billion to upgrade the housing situation in Chile, the team approached the government to participate. They were elected to redesign the Quinta Monroy project. Half a house was built and they showed the residents how to extend the structure. Only after two months of inhabitation, most of the families were able to complete the dwelling into a whole house.
CONCLUSIONS ON CASE STUDIES

If we compare these five case studies with one and another, it is possible to extract some conclusions, both on the design process and the end-product, the design, itself.

Involvement
In the four case studies, which claim to use a participation design method, we can question the degree of participation.
In the Khuda-Ki-Basti Project the architect and the end-user probably never met each other. The user was involved in the design process, since it had to design his whole house by its own, on a plot which is divided by an professional.
Maurice Cox, the architect in the Bayview Village Project, certainly worked together with the residents. They met each other more often and this influenced the design clearly. The porches, for example, is a clear result of the stories and the will of the community. However, the design was made only by the architectural team in their office, on basis of these stories.
The project of the Ta’U houses was complicated by the fear of the villagers to talk about their plans. This made it for the architectural team difficult to apply participation design on an effective manner. Due to this difficulties it was for the team impossible to fully understand the wishes and needs of the residents. Regardless to this, the project is described as a successful participation design project.
Alejandro Aravena’s team, the creative minds behind ELEMENTAL, organized a participation workshop between themselves and the residents of the Quinta Monroy Project and therefor certainly involved the residents in the project. However, I feel this influenced the attitude of the residents more than it influenced the result of the design. Questions like ‘Do you agree to not getting a room?’ and ‘Water heater or land? (because there is no money for both)’ makes someone aware of his short-comings and say already something about design-possibilities.
In all these cases the participation of the residents is not so much in the actual design process. The term ‘participation’ is perhaps very exaggerated and utopic. There is a strong collaboration between both parties, but never the architects literally sat around the drawing table with the residents. As Maurice Cox said during the interview I had with him: ‘It is not the task of the residents to draw their houses. We, as architect, should do this’. 50

Unless this critical review on the term ‘participation’, the relevance of involvement of the user is visible in the four case studies. These consequences and benefits are divided in several subjects: acceptation, overall responsibility, incremental architecture.

Acceptation
For the team of ELEMENTAL a question as ‘Do you agree not getting a room?’ to the residents of Quinta Monroy is a well-considered question. Experience and research taught them it might be better to save money on the bedrooms so they have the possibility to realize well-built structural systems, kitchen and bathrooms; the
most difficult construction challenges. By discussing this with the residents, the idea, which was already there, gets accepted by them. In this case they needed this acceptance to obtain permission from the ministry to realize the project. This acceptance by the residents of a project eases the implementation of a project. Once realized, people accept the new design, with unfamiliar solutions, which is part of the success of a project.

Incremental Architecture
In the Khuda-Ki-Basti Project and Quinta Monroy Project there is a clear separation between the part designed by the architects and the part designed by the residents. The architects proposed a strict grid, which ensured a clear order in the project and maintained hygiene, safety and accessibility. The informal part, made by the residents themselves, made the project lively and each dwelling individual. The strict order worked as a basis for the project, but was very open so it allowed growth by the residents. I believe this combination of order and informal settlements was the key for the success of these project.

In Tamil Nadu the project did not have the openness like these project, which did not allow any kind of adaption by the residents. Regardless that the architect of this project did not know the living habits of his clients. The architectural form is so close it is impossible to adapt to the residents needs and even worse: the habitants cannot adapt to their new environment.

From the three projects in the developing world, Khuda-Ki-Basti, Quinta Monroy and Tamil Nadu, I learned several things I can use in my own project, Trashy Housing in Accra, Ghana. While the architects of Khuda-Ki-Basti and Quinta Monroy provide a certain openness which seems to be the success of these project, the architect of Tamil Nadu creates a finished project with no space for adjustments.

Overall Responsibility
The difference between a slum an the Khuda-Ki-Basti project is just a simple division of the land. Without this division, people would built their house where they want, without taking into account the influence this would have for the total area. The part we design as architects should provide qualities, laymen cannot achieve on their own. The main thing is to see the project from above and recognize the consequences of certain decisions. This overall responsibility can provide structure and hygiene, which would be overlooked without a professional.

My own design should be open so the residents can adapt it to their needs if necessary. An incremental scheme allows growth in the future.

My design should provide order, hygiene and safety.
Simultaneously to my research on using the participation design method I started a design project to complete my graduation project at the Delft University of Technology in Architecture. Obviously I am interested in sheltering the poor in developing countries and because of my research topic I had to work with real people. The location of the project was of an unimportance. The only location requirement was that it should be in a ‘third’ world country.

**Approach and first contact with Trashy Bags**

February – July

In February I started my search for a design project, but finding a project of this kind seemed to be a project on its own. In February I got in contact with Esther from Delft Centre for Entrepreneurship, who was able to introduce me to Stuart Gold, the owner of Trashy Bags. This company, situated in Accra, capital of Ghana, recycles water sachets and advertising billboards into usable bags. Trashy Bags was founded in 2007 and since then employed around fifty Ghanaians.

Stuart Gold worked with students of the Delft University of Technology before. Most of these students helped him and his employers to design products for his company. However in 2010, two volunteers, Emiel and Arjen, went to Accra to assist a retired Dutch architect on a housing project for the employees of Trashy Bags. At that time, some of the employees slept in the factory, while the others travelled home where they lived in inhuman places. Stuart and his wife Lydia felt the need to do something about their living situation and bought four plots of land with the ambition to build houses for their employees. Unfortunately, by the time Jan van Amstel and the volunteers finished the design and were ready to start the construction, the financial crisis reached Trashy Bags. To save the company, Stuart had to invest the money intended for the housing project into the company, so he was able to remain the jobs of his employees.

When Esther introduced me to Stuart in February 2012, the project had not progressed at all. The design of Jan was quite conventional and became infeasible. Stuart was open to new, innovative solutions and indicated that the workers were excited to start constructing. I was invited to work on the project in Ghana during the summer of 2012.

‘Well the Trashy Housing idea has not progressed as although we had a conventional design prepared we don’t have the money to build. Your student’s idea sounds like a good one under the circumstances. It is true that the workers would just love to start building themselves so to have someone dedicated to working with them to come up with simple and cheap designs - especially using recycled materials would be fantastic because I certainly don’t have time to work on that myself.’
‘I like the idea of you being self-directed but of course being an architect myself I would want to oversee the project while, of course, giving you a free hand to develop it the way you want.’

Despite of a private matter, Stuart would not be in Ghana during the first two weeks of my stay. Therefore we had a Skype conversation specify my goals in Ghana. We both agreed that I would be free to work with the people who were interested in the housing project. The main goal was to get an idea of their aspirations, their abilities and their skills. Would they be able to build during their weekends? How many rooms do they need? How much money do they want to pay for their own house? Beside this research, I would do some practical investigation on the available materials in Accra. We hoped to find other solutions than the concrete blocks which are normally used for constructions in the city. The actual design process would start after my departure, where I could work on the project at the University.

Arrival in Ghana
18th of July – 24th of July

After a long journey I arrived at Kotoka International Airport in Accra. Since Stuart was not in Ghana, Elvis, the manager of Trashy Bags welcomed me in his country. He brought me to my accommodation, where I met Astrid and Annet, two students for Industrial Design in Delft. They arrived one week earlier and would design new bags for the company. They invited me to a party together with another Ghanaian, but since I was very tired I decided to cancel. After he and Elvis had hung my malaria net, they left and I went straight to bed.

The following day Astrid and Annet showed me the company and I met the workers. Only then I realized that the second Ghanaian I met the evening before was Mustapha, the accountant of Trashy Bags and also involved in the housing project. Since he went out with the volunteers I realized the relationship between the volunteers and the workers (as the employees of the company are called) would be very informal and friendly. This would ease the mutual trust I wanted to achieve, what I have learned from my research to be very important in a participation design method. After getting-to-know every one of the company I learned from Elvis and Mustapha which eight workers were still interested in the housing project. I decided to talk with each one of them the following morning about their families and their living habits.
Currently Elvis Aboluah, the manager of Trashy Bags, has an household of four persons, himself and his wife, their 6 years-old daughter and his sister in law.

**Current Situation**
The family rent a single room in Medina, a middle-class area. The room is divided with curtains into a living area - where they eat, watch television and read - and the sleeping area.

The kitchen and bathroom are both shared with the other nine tenants of the compound. The landlord lives with a six-person household in the compound but has his own kitchen.

After school the daughter of Elvis plays - f.e. hide & seek - outside in the compound with the other children.

**Wishes for the new design**

In an ideal house the Aboluah family would like to have three bedrooms, one for the parents, one for the sister in law and one for the daughter and possible other children.

For Elvis it is very important the bathroom and toilet would be private and separated, so that any guest could use the toilet without seeing their towels etcetera.
SULEMANA FAMILY

The brothers, Mustapha and Abdul Sulemana, live together in an 'apartment', owned by their father. Mustapha, as the accountant of Trashy Bags, is one of the participants in the housing project. When the project is realized he would live there probably with his brother. However, as soon as he will be married, he wants to live there with his wife and a maximum of four children.

**Current Situation**

What Mustapha calls his apartment exist of two small rooms of approximately 2 x 2.5 meters. The first room is a living room where they watch television, but this is also the room where Mustapha sleeps on a mattress on the ground. The second room, with the same dimensions, is the bedroom of his brother Abdul.

Four similar apartments are rented by the landlady who has a bigger house for herself and for her sister. In total the compound has 25 residents, who use one single ‘bathroom’, where they wash themselves with a bucket. The water (rainwater) they can fed within the compound where they have a water reservoir. Outside the compound are two toilets, one for the landlady and her family and one for the tenants.

In front of the apartment of the brothers is a small pavement, where they can cook, but normally they eat outside.

The compound is situated in Dakuman, a middle class area.

**Wishes for the new design**

Mustapha wish to have two bedrooms, one for himself and his future wife and children. The other is for his guest. He wouldn’t mind to sleep with his children in the same bedroom, which he will divide by curtains.

Furthermore he wish to have a living room and a separated kitchen, a private bathroom and toilet (which can be in the same space).
ATTAH FAMILY

George Attah, the sales-manager of Trashy Bags lives with his wife, who works as a hairdresser, are planning to start their family very soon and wish to have at least two children.

Current Situation
George and his wife live in Lapaz, a middle class region in Accra, in an apartment existing out of a living room and a bedroom.

The bathroom and toilet is shared with six other households in the same apartment block. They don’t have a kitchen, so they cook in front of the house or eat outside.

In front of the housing block is an open space to dry their clothes but the area is open to the road.

Wishes for the new design
Since the young couple is planning to start a family very soon, they prefer to have two bedrooms. His kitchen should be connected to the living room, but not in the same space. He also wants his private bathroom and toilet, so guest would not see his towels and other personal things in the bathroom.

DOE FAMILY

Derek, who is the floor-manager, sleeps at Trashy Bags more often because of the travel distance. During the weekend he goes home, to see his wife who is currently unemployed and looking for a job. The couple has a child-wish and want preferably two children.

Current Situation
The area where Derek lives is just outside Great Accra. They live in a single room and use the porch as a kitchen. Since this place can be overcrowded he does not like this.

Since the bathroom and toilet is shared with many others they have to wait in a queue to take a bath.

Wishes for the new design
Unless Derek currently lives in a poor situation he has high aspirations for his new home.

When you enter the house there should be a hall before you come into the living room, which is separated from the kitchen. He wants to have three bedrooms, from which one is a master bedroom containing a hall, bedroom, a private bathroom with a separated toilet. The other bedrooms can share a bathroom and separated toilet.

The outside space should contain a porch to sit in front of the house.
Joseph Asare, a designer at the company, lives with his wife and four children. His oldest son, 19 years, studies already but in the weekends he sleeps at home. His daughter (15 years) and two youngest sons (12 and 7 years) still live at home. After they go to school, they stay with their grandmother and aunt, till Joseph or his wife finished working.

Current Situation
The family live together in a single room of approximately 3 x 3 meters wide. The room is too small for all of them to sleep comfortable. During the week Joseph and his wife sleep with the youngest boy in a twin bed, while their daughter and the second son sleep on a mattress on the ground. When the first-born is at home, the daughter also sleeps with her parents. Every morning they have to put the mattress on top of the wardrobe, before they can ‘walk’ in the room. The room has a steel roof, which was blown away one year ago. Stuart paid for a new one. The room is ventilated by one window. Also the Asare family lives in a compound. He shares a bathroom (a space where they take a bucket shower) with the other tenants and landlady. In front of the room the wife cooks on a open fire. This is also the place where they sit on the ground to eat. The compound does not have a sanitation so they have to use a public toilet. The closest is a 10 - 15 minutes’ walk.

The compound is situated in Chorkor, one of the poorest regions in Accra, however central in the city. Nowadays Joseph only have to travel 30 minutes (1 trotro 20 minutes and a 10-minutes’ walk) to Trashy Bags. After they would move to the new housing project, he would have to travel over an hour. Regarding to his current living situation this would not be a problem for him.

Wishes for the new design
For the Asare family a two bedroom, one for the parents and one for their children, apartment would already make a big difference. He would prefer to have his own kitchen and bathroom. And in front of the house he would like a porch, if possible, so he can sit outside in the shade.
Sly, a designer of Trashy Bags, lives with his grandfather who has difficulties with walking. Beside his job, he is a musician. After his work he meets friends in their studio, plays football. When he arrives home he cooks for himself and his grandfather. For now he do not have a plan to start a family yet.

Current Situation
Sly lives in Lapaz, a middle-class area. He shares a single room with his grandfather. The toilet and shower are shared with ten other people. They do not have a kitchen, so they cook outside at a small porch.

Wishes for the new design
Since he does not mind to live with his grandfather in the same room, a single room would do. Sly is the only one who would not mind to share the toilet and bathroom with other people. However, he prefers the kitchen to be private and inside the house.

Because his grandfather has difficulties with walking, the dwelling should be on ground level and he shouldn’t have to walk stairs to reach the toilet nor bathroom.

Kingsly Adu-Boahen, also a designer at Trashy Bags, is married and has two daughters of eleven and two years old. He is the only one, involved in the housing project, who has difficulties speaking English. Sly, who help as a translator was helpful, but still a good conversation about his living habits was difficult.

Current Situation
Currently the family lives in Lapaz in a single room. As everyone else, they also share the kitchen and bathroom with other people. His daughter plays outside the house and do their homework indoors.
After these conversations I noticed these eight people were the ones with the highest functions in the company. Automatically I assumed they also had the highest salaries and probably live in better conditions than other workers.

On Monday I arranged a meeting with the workers, including Lydia, who would also buy one house for her sister, Florence. Lydia told me they would build the project which Jan designed in 2012 and she knew someone – known as ‘the builder’ - who could built it for them. She already worked with him before and he could do it. The workers seemed to agree on this, so I asked them what my role in the building process would be? They answered with: ‘What can you offer us?’

I explained them my architectural background and that I had in mind to design another project for them, which would be more innovative than Jan’s design. To reach this I wanted to know more about their way of living and involve them in the design process so the dwelling would fit to their needs. For them the design of Jan was already good, but if I could make it cheaper it was fine for them.

First Design Meetings
24th of July – 26th of July

As a preparation I analyzed some basic communal dwelling types before I came to Ghana. In a second meeting with the workers I showed them four models: single units, separated pavilions of four houses, one communal courtyard and the row-houses. Lydia was very clear on her choice, the row-house. The others agreed with her and I would work on this model.

Lydia wondered if it was possible to divide the plot into twelve instead of eight. This would make the project cheaper for the others. She would buy five houses instead of one and sub rent them to tenants. Since I would take their suggestions into account, I would investigate this, while I would develop the row-houses.

The following day Mustapha asked me if we could talk in private. He told me that he and the workers were not very fond on the idea of dividing the plot into more than eight. He agrees that more people should have a chance on proper housing, but they are afraid that if Lydia would own five out of twelve houses she would gain even more influence than she has already. He could not mention this before, because he would fear his job if Lydia would know about this.

Beside this, he is worried about what would happen if he would leave Trashy Bags if he would find another job. This is something I wanted to talk about with Stuart as soon as he arrives in Ghana.

In a next meeting I proposed the incremental row-houses which shift from each other. In this way it would be possible to build just part of the house, which they can easily extend themselves in the future. This would ease the realization now, while they still can develop in the future. They ‘liked the idea very much’ and even ‘thanked me for my creativity’.
Besides these offsets I explained them the benefits of a tropical roof in a subtropical climate like Ghana. Since they work with billboards, which are made from a PVC-plastic, I wanted to research if it is possible to make the roof from this material. They understand the benefits of the tropical roof but are pessimistic about the billboard material. However, if I could show them it is possible they think it is a nice idea.

**Arrival Stuart**
27th of July – 3rd of August

The first day of Stuarts arrival at Trashy Bags we mainly talked about the company with the other volunteers and some workers. Only after some days we were able to have a short talk about the housing project. At first he seemed a bit pessimistic on some decisions. I had the impression the main objective in Stuart’s opinion was of a practical and financial kind. For example the reason to choose for a certain material should be familiar by the residents instead of sustainability. It should be easy to build.

After I showed him the Quinta Monroy Project he taught the incremental row houses might have potential. With such a design he is willing to be financial responsible for the common items like foundation, constructive structure, the roof, and sanitation. This is only if it is financial feasible to do so. Therefore I should try to find out the costing of my design.

**Visit to Mustapha’s House**
1st of August

To understand more about the way of living in Ghana, I joined Mustapha to his house. For him it was the first time he brought a volunteer to his house, but he was happy to do so. His father rents a room from a landlady for Mustapha and his brother. Besides this room, there are three more rooms for tenants and the house for the landlady and her family.

When we walk through the porch of the compound (as they call such dwellings), the women sat outside and fried a typical pastry. Mustapha explains me that they would sell these later on the street. The women are surround by some chicken and two goats which are owned by the landlady and some tenants.

In the corner is a water well, where they can fetch water with a bucket. Although the water is not pure, it is a luxury to have a well in this area of town. They clean the water every two weeks with a sieve, so they can drink it. Although Mustapha knows he can get sick of this water, he is sometimes unable to buy bottled water and drinks the water from the well.

He showed me the small room, but unfortunately there was ‘light-off’ (Ghanaian expression for electricity break down). The room was very dark since these is only one small window. The room is approximately two by two-and-a-half meters and contains a...
couch, a chair, a small coffee table and a closet with a television. During the night Mustapha sleeps on a matrass on the ground, which stands against the wall during the day. Behind this room is a similar room with a bed and a wardrobe where his brother sleeps. The shower (an area where they can take a bucket-shower) is in the corner of the compound and is used by all the twenty-five inhabitants of the compound. Just outside of the walled area are two toilets; one for the landlady and her family and one for the tenants. The toilets are not connected to a water system, so they have to use a bucket to flush the toilet. On our way back to the trotro (public transportation), Mustapha shows me the sanitation of the grey water in the area, which are basically gutters on the street. The toilets are always connected to a septic tank.

Design Meeting
7th of August

For a week I worked individually on the design. We arranged another design meeting with Stuart and the workers. I presented the design, which on this moment existed of a zig-zag-formed wall, which created eight open spaces. These are free partitionable by the workers themselves. The tropical roof would be self-carrying and hang over the roof.

During the meeting somebody proposed to build a second layer in the future, when they would have more money. This would have consequences for the foundation. Another problem was mentioned by George, who realized the roof would be in the way at a vertical extension.
Fig 5.18 - 5.20

Conceptual Model showing the separation between company-built (zig-zag structure wall and the roof) and self-built (inner walls).
8 or 16 families?
9th of August – 10th of August

To find out more about the available building materials in Ghana I visited the Ashesi University in Accra Region. In the afternoon I returned to the Trashy Bags where I informed Stuart on the information I found. During this conversation I learned about a misunderstanding between him, the workers and myself. In the last meeting we talked about building a second layer on the building in the future. In Stuarts’ opinion this second layer would be for eight other families, while the workers taught they would own the land from ground till the sky and therefore also own the second layer. Personally I agreed with Stuart that more families should benefit from a project like this. However, till this conversation I always understood the families would own the land and therefore the second layer would be theirs. Meanwhile Lydia entered the office and intervened with the conversation. She knew already about the misunderstanding and strongly agreed with Stuart that sixteen families should benefit from the project. At that moment she already knew the names of these eight workers who would be involved. Since my design was made for eight families I indicated I should change the design, but what was more important that the current eight families would be informed about this change of program. Since it was not the first misunderstanding in the past four years I asked Stuart why he never put anything on paper, so it was absolutely clear for everyone who was involved and what the intentions were of the project. Although he was not fond of this idea, in the end he agreed to compose a contract in which the responsibilities and ownership of each party would be described. Meanwhile I would make a redesign so the project would fit sixteen families instead of eight.

The following day I was supposed to meet Lydia and the seven workers who were already involved in the project on the site, so we could divide the land. I proposed to postpone this date since the project would change, but Lydia insisted to go anyway. I commute with Sly, Kingsly, Derek, George and Asare to the site. Here they started to fire the weed, since they still thought we were going to start construction soon. When Mustapha arrived there as well he seemed to be very upset and after some altercations in Twi (the local language in Accra Region) he explained me he had a confusing conversation with Stuart the night before. I immediately realized it was the same conversation as I had. At this moment Lydia called Mustapha that she wanted to talk with him privately. He asked me to explain the others what has happened. For them it was not the first time Stuart changed his opinion about the project (or decision within the company). With the site on fire, the tensions get high and in the end we decided to arrange a meeting with Stuart on Monday and put down a contract together, which each one of them would sign. They understood

*Fig 5.21 Scheme Participants who is involved in the housing project and what is there role?*
this was the only method to know the exact purposes of the project and with every misunderstanding in the future they would have a document to rely on.

Although the workers saw the day as a waste of time and money, I think each one of them (including myself) had learned an important lesson.

Meeting with Stuart
13th of August – 18th of August

When I arrived at the office on Monday I was asked to approach Stuart and propose a meeting with him and the workers involved in the project. Stuart, who always arrived around lunch break, was not in a pleasant mood. Already after a month, I knew it was better to wait one more day than have a meeting with Stuart being in bad mood. This would probably ensure for some tensions between the parties on itself.

Unfortunately the coming days Stuart was still cantankerous and also I lost hope and spirit in the project through the confusion and tensions around the office.

Meanwhile Kingsly, Asare, Derek and Sly decided not to participate in any meetings with Stuart. They do not want to provoke Stuart and fear to make a bad impression on their boss. Elvis, Mustapha and George, who are able to understand Stuart better than the others, would talk in their place.

All of them had reached a point where they would agree with Stuart on anything, if that would mean the project would be realized soon. For them any decision would be an improvement on their living situation as it is right now.

Visit to Asare’s House
14st of August

The happenings of the last days created a lot of confusion and insecurity in the process. The pessimistic vibe, affected my spirit and will to work for the project. However, Asare and I agreed to visit his house this afternoon and I felt I could not cancel on this. Besides I knew it would be useful for myself.

After break time we took the trotro to his neighborhood for 20 minutes. From there we had to walk for 10 minutes from the bus stop to his compound. The area was so polluted we took bridges over rivers of trash, goats standing in the middle of to find something eatable. Asare told me the smell was not so bad (I could not agree less) because of the past rainy season. It would be worse in the dry season.

We arrived in a compound, crowded with laundry, baskets and pan. Somewhere in the back a women was just hanging her laundry on the line. He welcomed me in his house, which exist out of a single room approximately 3 x 3 meters wide. The coffee table was placed on top of a twin-bed, where he would sleep with his wife and his youngest son. During the night
he would place a mattress on the ground where we were standing right now for his second son and his daughter. Since there was a big wardrobe, with a couch on top of it, the mattress would fold a little bit but it was ‘okay’. His oldest son, lived in a dormitory on school, but when he returned home during the weekend, Asare would sleep in the chair which stand between the bed and the wardrobe. The room, where they sleep with five to six people was ventilated by one small window.

In front of the house stand a small fireplace which his wife used to prepare the meals. In the corner of the compound they shared a similar shower place as Mustapha has, with the other tenants. Unfortunately this compound had no water reservoir so they have to walk ten minutes to fetch the water. As most compounds in this area, they also don’t have any toilet. The family uses a public toilet, which is a fifteen minutes’ walk.

When the housing project would be realized, Asare would have to commute more than double. On our way back in the trotro I ask him his opinion in this. He is very clear that he would not mind at all, since the situation he lives in right now is unbearable. Than he begs me to convince Stuart to give them the land so they can build themselves. After four years, he does not believe Stuart will be able to finance the project, but they can do it step by step if he let them. He promises to build my design, since he knows the last thing Stuart wants is a copy of the slums.

The visit to Asare’s home made me realize why I was so devoted to shelter the poor in developing countries and found my spirit again to work for this project. The following day I approached Stuart to have a meeting with him, myself, Elvis and Mustapha (George was on leave for personal matters). He was open for a meeting with them, but not before we had a proper design and knew the cost of that design. In this case we would have a clear proposition we could show the workers. We agreed I should work on the design and find out the cost together with Lydia and the builder.

**Compound instead of row-housing**
27st of August – 7th of September

In the week after this decision I travelled north to see the traditional mud-houses. During this week I was able to see many different dwellings and I noticed the majority existed out of compounds instead of the row-houses we were planning. I realized I made a rookie mistake to assume the opinion of the future-user is a well-thought and therefore the best decision.

There is a reason why Ghanaians live in compounds and not in row-houses. The workers see it as a system where the landlord or lady is the owner of the compound and has several tenants to have an income. Especially the way of paying the rent, which they have to do 2-years in advance, brings difficulties for the tenants. They don’t have the change to own something and every two years they have to pay a lot of money, they mostly do not have. Luckily enough the workers from Trashy Bags have the possibility to lent this money, rent-free, from Stuart.
This way of ownership and payment is indeed not preferable, but this does not go for the architectural form of the compound; a walled semi-public space where they can benefit from communal safety. For example, in many compound one mother or grandmother stays at home and takes care after the children, while the other mothers go to work. Besides this free childcare, chickens and goats walk in the walled area. Beside the social control between neighbors is enormous and is part of the Ghanaian culture.

After my journey I submitted my finding to Stuart, who understood my point of view, but also believed people wanted a way forward and saw this in row-housing. We agreed I could have a meeting with Elvis and Mustapha to learn their opinion.

So one evening, Elvis en Mustapha stayed in after closing to work with me. Despite of ‘light-off’ (the expression for an electricity failure), we were unable to use my computer. I took them out for dinner, where we had an interesting discussion about compound housing. Indeed, when I asked them their opinion, they immediately said that they wanted to own a house instead of renting a room from someone. Of course, the 2-years deposit made everything worse.

After explaining the this was only a matter of ownership and payment, but not of an architectural kind, Elvis understood what I wanted to know. He confessed that his daughter could now play with the other children in the compound and it was easy to find a baby-sitter when needed. However, he does not prefer the houses in a compound, since they are always small single or double rooms with a shared ‘bathroom’, toilet and kitchen. In the end, both of them agreed that if the individual house would be of the same kind as in a row-housing-block, the compound was preferable. However, they do not want to be the one to make the decision, this is up to Stuart since he would finance the project.

In the last week of my stay in Ghana I mostly worked on drawings, the builder could use to realize the project if Stuart was able to get the funding. Unfortunately, despite of communication problems between myself en the builder it is still unclear what the exact price of the project would be. I believe this will stay unclear until the project is finished, because nobody asked him before such a question. How he does it normally is that he build until the money is finished and starts again when there is money again.
When I left Trashy Bags, every worker, also the one not involved in the Housing Project, was thankful for my effort and time I spent with them. As much as this made me happy, it made me feel guilty since, in my opinion, did not succeed. The design, which Stuart and the workers, appreciate and were willing to build, was probably never to be build. Not because my incapability, but because no one there felt responsible enough to continue and the financial means where probably insufficient. These two reasons are not to blame on me, but my time in Ghana felt useless for the ones in need and I was the only one who really benefit from it, since I had a great experience and gain knowledge for my graduation project. Meanwhile I gave people hope, which will likely be unanswered.

As much as I want to give them their own house, I believe this is probably for the best. As soon as the project would be realized, the workers would live in a house, partly owned by their boss, most likely without any contract; nor for to prove their employment at Trashy Bags, nor to prove payments of their house. So, as soon as something happens; one finds another job, moves, or get fired, they could lose both their income and their roof above the head at one single day.
In 2007 Stuart Gold opened the company Trashy Bags and employed about 60 workers. To give his workers a chance on proper housing he bought a plot of land and let a design made for 32 workers. Ready for construction, the government made plans to construct a road over half of the plot. This, but also the financial crisis, put the project on hold.

In the beginning of 2012, Imke van Leuken was in search of an architectural graduation project in the developing world and came in touch with Stuart Gold. They agreed she could work on the project with the 8 workers who were still interested in the project. She visited Ghana and first made an overview of the involved workers and their families. In a first meeting with the 8 workers they agreed she was going to design a new project. After an individual design, she presented three concepts and one (row housing) was chosen in another meeting by the workers.

After another design session on the chosen concept, everyone involved seemed to be satisfied with the design. At first one layer would be built and when enough money was available a second layer would be built on top. However, in a private conversation with Stuart, Imke learned there was an misunderstanding between him and the workers about the amount of involved residents. In his opinion the second layer would be inhabited by 8 other workers, while the already involved workers taught it would be theirs.

When the workers learned about this misunderstanding, they lost hope in the project and some decided not to participate in the meetings anymore. They would agree with what Stuart and the other workers would decide. From now on the project would involve 16 households and be built in three stages; first layer of 8 dwellings, a second layer of 8 dwellings and the tropical roof.

Meanwhile, Imke had been in Ghana for more than a month. After a research on the living habits of the Ghanaian, she realized the concept, chosen in the first meeting, did not fit with the living manners of Ghanaian. She had a meeting with two of the workers on this topic and they decided to change the row houses into compound houses, with the same properties of the individual home.
CONCLUSION & RECOMMENDATIONS
The positive atmosphere in the literature on Participation Design Method gave the idea this method was the most sufficient method to overcome the cultural differences between architect and user. General recommendations were given by the authors, like the importance of gaining trust by the community. Why this trust was so important was hardly described nor the way to do so. Henry Sanoff was one of the few writers who gave specific recommendations in his book *Designing with Community Participation*. He described f.e. the importance of proposing multiple options to the residents so they had to compare one with another instead of (dis)liking the only option without a clear reason. However, the projects described in his book were only theoretic. At the end of his book I still did not know how to guide a participation design process with real people. Therefore I decided to write a manual for architects, how to use the Participation Design Method in reality. I proposed the following research question: How can the Participation Design Method help a designer, in an effective and social manner, during a design process within a different culture than his/her own background?

In this manual the focus should be on the actual design process and not on the management of such a process, like V. Desai described in *Community Participation and Slum Housing*. Analysis of case studies, were supposed to be the starting point for this manual. The focus was on the designing processes of these case studies and described the significant meetings between architect, future residents and others involved in the process. Meanwhile I described the architectural consequences of this collaboration.

Gradually it became clear that Participation Design did not imply a collaboration between the architect and user at the actual design table. In all the case studies I noticed a strong relation between architect and user, but none of the future residents actually drew or designed their house. With this insight the term Participation Design Method is an overstatement and implies something utopic. Sometimes I felt naive to believe in a perfect world, were laymen came together with a professional architect and design their perfect house. However, the term implies this situation and is thus incorrect. While in theory, participation means collaboration, the term implies involvement in reality. Then again, Involvement Design Method gains the same questions as I clarified in the chapter "What is Participation Design Method?: Involvement of who?" While optimizing the term in itself, we should also question the meaning of design method. Therefore I would like to cite Wikipedia: When process and method are discussed, they tend to be used interchangeably. However, while they are two sides to the same coin, they are different. Process (lat. processes–movement) is a naturally occurring or designed sequence of operations or events over time which produce desired outcomes. Process contains a series of actions, events, mechanisms, or steps, which contain methods. Method is a way of doing something, especially a systematic way through an orderly arrangement of specific techniques. Each method has a process.

51 Thesaurus 2012

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51 Thesaurus 2012
While f.e. brainstorming is an obvious design method, involvement of the takes place on certain moments in a process and certainly helps with the designing, involvement is not a design method in itself. The correct term of the method I propose is as follows: Involvement of the end-user in the Design Process.

When the literature would have used the term Involvement of the end-user in the Design Process instead of Participation Design Method, I would agree that the method is a good way to design development architecture. To design proper buildings, it is necessary to know and understand our clients, and this is possible by involving the users in the process. Simultaneously the user will understand decisions we have made during the design process and therefore accept and understand the design. Still a good manual on how to guide such a process is missing. The unexpected results of my case studies, made it impossible to write a manual before my departure to Ghana. On the other hand, if there would have been a manual, I would have thrown it away the first week of my arrival. Because of so many reasons it would have been impossible to sit around the table and design a proper house together with the workers of Trashy Bags: the sensitive tensions on the work floor of Trashy Bags, the fear of the workers to say anything out loud in front of their boss, the lack of reading drawings nor models of the workers, the misunderstanding of the purpose of my visit between me, the workers and Stuart and so on. A manual for such a design process is impossible, because of the unpredictability of people and their relations. Nevertheless I propose some recommendations based on my literature study, the analyzes of the five case studies and my own experience in Ghana.

RECOMMENDATIONS BASED ON LITERATURE STUDY

Trust by Informal Meetings
Trust is an important base for a good collaboration between two parties who are different from one and another. In my own experience I noticed Ghanaians look up to people who have a higher value than themselves. This means elderly, their employer, and unfortunately also white people. A daily example for this is that they would always say ‘I’m fine!’ to a higher valued person, also if they are absolutely not. In projects with a strong collaboration between a project manager or a designer (especially if they are white), this would mean the ordinary Ghanaian agreeing on everything what is said. This can easily lead to a project which does not fit to the user at all.

If the designer is able to win trust with the locals, it is possible to come across this politeness and get a truly view on their opinion. This happened to me in Ghana, but I believe this is possible in every culture.

To win this kind of trust it is important to meet the locals on an informal basis and participate in their culture and rituals. Besides
learning their culture it is necessary to show them who you are and be open to them as you wish them to be to you. This can mean going beyond a professional relationship with them and become ‘friends’ with them.

**Work with Models**

Most of the clients in developing architecture will be laymen on this subject. If we show them architectural drawings they would not be able to get the essence of these drawings. Therefore it is better to work with models, if possible 1:1, so they can get a clear picture of the project.

However, even then it is important to explain the essence of the project and show the consequences some decisions will have for them personally.

**Propose Multiple Options**

Each time a design is shown to the clients, it is important to present multiple options. This will force them to make a comparison between the options and weigh the benefits and disadvantages of each one of them. Perhaps the outcome is that some points of version A are preferable within version B. If only one version is proposed, they will either agree or disagree with the project as a whole without really considering it.

If the residents will make a decision on one of the versions, it is still important to revise them as a professional and look to the reasons why they prefer one above the other.

The used literature handle many reference projects, which used the participation design method. Unfortunately when I started analyzing these processes, hardly anything was said about this process itself. How did the end-users participate? What were the consequences of this participation? How did the architect and the users work together? Where did they meet and how often? In the end I was able to map four case studies and describe the most important meetings of different parties.

**Involvement**

Only after these analysis of my case studies, I realized the atmosphere created by the literature was very utopian. In none of my case studies the architect literally designed together with the end-user of the project.

My main conclusion, which evolved my research question was made: instead of participate the end-user in a design process I believe we should involve the end-user in the process. Hereby I mean it is important to know the client (their wishes, need, assets, living habits) and involve them in important decisions which will affect their future living environment. However, the design is mostly done by the architect and therefore I agree with Maurice Cox: ‘It is not the task of the residents to draw their houses. We, as architect, should do this’. 53
CONCLUSIONS BASED ON CASE STUDIES

Acceptation
Involvement of the end-user will ensure the people to accept the project as their future house, since they know why certain decisions are made. This can ease the realization of a project and prevent dissatisfaction of the client.

Incremental Architecture & Overall Responsibility
Beside these insights regarding to the design method, I was able to recognize some similarities in the architectural results. First of all the architects were responsible for the projects as a whole. He ensured order and hygiene on a communal scale.

The users themselves, who are seen as laymen in construction and design, are perfectly able to construct a simply shelter. However, structure, sanitation and safety are more difficult to realize and therefore the responsibility of a professional.

The most succeeded projects of my case studies, which I believe to be Khuda-Ki-Basti Project and the Quinta Monroy Project, used an incremental architectural scheme. A grid is provided which is extendable by the residents themselves, if they have the need and means for it.

Work with contract
During my stay in Ghana I noticed a lot of miscommunication between different parties involved in the project. To overcome this I recommend to work with clear notes of meeting and make sure everyone agrees on this.

Since an architectural process can take years to realize, these notes could be used as a reminder to solve future disagreements.

A contract, which describes the involved people, their responsibilities and their ownership would have overcome the main conflicts I experienced in Ghana. While contracts are mostly common in the western world, in developing countries like Ghana, many decisions are taken verbally.

Research before Design
Although I planned to investigate the local living habits of Accra before I start the design process, the workers of Trashy Bags did not expect this. For them the research seemed to be useless, especially because of my short stay in Ghana. I decided to start the design simultaneously with the research.

Already in the first week of my stay in Ghana, the residents chose a design from the multiple options I presented to them. But only after a few weeks, I realized this decision was in contrast with their living habits. Therefore it is important to do a good investigation on the people, their habits and so on, before proposing a design.
GENERAL THOUGHTS

Beside these conclusions and recommendations, based on literature, case studies and my experience in Ghana I would like to emphasize that a process with laymen is mostly not only about designing the project as an architect. It could mean that most of your time is spent on finding funds or investments, teaching people how to build, getting permissions and so on. Meanwhile, be aware of the fact you are working with real people, who will raise hope only by your arrival. It could be their only chance of a proper home.
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APPENDIX 1 INTERVIEW WITH JEFF HOU

I. van Leuken: As goal of my research on ‘participation design method’ I hope to propose a manual for designers how to conduct this method and involve the user thoroughly in the design process and decision-making. We do you, as a practising architect, believe it is important to engage marginalized communities through participation design?

In your career you worked with many communities, from indigenous tribes in Taiwan to inner-city immigrant in North American cities. Do you have a general approach to achieve active participation from the people in the design process? Could you describe this approach? And if you don’t have a general approach, why not?

J. Hou: The exact approach is always different from community to community. But generally, we focus on understanding the community and the broader social and political context as the first step and with capacity building as a general goal, rather than a physical product.

In Expanding Architecture: Design as Activism you write about the design process of the Ta’u Houses. During this process the team tried to create a meaningful participatory process by following the established norms for the practice of professional community design. How would you describe these norms?

We did, but it didn’t work given the distinct cultural context. The professional norms included interviews and workshops but these were not part of the cultural norms for the local community. The chapter provides more details.

During this process you had the difficulty of the Ta’u culture and it’s taboo to talk about their plans. How did you handle with this? Did you try to gain more trust and convinced them to talk to you or did you respect their culture?

We tried secret ballots. We had established trust by that point and continued to respect their culture.

Before the elementary school let you build their cultural classroom you were already working on the island, building prototypes and conducting workshops and interviews. What kind of prototypes did you built? Did you built them just with the design team of together with the local?

The elementary school was the first built prototype, constructed with the help of the local.

Could you describe more about how you conduct the workshops? What was the goal of these workshops? Did you design or built the prototypes together with the locals during these workshops and how did you organize this?

The workshops involved simply presentations of proposals and discussion. The goal was to share information and invite inputs. The workshops were just a starting point. Much of the discussion were extended into informal conversation. Although not much was accomplished during the workshop, it was necessary to share
information and be transparent. The workshop did not involve any construction.

And how about the interviews. Did you interview all the residents or just the leaders? Did you just talked with them or held a survey? What did you learn from this?

We started with the leaders and then every household in the village. There was no structured survey. We learned about the individual perspectives and varying circumstance of the families and gained a much deeper appreciation of their life experience and struggles.

With the findings of my research I hope to write a manual which can assist designers and project planners during a participation design project. Do you believe it is possible to propose such a manual, which is applicable in every situation? If possible, what would this manual look like?

There are already several manuals available, such as Randy Hester’s Community Design Primer and City Repair’s Placemaking Guidebook. You would want to be specific about how your manual is different from the existing ones. It’s good to reference available sources, but I would warn against universal approaches if that’s what you intend to do.

APPENDIX 2 INTERVIEW WITH BRYAN BELL

I. van Leuken: In your books you talk about the importance of the participation of clients in the design process, so they have influence in decisions that shape their lives. To involve the community in the design process you state, it is necessary to gain trust between designer and user. Why is this trust so important? Is it difficult for the community members to trust an outsider immediately?

B. Bell: I like to compare a good designer to a good doctor. The best process is one of listening carefully and not just jumping to conclusions. The best solution is often a discovery, something we did not know. This discovery happens best when there is a relaxed trusting flow of conversation. For example, I had a cough for years. I went to several doctors who looked down my throat and gave me cough medicine. Finally I met a doctor who asked me about what I liked to do. After listening, and probably observing my tanned skin, he asked if I liked to swim in streams and lakes. I said yes, often. Then he looked in my ear and found an ear infection. He prescribed antibiotics and I’ve never had the cough again. I didn’t realize he was being a good doctor, I thought he was just a nice guy. But our conversation, which involved a degree of comfort and trust, made him a very good doctor. In another example, when I first starting designing migrant housing, I would ask migrant workers if there was any problems with their housing. I did not understand that they could easily be afraid that they would be fired if they complained.
What is the best approach to achieve this trust?

I always try and work with through local organization that has established trust from the end-users of the building/project. Our introductions involve who we are, why we are there, and that we can be trusted. In the design process, we earn trust by showing that we listened and that their input is having an important and direct impact on the decisions.

To understand the needs and assets of the client it is necessary to get to know the clients and listen to their stories. Different methods are familiar like surveys and ‘get-to-know-you’ meetings. Which is the most effective method and what is the best manner to execute this?

I don’t think there is one best way. I think we need to find local methods and venues to have these conversations, and this may soon be online. In many cases, community meetings are not the best way. The people being served may not go to meetings. Charrettes and public hearings are also pretty poor forms of democratic decision making. I am optimistic that digital means could be a democratic design as it has to democratic processes such as the Arab Spring. SEED Evaluator is a first effort at this, where people can track projects. We will be adding a voting process soon.

The next step is the actual design process. How would you describe a good approach to develop ideas from the clients? It seems to me the clients are not able to show the essence of their ideas in architectural drawings.

I agree, clients are not the designers. That is why we are needed. I see this as shared expertise, both needed for a valuable solution. Designers need the expertise of the end users in what the challenges are and how they can be met, and the client needs the designers to make these into realized solutions. Designers are the form-givers, this is our unique gift among society. We have to use this gift, as well as our unique education and experience, to shape the built environment for everyone else. This gives us a power that we can use well or abuse. We have not used it well.

How can you involve the community members in decision-making? I can imagine a voting between a few options could be effective, but too time-consuming for every decision.

Just like a doctor explaining an operation in advance, a designer should be clear in advance at what points the community will be invited to vote. The community should agree with this or adjust it. Then they can relax and know that they will be asked for input at those benchmarks. The votes should be shared on-line. If you didn’t vote, then your opinion was not counted. I think making this transparent will encourage more engagement in these processes.
I imagine the most ideas come from the designer. How do you show these ideas to the clients, who are unfamiliar with reading architectural plans and models?

You’d be surprised. The first time I custom designed five houses for farmworker families, we had a meeting for them to show each other their plans. I asked each family to present. I was amazed and they did as well as I could have. The best way to achieve this understanding is to consider a small amount of information at each meeting. Presenting too much, such as a single 3-D rendering, leaves them only to say “I like it” or “I don’t like it.” Even if they say they like it, does not mean they understand the hundreds of issues represented in one rendering and finished plans. Then at the next meeting, you review the conversation of last time and how it is not in the design, and whether that works, before you go on to more information. In single family homes, we are able to break the total design process effectively into five meetings.

When we, as architects, design a private house for home-owner we talk with the client, listen to their needs, wishes and ideas. Afterwards we transcribe this into an architectural design. What is the difference between this approach and participation design with a community?

Fundamentally they are the same: respect and collaboration. My mentor Sambo Mockbee taught me that there is poetry in every person and community, no matter how under-resourced they may be. The design challenge is not to address the functional challenges but to dig and find that poetry, then express it in the design as a celebration of that person/family/community.

The SEED Evaluator assist individuals, groups, designers, communities, project planners and participants achieve goals that are focused on social justice, economic development and environmental conservation. A manual which can assist designers and project planners, guide the actual participation design project is still missing. Do you believe it is possible to propose such a manual, which is applicable in every situation? If possible, how would this manual look like?

The SEED Field Guide is underway. It will explain the next version of SEED. SEED 3.0.