1 City Models

When looking at cities, different kinds of city models have helped to understand the development of urban areas worldwide. The background of their creation was the assumption that urban areas follow certain characteristics in the course of their development. The most widely published city models are the three prototypical models created by Burgess, Hoyt and Harris & Ullman (cp. Kivell 1993:19).

The first one by Burgess (1925) shows how a city develops from a centre in concentric circles: In the core there is a central business district with diverse functions. The further away one moves from the centre different zones follow almost like shells around that central core, each with different functions: a transition zone, low and high quality residences and a commuter zone on the urban fringe. Developments like this can be seen for example in cities of the American Midwest, such as Wichita, where cities grew in an area that was almost devoid of limiting natural borders in what one might see as “terra nullius” regions in terms of permanent settlements.

Figure 1: City models: 1 Concentric Zone Model by Burgess (1925), 2 Sector Model by Hoyt (1939), 3 Multiple Nuclei Model by Harris & Ullman (1945)
Hoyt’s city model (1939) follows a different approach: Here the city does not expand in con-centric circles but in sectors stretching from the central business district like wedges all the way to the outskirts of town. Often major rivers or other topographic features, transportation lines like railroad tracks or highway corridors pre-define how the sections are laid out with different economic and residential areas taking up the space in between. The classic example for the sector model is Chicago.

The third model by Harris & Ullman recognises that cities often do not grow prototypically from one central core but are a set of irregular and multi-central entities. Cities like that have often grown in industrial and post-industrial times from multiple cores or have integrated sub-centres into the urban fabric. A very obvious example is the German Ruhr region.

The examples given here are of larger cities or agglomerations worldwide where the models can be observed in nearly pure form. However, cities never develop in undistorted ways. A mountain range, a river, transportation lines and even singular historic events may alter urban development in one way or another. And most cities bear characteristics of each of the three classic city models. While learning about urban development in Polynesia a picture started to emerge how urban areas in the region may be abstracted from their common and characteristic features.

I have chosen a morphological perspective on Apia because in the spatial structures of towns the social, cultural, economic and ecological processes become visible. By studying the spatial formation and transformation of an urban area – because that’s what urban morphology is – a wider picture of a phenomenon unfolds in a more complex and differentiated picture.

This paper only attempts a very general look on Apia since even though my DPhil research is about urban development and land issues in Nuku’alofa and Apia, my own experiences in Tonga are considerably deeper than my knowledge of Apia which until now I only know from literature, plans,
satellite imagery and a visit of one month in 2005. However, these sources are both invaluable for a
town planner like me to understand a city and sufficient to get a discussion started that will lead to a
more in depth understanding of urban Polynesia in the course of my research

2 Morphological Characteristics of Apia
To understand how Apia and other Polynesian cities fit into these city models, one must have a look
at the cities themselves and go through different morphological characteristics:

Topography

Apia lies centrally on the north coast of Upolu. The two most characteristic features are the sea to the
north and the steep volcanic slopes of the islands up to 1,113 m at Mount Fito, only about 15 km
southeast of Apia. The coastal plain in the Apia area is comparatively spacious with Mount Vaea as
the most characteristic ridge, dividing the plain into a western and an eastern part. Due to the
smallness of the island, only minor rivers flow from the south to the north into the sea. The conditions
on the coast are favourable for a natural harbour with the Mulinu’u peninsula and the Matautu area
protecting the harbour from some unfavourable conditions.
Urban Origins

Samoa, like the other Pacific Islands in Polynesia, Melanesia and Micronesia, never had an urban centre in pre-contact times (Connell & Lea 2002:19). Before the arrival of the first Europeans, the closest thing to what may be called “urban” in the region was Mu’a on Tongatapu, the residence of the Tu’i Tonga. However, this kind of settlement growth and cultural gravity in one place cannot be found in pre-colonial Samoa where the villages lined up along the coasts without an obvious hierarchy.

The origins of urban Apia were laid through the creation of American and German consular offices in the mid-19th century and thus a central, official and continuous presence of Western powers in the islands. The choice of the village of Apia was not by accident, taking advantage of the sheltered harbour conditions of Apia Bay and the accessibility of some of the most productive areas of the Samoan archipelago on the north coast of Upolu. The original core lay between Vailima Stream and Vaisigano River but later extended towards Mulinu’u further west. Land was made available for trading posts, missions and other functions from Samoan land owners by a variety of terms (Ward & Ashcroft 1998:135).

Most of the official buildings were located along today’s Beach Road where some of the colonial architecture has survived until today (cp. Fig. 3, no. 1). In the first decades the town remained small. A German educational book of that time characterised Apia with terms such as klein (small), niedlich (cute) and malerisch (picturesque) (Buchholz 1893:73). Even until the 1930s the town did not grow far inland but occupied the areas in proximity to the coast. One of the likely reasons for this was the fact that a comprehensive road network on Upolu was not constructed until the 1950s and most of the transport of people and goods happened by boat or on walking tracks (Ward & Ashcroft 1998:73).

Even though Apia was not particularly big, especially in the first decades, it showed features that were new to Samoa of that time: permanent consulates of foreign states, administrative buildings with specific functions, trade and customs facilities, police station, post office, hospital, market hall, hotel, and even tennis courts (Map of Apia 1938). The main distinction between Apia and the other Samoan settlements of that time were not so much a distinction of size but of function. By the end of the 19th century it is fair to say, that Samoa had its first nuclear urban enclave on Upolu, determined by the first municipal authority in the Pacific islands, established for Apia in 1879 (Connell & Lea 2002:20).
“Apia was recognized as an entity, separate from the rest of Samoa, in 1879 when ‘the Samoan Government gave up all jurisdiction [though not ultimate sovereignty] over the town, harbour, and neighborhood of Apia’ (Morrell 1960:223). A municipality was established, largely under the control of the British, German, and US Consuls, ‘to protect the infrastructure of trade built up by foreigners, and to regulate relations between the Samoans and the Europeans’ (Hempensstall 1978:27). … The municipality of Apia no longer exists as an administrative unit.” (Ward & Ashcroft 1998:135).

Still, Apia was a thoroughly colonial town. The described functions catered for the needs of its expatriate population, mostly from Europe, their economic interests and lifestyles, but spatially and culturally more or less segregated from the rest of the island.

Figure 2: Map of Apia, based on official sources of 1938.
Source: www.lib.utexas.edu, 02 August 2014

The Villages

After all, urban Apia did not develop on terra nullius. The European settlement was placed in proximity to the name-giving village of Apia itself and in between pre-existing villages.

The morphological distinction between Samoan villages and the imported reproductions of a
European town is far-reaching. In contrast to the colonial town the villages followed their own logic as self-contained and almost autonomous entities (O’Meara 1995:112), related to each other only by more or less peaceful cultural bonds and the location in the same archipelago, but not by an overarching central power.

In contrast to other Polynesian islands the local power structures in Samoa have not been profoundly altered during the colonial era. Unlike Tahiti, Hawaii or Fiji where increased economic interest and influence by the colonial powers were accompanied by a considerable influx of people from abroad, or Tonga, where the indigenous dynasty of rulers transformed the society to a feudal system inspired by the European monarchies of that time, the Samoan matai system stayed in place all the way through the colonial rule by Germany and New Zealand with only slight alterations (O’Meara 1995:120).

Apart from the much discussed social stratification and regulation in Samoan villages, the villages are also characterised by a strong spatial hierarchy which can be described by the inherent bipolarities of 'a'ai (inside)/vao (outside) and tai (seaward)/uta (landward). The centre of the village is the malae, a
public space (cp. Fig. 3, no. 2). According to Shore (1982:49-50) tai and ‘a’ai are associated with cleanliness, order and control. Towards uta and vao the enforcement of these virtues is less strict. This often subtle hierarchy with its rules, regulations and curfews set up by the individual village leaders strongly determines the course of life in the villages. The matai system remains strong even within the villages now lying within the Apia agglomeration (Connell & Lea 2002:115).

One aspect is the spatial structure of the housing compounds: While in Samoan tradition a compound comprises a number of hierarchically ordered but separate buildings: fale tele – fale o’o – umu kuka – fale vao (Shore 1982:48-49). These distinctions are also relevant within the spatial order within a Samoan house with the distinctions between luma and tua (Lehner 1995:50; Shore 1982:50). In the urban areas these functions tend to be transformed, for example through the combination of the different fale in one single building.

Ward and Ashcroft note that, in recent decades, houses in villages were often built further inland from the nuclear villages, closer to the roads (1998:45). This phenomenon is also visible in Apia with a distinction of the villages through the name suffixes –tai and –uta.

**LAND**

One of the most decisive differences between the Samoan rural settlements and the colonial urban ones was and still is the completely different tenure and management of land. Much has been written about the contrast between these two different systems by Crocombe, Ward & Kingdon, O’Meara and others since this is not a uniquely Samoan phenomenon but an issue that can be observed all over the Pacific with very different experiences in the last two centuries and very different solutions in practically every single island group. The practice and adjustment of different forms of communal tenure where land is owned by a kin group is difficult in light of new challenges like urban development, increased migration and absenteeism. Thus, land management is a complicated issue in most states, especially in urban areas. Floyd hits the spot with his apt statement by describing the “... issue of land ... as something between sensitive and an obsession.” (Floyd 1981:97) which resonates also in the Samoan experience with land especially in the transformation from land in the context of fa’aSamoa to what is closer to the understanding and handling of land in a globalised world.
Without going much into detail at this point it must be made clear how the issue of land is shaping the morphology of Apia. In contrast to Samoa as a whole, where approximately 80 % of land is categorised as customary, 16 % as government and 4 % as freehold land, Apia’s urban area is only partly under the pule of the matai (about 20 %). 10 % of the town are on government land and 70 % on freehold/STEC land (Connell & Lea 2002:142, cp. Ward & Ashcroft 1998:64-65). The high proportion of non-customary land is due to the European activity in the area. By the end of the 19th century much of the land in the Apia area was owned as freehold by foreign governments, traders, planters and missionaries.

The villages and settlements on freehold/STEC land exhibit a different settlement pattern. They are situated on a simple road grid with small parcels for housing (ca. 0.1 ha), usually without the typical spatial features of the Samoan villages like fale tele around a malae, and without access to agricultural land (Thornton 2013:361; cp. Fig. 3, no. 3). Thornton also concludes about the social implications of this structure that “vulnerable Samoans have been identified as urban villagers without customary land rights, who do not share in reciprocal exchanges of material goods with rural village aiga.” (2013:370).

Land tenure can be seen as one of the central morphological determiners in the formation of Apia as a city. Many scholars have pointed out that not the sheer lack of land in Pacific islands is the problem but much more the unavailability of land for certain purposes. Often, people are “forced to build wherever they happen to hold land.” (O’Meara 1995:152). This has led to an artificial shortage of land causing an increased pressure on freehold land – including rising land prices, especially in Apia (Connell & Lea 2002:142,148) – and the search for residential land in marginal locations such as mountain slopes and mangrove swamps. The landfills in Apia Harbour and the marginal settlements like Saleufi, Fugalei or Vaitoloa are examples for this (Ward & Ashcroft 1998:164; cp. Fig. 3, no. 4) but also Popua and Sopu on the outskirts of Nuku’alofa or the Tahiti Fa’a’a Airport in Papeete.

1 WSTEC/STEC: (Western) Samoan Trust Estates Corporation, formerly NZRE: New Zealand Reparations Estates, government freehold land originating from German reparations after World War I, mostly plantations, today some (mostly in the Apia area) sold or leased (WARD & ASHCROFT 1998:64-65)
3 A MODEL FOR POLYNESIAN CITIES

Out of the analysis of the macro-structures in Polynesian towns and the three city models described at the beginning of this paper I suggest a generalised city model that I think can be applied to Polynesian cities in general (Apia, Nuku'alofa, Papeete, Avarua) but may also be adopted for other Pacific island cities, even cities in the atoll states.²

It is obvious that practically all urban centres in the Pacific islands are located at the sea. Thus, growth is generally limited to three cardinal directions. However, topography also limits growth in the opposite direction from the sea, through mountain ranges on volcanic islands (as in Apia, Avarua, Papeete) or by a lagoon on coral islands (as in Nuku'alofa, South Tarawa), causing urban growth to continue along the sea shores after reaching these natural limitations. Today, the backbones of this growth are the modern ring roads around the islands.

There is a strong hierarchy within the settlement structure with the complementary bipolarities of tai (seaward)/uta (landward) and 'a'ai (inside)/vao (outside). As described before, these bipolarities can be observed on all spatial levels, from the single housing compound through the village level all the way to the spatial structure of the urban areas.

This distinction, especially between inside and outside, is not uncommon in urban typologies worldwide. In Pacific island cities the colonial settlement has usually taken over the function of the

² In a more detailed city model other features might be included into the picture, for example characteristic aspects of the street layout or the placement of functional clusters such as industrial zones. But in a simplified urban model for the Polynesian cities, these can be seen as minor morphological characteristics. Neither does segregation between different social or income groups play any major role.
‘a’ai for the city in a tai location with several characteristics that can also be found in Samoan villages: important public functions, ceremonial significance, high levels of control and regulation.

So far the model can be seen as a variation of Burgess’ concentric development model with successive additions on the urban fringe. The most significant difference to this model lies in the existence of the old villages within the urban fabric.

It is not a specific feature of Pacific islands that cities or urban areas, during their growth, tend to extend their limits beyond other settlements, villages, or even other cities.

A big difference is the pace and the way these villages were incorporated into Apia, Nuku’alofa and other urban areas in Polynesia. In contrast to European or Asian cities, where the urban and the rural have co-existed for centuries, or American cities where cities usually developed in areas without a long rural tradition, the Polynesian villages were swallowed up by cities that have existed only for a few decades and that were organised in a very different way. A slow and gradual assimilation (both structural and cultural) has not happened hand in hand with the urban growth as elsewhere.

This does not mean that the villages are static. It means that change follows after the spatial expansion of the city. However, at this stage, I do not attempt to forecast the pace and direction of that change; if it is likely to happen quicker than in rural areas or what kinds of influences the closeness to the centre and the absence of adjacent agricultural lots might have on the social and economic fabric within the villages.

As a result, these villages remain as autonomous entities with their customary legislative, executive and judicial powers applied in and for the villages themselves (cp. Ward & Ashcroft 1998:165). Lacking long-established municipal authorities that think and act beyond village boundaries, these powers are only curbed by the national governments\(^3\). The recent Samoan Planning and Urban

\(^3\)“The difficulty of establishing a modern system lies not so much in any failure to appreciate that such a change is necessary but in grappling successfully with the underlying factors which have ensured that efforts at reform have met with defeat. Attempts by development funding agencies and aid donors to introduce a planning regime backed by legislation appear never to have investigated why Samoan governments have been so resistant to changes affecting controls over land title. Underestimation of the strength of local social organisation on the part of many external advisors and consultants perpetuated an extraordinary succession of unfulfilled recommendations dating back, in the case of Apia, to the colonial period before the Second World War.” (Connell & Lea 2002:113)
Management (PUM) Act of 2004 and similar legislation in other states are steps aiming to fill that gap.

A big theme is how to balance modern and traditional approaches to development, to support one without destroying the other.

In this context, the term “urban village” comes to mind, and how these old villages with their kinship bonds of the aiga, their matai and their very specific spatial layouts co-exist on the one hand with the vibrant and diverse urban centre and on the other hand with the more recent development of mainly residential settlements on freehold/STEC lands.

References


