

# COLLABORATION AS THE KEY TO IMPROVING INFORMAL BUILDING METHODS ON SINT MAARTEN

The changing architectural approaches towards public  
developments

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## I INTRODUCTION

Research is a vital part of the architectural profession to contribute to the knowledge surrounding architecture. The built environment is becoming more complex because more people are moving from rural to urban environments than ever before. These densified environments are interesting for their social, cultural and political relationship with each other. When architects are asked to intervene in such an environment, research is necessary to understand all the powers that be in such contexts. The methodological framework that is formed to find the answers to context related questions, defines the scope in which data is analyzed to be translated into architectural solutions.

Calle-Escobar (2014) describes the fundamental purpose of heuristics: “to create a structure for the existing knowledge in order to ensure a logical route for its reuse in the future”. For architectural practices it is important that the knowledge and experience are available and effectively structured to make sure that it is useful for the organization in the future. Heuristics in architecture therefore play a part in the profitability of architectural practices. Architectural practices use the experience that is present within the company to form methods of practice. Those are used to streamline different stages of the design process to get the preferred result but also to make the process as fast as possible to ensure that it is executed in good time to make the process profitable.

The realization that research methodological awareness is such an essential part of architecture is what opened my eyes the most. It also made me more interested in the less straightforward approach towards the architectural profession. Starting my bachelor's degree at this same university, there has always been a certain standard or expected road that should lead you to a 'junior-designer' position at some big architecture firm. This road has interested me less and less especially during this graduation track, and specifically this course, where I started to explore new ways in which architects can position themselves to build a better world. What resonates the most is what Avermaete (2010) discusses about more refined architectural attitudes towards the public and specifically the position as architect-facilitator. The perspectives discussed from Giancarlo de Carlo and John Turner that the “design and building process is disconnected from the life and aspirations of common man” and “that housing is best provided and managed by those who are to dwell in it rather than be designed and administered by others”, are very similar to my own perspective towards my graduation project and in general.

My own graduation project focusses on Sint Maarten, an island which is part of the Leeward islands in the Caribbean. The research program that supports my project revolves around the informal building methods on Sint Maarten. In my thesis I aim to dissect this phenomenon and explore how these informal building methods could be improved by answering the question: How can the government of Sint Maarten reclaim control over the informal building culture on the island in preparation for future hurricanes? A large part of the problem is the instability of the government and that the informal settlements have deeply ingrained themselves into the urban fabric. I believe that a collaboration between governmental departments and citizens can help facilitate the improvement of the informal areas on the island.

## II PRAXEOLOGICAL FRAMEWORK TO ANALYZE THE BUILDING CULTURE

The research question proposes several points of research but building culture is of main importance. The demographics of the island are interesting because of the many nationalities which results in a mix of building knowledge and this makes the built environment very inconsistent and unorganized. The (heuristic) methods used to get a better understanding of the building culture and how it developed is largely based on qualitative research. Getting to the root of the informal building culture requires to dive deeper into the qualitative state of the government of Sint Maarten. A background description is formed by a literature review of official research documents by independent instances but also by simply reading newspaper articles. Through an interview with a local structural consultant, observations during field work with an organization that deals with the described informal building culture on a daily basis, literature review with corresponding governmental meetings and direct observations of the informally built neighborhoods, a clear description can be made about the state of the described phenomenon. These analytic tools help analyze the current situation but more importantly which steps are being taken

to improve the current qualitative state. A case study research into projects that deal with similar conditions reveals how certain contexts correspond well to the approach that is taken.

The heuristic assumption that the destruction on the island after a hurricane is a result of informal building comes from the reasoning that a hurricane prone area probably has some sort of a building standard that prevents houses from being destroyed. Yet, statistics show that 91% of buildings on the island were affected. Another assumption that the informal building culture would be a result of political malfunctioning comes from the reasoning that the building standard which most likely should exist and should be used is not being enforced (resulting in destruction).

The research approach I used firstly attempts to prove that these assumptions are valid through observations during the field trip and a literature review. Additionally I try to discover which purposeful actions are at the root of causing these phenomena. The sub questions are essentially concerned with the behavior of people on the island and conclusions are drawn from these findings. Knowing that you live in a hurricane prone area and still intentionally choose to build informally (not according to permits, not hurricane proof) shows that these people do not have a better choice in the situation that they are in.

The praxeological framework (qualitative research methods), which supports the conclusions drawn from these findings, aims to discover what the intention is behind the action of informal building and the reason behind the lack of engagement from government. These were unknown pieces of information which could only be discovered by experiencing the island first hand. The corresponding methods essentially uncover why people act how they act and which approach can be taken to improve on the situation that many people find themselves in. Only having spent two weeks on the island, there has been little time to execute other praxeological methods. Towards the approach for improving informality it would have been valuable to have conducted a survey to gain knowledge into how people live in (or would like to improve) their homes and how they make use of (or would like to improve) their public spaces.

### III ETHNOGRAPHIC RESEARCH IN ARCHITECTURE

The qualitative research methods described before focus on the social practices and interactions or ethnography of the people on the island. Ethnographic research is the practice of writing about another group of people as described by Lucas (2015). As is usual with ethnographic research one spends an extended period of time (months or years) with people of another culture in a different part of the world. 'Talking to them about how they understand the world'. While I was not able to spend more than two weeks in Sint Maarten, this was exactly my aim for the research: to talk with people on the island about how they experience different aspects of their built environment.

Ethnographic research in architecture aims at gaining knowledge about a certain unknown place where there are potentials for architectural improvements. *Observing traces* can be a useful research tool to produce valuable insights at the start of a project, test hypotheses in the middle and a source of ideas and new concepts throughout. A trace can induce questions about the cause, what the intention of the person that created the trace was and how the trace got there. Yet, one trace alone cannot indicate how justifiable the hypothesis is. Follow up interviews can verify the context around the trace. For example, in an evaluation of a housing project in Roxbury, Massachusetts, Zeisel noticed large well-kept flowering bushes in residents' backyards. At first observation he assumed that they kept their gardens that well because they cherish the appearance of the project. This appeared to be a false assumption after interviewing people who told him that the shrubs had been planted years before when the management of the project organized a competition for the best garden. Then at a second glance he noticed that the largest portion of the well-kept shrubs were actually neglected (Zeisel, 2006).

The ethnographic architectural research approach has changed where instead of a *designers perspective* on evaluating a building, the *inhabitants' perspective* on how they evaluate their living spaces proves to be more valuable (Pavliades, 2011). This illustrates how the role of the architect has changed from an authoritarian, all-knowing architectural specialist to a specialist who collaborates with inhabitants. The exchange of knowledge from the inhabitant to the architect helps the architect in understanding which architectural spaces are appreciated by people that occupy them. The observation of traces then gains another layer to make the hypotheses that follow from them more justifiable.

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Giancarlo de Carlo was an Italian architect, planner, writer and educator who was one of the fiercest critics of what he saw as the failure of architecture in the 20<sup>th</sup> century. His article *Architecture's Public*, remains a influential text on the necessity for the inclusion of users in the design process and the inherently political role of the architect. The two basic differences between planning for and planning with users lie in the *quality of consensus* and *quality of plan* on which the architectural intervention must be based. When planning with users 'the act becomes liberating and democratic, stimulating a multiple and continuous participation'. Planning with users keeps the consensus permanently open and can be renewed by confrontation with the planned interventions through the whole existence of the project which makes it more resistant to the 'wear and tear' of unforeseen circumstances and changing times. Participation with users transforms architectural planning from the authoritarian act into a process. Starting with the discovery of users' needs, incorporating them in the formulation of formal and organizational hypotheses before moving to the phase of use (De Carlo, 1969).

The Bijlmermeer development is a famous modernist plan that was supposed to be the city of the future. The plan carried modernist ideas about dense living and putting people in the sky and keeping the ground floor clear with communal spaces. It should have been a prime example of the CIAM ideas but the plan failed because the users were not involved in the planning of the project and did not enjoy living in the apartments of the "city of the future". As a result the buildings were not fully occupied and a group of Surinamese-Dutch citizens started squatting in the empty apartments. Due to legal complications to move people out of the apartments, these people were given legitimate leases and more Surinamese people started moving to the Bijlmer along with people from different countries like Morocco and Turkey. Because the target group, that the Bijlmermeer was designed for, did not want to pay high rents for those apartments, groups that were discriminated against, where pushed out of Amsterdam city center or could not afford housing elsewhere moved to the Bijlmer. In the 1980s about a quarter of the apartments were still empty and many people could not pay their rent. Therefore the housing association became broke and could not afford maintenance to the buildings which started to fall apart. The 'city of the future' had become the 'drain of Dutch society' (Mingle, K and Bajema, C, 2018).

The Bijlmermeer is a extreme example of how the 'arrogance' of the architects and planners can result in a the construction of a idealistic futuristic city that is not designed to the standards of the targeted groups. Around the time that the Bijlmermeer was constructed, Giancarlo de Carlo published his paper about the idea of "planning with" users to adjust designs to users' needs. This especially applies to large projects such as the Bijlmermeer but also to smaller projects like a residential home. Ofcourse, the architect has knowledge about designing homes, construction principles, materials and so on, but it is necessary to collaborate with users to ensure the sustainability of a project.

## IV PARTICIPATION TO IMPROVE THE INFORMAL

With my research I aimed to discover what the cause was of informal building on Sint Maarten and try to find a approach to improve this informal building culture. The heuristic methods chosen to discover the cause was by analyzing inefficiencies in governmental functioning that could influence the built environment. To me this was a important aspect of the research to understand the context better. Being on the island I realized the island was so severely damaged after the hurricane due to the informal building culture and that realization became the main fuel for most of my research. Whereas before going to the island I had no conception for a project that could improve the lives of inhabitants on Sint Maarten. After talking with experts, government officials, and people from a NGO on the island it became clear that at the root the cause of the destruction was due to governmental instability which expresses itself in the informal building culture on the island. The NGO which is executing a home repair program on the island is consciously working in collaboration with the local builders and along the road of repair providing knowledge regarding hurricane resilient building methods.

Even though ethnographic researchers normally spend months or even years in a different country, my qualitative research contains some corresponding ethnographic methods such as interviews with locals (construction experts and citizens) and direct observations through photographs, audio recordings and meetings with government officials. Additional praxeological methods with the aim of gathering information about how people live inside (or outside) their homes and use their public spaces,

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through surveys for example, would have been a valuable addition to my research. Especially towards finding a solution for the informal settlements on Sint Maarten. Berkers (2019) addresses in her lecture that 'by studying the praxis of architecture one can develop an eye for the actual users of building, and not the imagined ones'. The hypothesis that follows from my research is that the solution for improving the informal building culture on Sint Maarten lies in the cooperation between the government, available building knowledge from experts on the island and of course the users. There are many examples of projects where large areas are developed by government to provide affordable housing solutions but often these are not successful. Shown in the case study of Casablanca where government has doubled down on efforts to eliminate substandard housing conditions and pledged in 2017 to build 800,000 affordable housing units over a five year period. Obviously in this case, the main focus was on quantity rather than quality. These projects lacked meaningful public spaces, social cohesion and connections to the existing city (Berkers, 2019).

As de Carlo describes, by including inhabitants into the planning process the act becomes liberating and democratic, stimulating a multiple and continuous participation. This notion was neglected in the planning process for the Bijlmermeer development plan due to the "arrogance" and belief in modernist qualities for design which neglected the qualities perceived from the perspective of the proposed inhabitants. Another architect and theorist who shares similar opinions about the approach towards public projects is John Turner. A analogue he uses to describe the approach the government should take regarding housing action is by comparing the central government to the organization of a professional football club. 'The role of the club's directors is not to score goals. And it is just as foolish for central government to attempt to provide houses' (Turner, 1976). In fast urbanizing countries with 'free market' and 'mixed' economies, it is a rarity to find low income households housed in the projects that were designed for them. Even if they are it is common to find that they are behind on payments for rent and purchase. Additionally, the costs of construction and management of publicly funded 'low-cost' housing developments are often at least double the cost of the equivalent housing built by the informal sector.

While citizen participation is already common in most local governments and is seen as an important mechanism for achieving development gains, strengthening local accountability and empowering citizens, the relationship between citizen participation and participation results can be complex. Effective participation from citizens often depends on the building agency of diminished groups, assemblage of citizens and the establishment of dynamic social networks (Pandeya, 2015). While my research does not specifically address these issues, it does show that there is a lack of collaboration between the government and citizens. The different neighborhoods on Sint Maarten which were subject for the repair program were divided between the Red Cross and the government. The neighborhoods where the Red Cross has been active, significant improvements are visible. In contrast to the neighborhoods assigned as the government's responsibility where little improvement is observed.

As an architect one is an expert in design and building technology (broadly spoken). In the context of Sint Maarten and the 'informal' building culture that exists there, an architect (and myself as an aspiring architect) can have an advising role regarding the design and construction of public or individual projects, but in this case there is a necessity for a mediator between locals and government. Interpreting and translating the needs of locals into architectural needs and communicating this with public officials. There have to be certain policies present to support sustainable development of projects but government should not attempt to build houses (Turner, 1976). My position as an architect would be the architect-facilitator as described by Avermaete (2010) where collaboration with inhabitants would be key to succeed with architectural projects to improve the building culture. Encouraging participation from local builders to provide employment opportunities and gain trust from locals and facilitate political goals would be a good solution to Sint Maarten's problematic.

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