

Dweller perceptions of public and self-built houses: some evidence from Mangaung (Bloemfontein)

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OPSOMMING

Die artikel wend 'n poging aan om die tevredenheid van huiseienaars met huise wat deur die staat gebou is te vergelyk met dié van inwoners wat hul huise self gebou het. Dit word deur 'n bespreking van die teoretiese standpunte van Turner voorafgegaan. Die navorsingsmetodiek maak gebruik van gestruktureerde vraelyste (wat hoofsaaklik op die vyf-punt-Likertskaal berus), aangevul deur diepteonderhoude. Faktore wat onder andere aangespreek word, is inwoners se persepsies van positiewe en negatiewe aspekte van hulle huise, persepsies ten opsigte van kwaliteit, vensters, son en ventilasie, die instandhouding van hulle huise asook hulle algemene tevredenheid. Ten slotte word kortliks kommentaar op die moontlike implikasies vir behuisingsbeleid gelewer.

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INTRODUCTION

The low-income housing policy in less-developed countries (LDCs) has changed dramatically since the Second World War. The period directly after the War to the late 1960s saw huge public investment and mass construction of low-income family housing (Stren, 1989:35-37).

In the 1970s the World Bank became involved in low-income housing finance and subsequently in services and *in situ* upgrading programmes for self-help housing (Gilbert, 1997; Pugh, 1997). This involvement was mainly due to the influence of Abrams (1964), Mangin (1967) and Turner (1967; 1968; 1976). The World Bank policy also changed dramatically after a first project-by-project approach with the emphasis on cost recovery, affordability and replicability. The 1990s saw an emphasis on targeted subsidies and institutional and city-wide reform (World Bank, 1993:62; Gilbert, 1997). However, although the self-help concept has changed dramatically since the 1970s (Pugh, 1997), it is still a basic element of World Bank policy.

With the development of a South African housing policy by the National Housing Forum (see Rust & Rubenstein, 1996) during South Africa's transitional period (1990-1994), a key aspect was whether the South African government should be involved in building houses for people or whether a more incremental type of policy (in which self-help is central) should be followed (Tomlinson, 1998). The latter option was chosen against a background of international failure in public sector housing due to insufficient fiscal resources to keep pace with the so-called backlog and maintenance. An aspect that was hardly touched on was what people would prefer - to build their own houses (be in control of the building decision making), or to have the government build the houses for them.

This article compares the perceptions of people with regard to their housing structures in a public sector housing development in Pelindaba (Mangaung, Bloemfontein) with those of people in a self-built housing development in Freedom Square (Mangaung, Bloemfontein).

TURNER'S THEORY ON HOUSING DEVELOPMENT

Turner's contribution to analysing the housing problem in LDCs was significant (Pugh, 1997). He was an architect by profession and was actively involved in research and consultancy work during the 1960s and 1970s in Latin America (Ward, 1982:5). His work him into contact with thousands of low-income families who had settled in informal settlements after urbanisation. The 1960s were years of large-scale government-built rental housing to accommodate people in the cities. Turner soon started to criticise this approach to housing and the underlying assumptions which determined government-built rental accommodation. During the 1970s he was influential in changing World Bank policy (Grimes, 1976:7; Ward, 1982:9; Rodwin & Sanyal, 1987:28).

In analysing Turner's ideas, one should realise that he theorised against a background of failure of the public sector to provide housing. He used concepts like "dweller satisfaction", "use value", "housing as a process" and "housing as a verb" in his writings (Turner, 1967; 1976; 1978). According to Turner (1976), the value of a house lies in what it does for people rather than how it looks from the outside. He suggested that the function of a house cannot be equated with the material standard of the structure. In other words, the structure is less important. In fact, Turner believed that the physical appearance should be the last aspect to consider in defining a house. He argued that access to employment, services, and social amenities were more important considerations.

In order to illustrate his argument, Turner (1976:58-63) compared what he called the "supportive shack" and the "oppressive house" (see Table 1 for a summary). In this paradox, a supportive shack provides shelter at a minimum cost and is usually well located (both for work and social activities). He saw the shack as providing admirable support for low-income groups and being a vehicle for the realisation of their expectations. In terms of cost, a shack dweller can construct his or her house for less than a modern house would cost, mainly due to cheaper labour costs and cheaper but sound materials. Turner saw the shack as a house-in-process which could be built according to the occupant's needs.

The oppressive house, on the other hand, is unsatisfactory because the family spends most of its income on rent and service payments. This house is not built according to the needs of people (usually being uniform structures). Turner (1976:58-63) argued that this was because of costs and the lack of flexibility in modern building technology. Modern housing labour technology makes use of machinery and formal employment. In contrast, a shack is built by the dwellers themselves as they usually possess some building skills.

Turner (1976) also noted that most government-built rental accommodation was not well located in terms of employment opportunities. This meant that the working family members had to spend income on transport. This affected their food budget and frequently

led to poverty. In contrast, poverty in a shack is usually compensated for by access to utilities and employment.

The above analysis clearly explains why Turner argued that an individual residing in a shack is able to fulfil his or her expectations of owning a house. This house would be better constructed and meet the owner's needs, more than one built by the public or private sector. A self-built house may be constructed gradually, using cheap labour, cheaper resources, and spare time in order to reduce costs. Turner considered government-built housing delivery a operation because it produced objects of high quality at great cost with low user value. Turner consequently suggested autonomous systems where the users would decide what type of houses they needed.

According to Turner (1976:77), the viability of any housing system depended on the efforts of the users and their will to invest those efforts. He believed that the major part of resources invested in housing should be possessed and controlled by the users themselves. The economies of housing depended on the users' resourcefulness. This means that the users would have the skills to build their houses as long as they had access to resources such as land and building material. Moreover, when people make some contribution to their dwellings, the personal responsibility of ownership increases and they can usually care for and manage the buildings effectively.

At low-income levels the demand and will to invest in housing are far greater than in the moderate income sector (Turner, 1976:77). Low-income groups stand a better chance of providing themselves with housing suited to their personal needs, unlike tenement renters and project buyers who usually have to take what is offered. The issue of authority over housing highlights another point, namely that of decision making. Turner believed that when dwellers are free to control and make contributions to the design, construction or management of their housing, it stimulated individual and social wellbeing.

Public housing is criticised for many reasons. The most important points of criticism are that these standardised housing structures do not meet the quantitative housing need (Harms, 1992:37); do not meet the needs of low-income groups (Turner, 1976; Gilbert & Gugler, 1992:137); do not reach the low-income population as most of the houses go to higher-income groups (Rodell & Skinner, 1983:3-4; Mayo & Gross, 1987); the building standards are too high (Mayo & Gross, 1987; Gilbert & Gugler, 1992:137-139); are unaffordable to lower-income groups (Mayo *et al*, 1986); are unaffordable to most governments as the housing is based on large subsidies (Mayo & Gross, 1987; Gilbert & Gugler, 1992:137-139); are not well located (Gilbert & Gugler, 1992:137-139; Potter & Lloyd-Evans, 1998:144-146), and some of these houses are unoccupied for long periods (Mayo *et al*, 1986).

The value of a house, according to Turner(1976) lies

TABLE 1: A COMPARISON OF THE MAIN ATTRIBUTES OF THE "SUPPORTIVE SHACK" AND THE "OPPRESSIVE HOUSE" ACCORDING TO TURNER

"Supportive shack"	"Oppressive house"
Provides shelter at a relatively minimal cost	Provides shelter at a relatively high cost
High use value (people are very positive about the house)	Low use value (people experience the house in a negative way)
Usually well located in terms of employment	Not well located in terms of employment
Low rentals or tax	High rentals
Cheap labour (dweller uses his skills)	Machinery used (advanced technology)
Usually matches the users' needs as the user is in control of the construction process	Frustrates the needs of its users as they have little say during planning and construction

Source: Turner, 1976:58-63

TABLE 2: A SOCIOECONOMIC COMPARISON OF HOUSEHOLDS IN PELINDABA (N = 50) AND FREEDOM SQUARE (N = 50), 1998

Characteristic	Pelindaba (n)	Pelindaba (%)	Freedom Square (n)	Freedom Square (%)
Formal occupation (nurses, clerks, teachers, security, etc)	8	16	5	10
Households with net income less than R800 per month	39	78	46	92

TABLE 3: BIOGRAPHIC AND PHYSICAL COMPARISON OF HOUSEHOLDS AND HOUSING ATTRIBUTES IN PELINDABA AND FREEDOM SQUARE, 1998

Characteristic	Pelindaba	Freedom Square
Average age of respondents	42,72	38,91
Household size	4,74	4,60
Average number of rooms	5,00	2,08
Persons per room	0,94	2,21
Average number of outside rooms	2,00	1,44
Average number of windows	5,00	2,76
Cost for household to erect a house	Nothing	Average amount: R2 901,64
Land tenure	State-owned	Individual title deed

in its function rather than in the resources required to construct it. Turner's comparison is not to justify poor housing, but demonstrates the futility of poor people living in shelters of a high architectural standard that do not meet their needs (for example close proximity to a place of employment) and income (Gilbert & Gugler, 1992:117-124).

Turner's theories were debated extensively on an ideological level, in particular by Burgess (1978; 1982). Mathey (1997:282) summarises the major neo-Marxist criticism on the thoughts of Turner:

- Self-help programmes in principle still serve the interests of capital accumulation through double exploitation. It is argued that self-help prolongs the working day as people need to build after hours or during weekends.
- Self-help is a mechanism for disciplining the workforce by means of credit and work-time commitments.
- It leads to commodification. This means that land and self-built processes start to acquire economic value.
- Turner held an individualistic view of the self-help process and ignored the sociopolitical context in which it takes place.
- Although Turner was of the opinion that the self-help sector was able to generate its own resources without interference from capitalist relationships, Burgess considered this a myth.

Although the differences between Burgess and Turner were actively debated, Nientied and Van der Lindens' (1985) conclusion that there has never been "commonly recognized terms of reference" in the Turner-Burgess debate summarises the extent of the debate. Limited empirical research was conducted at the same time to test Turner's ideas.

The remainder of this article reflect on an empirical investigation of how people in self-built and public sector housing experience their houses.

METHODOLOGY

Conceptualisation and operationalisation

The aim of the research was to assess dweller satisfaction and dweller perceptions of their housing units in two types of housing delivery systems, namely self-built units and government-constructed housing units. However, before the results of the study are assessed, the central concepts have to be defined.

Lazenby (1988:55) defined dweller satisfaction as the degree of satisfaction with a specific house within their chosen residential, physical and social environments as well as with specific housing attributes. This study devoted specific attention to the degree of dweller satisfaction with regard to housing attributes.

Perceptions refer to peoples' perceived evaluation of an object or social condition (Sears *et al*, 1985:50).

Most people's behaviour seem to be based on their perceptions. Policy-makers should therefore take due note of people's perceptions.

Self-built housing units are houses which have been constructed by the household or where the household contracted a builder to construct the house according to its needs and within its financial means. In other words the household used its own finances and controlled the construction process. This article refers to such housing units in Freedom Square, a settlement in Mangaung (Bloemfontein). Freedom Square developed as an informal settlement during the early 1990s and was later formalised by an Independent Development Trust - funded *in situ* upgrading project.

Government constructed houses are housing units financed and constructed by the state, where the inhabitants are still renting the houses from the government. This article refers to such units in Pelindaba, an area in Mangaung (Bloemfontein), which were constructed during the 1960s. The age difference between Freedom Square, which developed during the early 1990s (Botes *et al*, 1991:1), and the houses in Pelindaba (also including Kagisanong) which were constructed during the 1960s (Krige, 1991:110), could become an issue.

Dweller perceptions and the degree of housing satisfaction were operationalised by means of a 5-point Likert scale.

Questionnaire

The questionnaire had four sections. The first focused on obtaining socioeconomic and biographical information. The second section focused on obtaining information about the physical attributes of each house. The next section contained open questions. The respondents were asked to reflect on the most positive and most negative aspects of their houses. The fourth section was based on the 5-point Likert scale and statements about the houses. The respondents were then asked whether they were undecided, agreed or disagreed with the statement (see Tables 4 to 6). Questions that were used to control reliability and validity of the results are not included in the tables. Although the questionnaire was formulated in English, the field worker conducted the research in the relevant language of the respondents (mostly Sesotho, Xhosa and Tswana). In-depth interviews were conducted with five households from each of the two housing systems (self-built and government-built houses). The aim of these interviews was to gain a better understanding of the responses to the open question on the positive and negative aspects of the houses and the Likert scale questions. These interviews were recorded and the responses were incorporated into the text to support some of the arguments.

Sample

It should be noted that this research intended to provide a preliminary comparison of dwellers' satisfaction

with two housing delivery types. This is the reason why only 100 questionnaires were completed (50 per housing delivery type). It is therefore not claimed that the results can be generalised at random.

It was difficult to reach the envisaged population. A large number of public houses have been privatised (handed over to the inhabitants by means of the R7 500 discount benefit scheme which provided ownership) during the last few years. These privatised public houses were excluded from the study. However, this had implications for the sampling procedures in the study area. Two thousand households were identified in the Pelindaba area as possible participants in the survey. A random sample of 100 was then drawn. The fieldworker had to visit the first 50 houses out of the sample of 100 nonprivatised houses. The 50th completed questionnaire was the 81st of the 100 possible respondents. This meant that 31 of the houses that were visited had actually been privatised.

Sampling in Freedom Square was also difficult. The main reason was because the houses had been constructed by means of consolidation subsidies (provided to households who had only received a site and services before 1994). This meant that when the survey was conducted in June 1998, some 50% of the housing units were not self-built units. A large percentage of the remaining self-constructed houses were so-called shacks. The study aimed to target households that had constructed and consolidated their own housing units with formal building material. The sample in Freedom Square was again larger than needed, namely 200. The 50th questionnaire was completed at the 180th household. This meant that 130 households were either beneficiaries of the consolidation subsidies or still had a housing unit mostly consisting of corrugated iron.

In both cases the interview was conducted with the head of the household (determined by the household), or his or her spouse if the head was not available. As the questionnaire was completed during normal working hours, the percentage of female respondents was noticeably high.

Survey

The survey was conducted in June 1998. One field worker was trained and completed all the questionnaires as well as the in-depth interviews. This ensured that fewer external interpretation aspects came to the fore. The interviews took approximately 30 minutes but were usually prolonged by questions about the survey. People immediately wanted to know whether the study would provide them with new houses.

Statistical analysis

The data from the questionnaire survey were captured in spreadsheet format for analysis. The in-depth interviews were recorded and important notes from these were captured on computer.

RESULTS

Description of households and houses in Pelindaba and Freedom Square

In this section dweller satisfaction in Pelindaba (public houses) and Freedom Square (self-built houses) is compared. Attention is first devoted to a socio-economic and biographical comparison between the residents of Pelindaba and Freedom Square (see Table 2 and Table 3). This comparison is followed by an analysis of the survey results on dweller satisfaction in the two residential areas.

The average age of the heads of households in Freedom Square was 3,8 years less than that of heads of households in Pelindaba. This could be attributed to the age difference between the two settlements (nearly 30 years) and the observation by Botes *et al* (1991:18-19) that most settlers in the initial establishment in 1990 were relatively young site seekers.

Concerning net income, 92% of the households in Freedom Square and 78% of the residents in Pelindaba earned less than R800 per month. The average household income in Freedom Square seemed to be less than in Pelindaba - something which should be kept in mind during the remainder of the analysis. This conclusion is supported by the fact that 16% of the heads of households in Pelindaba were employed in the formal sector compared to 10% in Freedom Square. This in turn supports the international concept that the poorer households build their own dwellings (see the section on Turner's theory on housing development).

In spite of these differences, the household size was approximately 4,7 in both areas. However, there were far fewer rooms per house in Freedom Square than in the government-built houses. This has an implication for the average number of people per room, which is considerably higher in Freedom Square than in Pelindaba. The houses in Pelindaba also have more windows than those in Freedom Square. Two of the most important differences between the houses in Pelindaba and those in Freedom Square are that the houses in Freedom Square are the property of the inhabitants, whereas the Pelindaba people rent from the government (although virtually no rent is paid). This also means that the inhabitants of the houses in Freedom Square were in control of the building process and invested money in their own housing units. The average amount spent per house in Freedom Square was R2 901,64.

Positive and negative perceptions in Pelindaba and Freedom Square

The first two questions in the questionnaire asked the respondents to name the most important positive and the most important negative aspect of their houses. The results are summarised in Table 4.

Positive perceptions According to Table 4 the

TABLE 4: DWELLER EVALUATION OF POSITIVE AND NEGATIVE ASPECTS OF THE HOUSES IN

Area	Positive aspects	n	%	Negative aspects	n	%
Pelindaba	• Provides good accommodation	37	74	• Poor-quality structures	21	42
	• Enough living space and good planning	9	18	• Very small and planning unsatisfactory	11	22
	• Strong roof	1	2	• Leaking roof	10	20
	• Water installation inside the house	1	2	• Porous walls	6	12
	• None/other	2	4	• Other	2	4
Freedom Square	• Ownership of a house	26	52	• Very small houses	28	56
	• Good accommodation	23	46	• Poor-quality structures	3	6
	• Security and shelter	1	2	• Leaking roofs	2	4
				• Nothing	17	34

TABLE 5: PERCENTAGE OF RESPONDENTS WITH POSITIVE OR NEGATIVE PERCEPTIONS OF GENERAL QUALITY AND MAINTENANCE OF HOUSES IN PELINDABA (N = 50) AND FREEDOM SQUARE (N = 50), 1998

My house has many cracks	SA	A	N	DA	SDA
Pelindaba	68	10	0	12	10
Freedom Square	12	26	0	12	50
The roof of my house leaks when it rains	SA	A	N	DA	SDA
Pelindaba	42	16	0	16	26
Freedom Square	14	12	6	8	60
I believe that the roof of my house has been built strong enough	SA	A	N	DA	SDA
Pelindaba	60	10	6	10	14
Freedom Square	72	4	10	4	10
I believe that my house has been built strong enough	SA	A	N	DA	SDA
Pelindaba	26	6	10	8	50
Freedom Square	68	8	10	4	10
The doors of my house are of a good quality	SA	A	N	DA	SDA
Pelindaba	10	6	0	8	76
Freedom Square	72	8	4	14	2
I spend time each year to maintain my house	SA	A	N	DA	SDA
Pelindaba	72	22	0	6	0
Freedom Square	62	12	2	12	12

SA = Strongly agree; A = Agree; N = Neutral; DA = Disagree; SDA = Strongly disagree

main positive response was good accommodation which rated 74% in the public houses and 46% in the self-built houses. This could be a reflection of the historical housing shortage in Mangaung (see Botes *et al*, 1991:9; Krige, 1991:110). Public sector housing was for many years one of the best forms of housing available. Another important positive point indicated by the respondents in Pelindaba was the planned living space (18%). This probably reflects the availability of an average of five rooms compared to just more than two rooms in the self-built houses. However, the average household size of these respondents was 4,11, which is less than the average household size of 4,7 of the respondents in the public houses.

It may therefore be concluded that respondents who are satisfied with their living space and planned housing have smaller families.

Fifty-two percent of the respondents in the self-built houses, mentioned the fact that they owned the house as the most positive aspect of their housing environment. This is related to what Turner recommended, namely that people should be given land and the opportunity to build houses of their own choice. This response was also in contrast to the responses of the public housing occupants where no formal tenure is available. However, the high percentage of respondents who considered ownership important should not be seen in isolation in a history of little African urban land tenure. This confirms the argument of Maasdorp and Haarhoff (1983:10) that security of tenure is the most important measure of household satisfaction and that it stimulates personal investment in housing which would otherwise not be possible.

Negative perceptions It is interesting that there is considerably more dissatisfaction in Pelindaba about the quality of the houses (74%) than in Freedom Square (10%). This finding also supports Turner's observation that when people are in control of their own housing provision, they are less critical of the quality and general construction methods. According to Turner (1976), residents who own their houses will take care of the maintenance, whereas those who do not own their houses will show less responsibility with regard to housing problems.

Only 22% of the respondents in public housing stated that their houses were too small compared to 54% of the respondents in the self-built homes. This was to be expected as the houses in Freedom Square are considerably smaller than those in Pelindaba.

The above section indicates that both types of housing probably contribute to solving the housing shortage problem. The majority of respondents in Pelindaba felt that their houses provided good accommodation. However, the positive response with regard to ownership in Freedom Square should be acknowledged. Ownership offers choices that are not available in the public sector where the residents has to accept the structure. Major negative aspects in gov-

ernment-built houses are construction and maintenance, and in Freedom Square the size of the house (too small) was the main negative aspect (a positive aspect of public housing).

General quality and maintenance of houses

The way in which dwellers perceive the physical standard of their houses also contributes to dweller satisfaction. The energy they dispense on maintaining their homes reveals their consciousness of having a decent house. Table 5 summarises the perceptions of the quality of certain housing aspects and tests the residents' perceptions regarding maintenance.

More respondents in Pelindaba than in Freedom Square reported cracks in their houses (78% vs 38%) and leaking roofs when it rains (58% vs 26%). Fewer people in Pelindaba than in Freedom Square perceived their houses (32% vs 76%) and house roofs (70% vs 76%) to be strong enough and the doors of their houses to be of good quality (16% vs 80%).

Turner (1976:94-104) stated that bureaucratic systems which offer mass housing would only be concerned with the quantity and not with the quality of the houses. The presence of cracks in public houses is perceived by the residents to be due to the poor and cheap materials which were used during construction. Comments such as "The apartheid government wanted to make sure that our houses disintegrate quickly" and "... they did not want to give blacks good houses" were common during the in-depth interviews. Dwellers complained that the cement washed away during heavy rains and that this made their houses porous in the rain. However, one should consider the fact that no tenure is available to them as this could have an impact on their willingness to maintain their houses adequately.

The residents' comments on the poor quality of the doors in public houses may be ascribed to the fact that they had to accept what was offered to them, whereas the residents of the self-built units had an opportunity to choose between alternatives. The residents in both forms of housing were willing to maintain their houses. The high response with regard to the maintenance of public houses means that although the dwellers do not own the structure, maintenance does take place. However, the following comment by a Pelindaba interviewee summarises the maintenance aspect of public housing: "What should I do when the roof of my house leaks? Surely I need to do something? I cannot wait for the council to maintain it - then I shall wait forever."

General satisfaction with housing

General satisfaction with public housing seemed somewhat greater than with respect to self-built houses (70% vs 64%) (see Table 6). Furthermore, a larger percentage of the respondents in public housing than in self-built houses appeared to be neutral in

TABLE 6: PERCENTAGE OF RESPONDENTS WITH POSITIVE OR NEGATIVE PERCEPTIONS OF GENERAL SATISFACTION WITH HOUSES IN PELINDABA (N = 50) AND FREEDOM SQUARE (N = 50), 1998

I am satisfied with my house	SA	A	N	DA	SDA
Pelindaba	50	20	18	4	8
Freedom Square	50	14	8	16	12
My house can accommodate my whole family	SA	A	N	DA	SDA
Pelindaba	68	18	2	8	4
Freedom Square	32	4	8	14	42
The layout of my house is according to my wishes	SA	A	N	DA	SDA
Pelindaba	74	2	8	14	2
Freedom Square	38	6	32	12	12
All the rooms in my house are where I want them to be	SA	A	N	DA	SDA
Pelindaba	88	0	8	2	2
Freedom Square	92	0	2	2	4
I am satisfied with the position of the kitchen in my house	SA	A	N	DA	SDA
Pelindaba	92	2	2	0	4
Freedom Square	70	4	6	8	12
I have made some improvements to my house during the last two years	SA	A	N	DA	SDA
Pelindaba	76	8	0	2	4
Freedom Square	54	8	4	8	26
I am proud of my house	SA	A	N	DA	SDA
Pelindaba	84	4	6	0	6
Freedom Square	98	0	2	0	0

SA = Strongly agree; A = Agree; N = Neutral; DA = Disagree; SDA = Strongly disagree

terms of general satisfaction (18% vs 8%). At the same time more respondents disagreed or strongly disagreed with the statements on self-built houses than on public sector houses (28% vs 12%). This could be because most of the houses in Freedom Square are still under construction.

The relatively high percentage of residents who expressed satisfaction with their housing, despite quality deficiencies, is noteworthy. One respondent in a public house summarised her feelings in the following words: "My house is not in a good condition and government should make sure that they maintain it better. But I am happy here and despite the problems, we have better houses than other people in Mangaung."

The respondents in public housing were more positive

about whether the whole family can be accommodated in the house (86% vs 36%). In fact, 56% of the respondents in the self-built houses did not think they had sufficient accommodation space. This response should be seen against the physical space differences between these houses (see Table 3). The response nevertheless emphasises the importance of size to the majority of households.

Respondents' responses to the position of the rooms and kitchens differ. With regard to the location of the rooms, 88% vs 92% in public and self-built housing respectively expressed satisfaction. With regard to the location of the kitchen, fewer people in the self-built houses were satisfied (94% vs 74%). This may be because most kitchens in the self-built houses are part of the main room.

TABLE 7: PERCENTAGE OF RESPONDENTS WITH POSITIVE OR NEGATIVE PERCEPTIONS OF THE WINDOWS, LOCATION OF THE HOUSE RELATIVE TO THE SUN AND VENTILATION IN THE HOUSES IN PELINDABA (N = 50) AND FREEDOM SQUARE (N = 50), 1998

The windows of my house are too small	SA	A	N	DA	SDA
Pelindaba	82	6	0	4	8
Freedom Square	46	6	18	18	12
My house receives enough sun in winter	SA	A	N	DA	SDA
Pelindaba	44	20	6	24	6
Freedom Square	72	4	4	10	10
I am satisfied with the ventilation in my house	SA	A	N	DA	SDA
Pelindaba	76	12	4	6	2
Freedom Square	80	4	8	8	0
The windows of my house are in the right places	SA	A	N	DA	SDA
Pelindaba	82	4	2	10	2
Freedom Square	84	0	4	8	4

SA = Strongly agree; A = Agree; N = Neutral; DA = Disagree; SDA = Strongly disagree

TABLE 8: SUBSIDY PER INCOME GROUP ACCORDING TO THE SOUTH AFRICAN HOUSING POLICY

Spouses' joint monthly income (R)	Subsidy (R)
0-800	15 000
801-1500	12 500
1501-2500	9 500
2501-3500	5 000

- Adjustable by 15% (on area, not project basis), at the discretion of the relevant provincial housing development board, for locational, topographical and geotechnical reasons
- On 1 April 1998 the R0-R800 and the R801-R1 500 income brackets merged with a housing subsidy of R15 000 available to households with a joint monthly income of R1 500 or less. At the same time the housing subsidy was raised by R1 000 in each category as from March 1999. This means that the highest subsidy is now R16 000. (Source: South Africa, 1995)

The data in Table 6 reflect that public sector houses received better evaluations than the self-built houses. So, despite the fact that public sector houses do not provide ownership and freedom of choice, the residents are generally positive.

Perceptions with regard to windows, sun and ventilation

Windows permit sun and cool air and therefore play an important role in the ventilation of a house (see Table 7).

The survey results show that the respondents in the

public houses were critical of the size of their house windows and that the respondents in the self-built houses were more satisfied in this respect. Eighty-eight per cent of the respondents in the public houses felt that the windows of their houses were too small compared to 52% of the respondents in the self-help houses. Complaints were aired about darkness in the public houses. However, the respondents in both types of housing appeared to be satisfied with the location of the windows. More residents of the self-help houses were satisfied with the amount of sunlight they received during winter (76% vs 64%). Satisfaction with regard to ventilation was more or less the same in both types of houses.

It is interesting that although the houses in Pelindaba have an average of five windows whereas those in Freedom Square have 2,76, the ratio of windows per room in Pelindaba is 1:1 compared to 1,33:1 in Freedom Square. The physical differences as well as the fact that the Freedom Square residents have a choice in locating their windows may contribute to the greater general satisfaction in this regard.

IMPLICATIONS FOR LOW-INCOME HOUSING POLICY

Determining housing policy implications from one case study would be shortsighted. However, a preliminary study such as this identify interesting aspects that have a bearing on policy. This section briefly reflects on current policy guidelines and goes on to assess the implications of the survey findings for policy development.

The first important policy aspect covered by this article is who should deal with the construction. The evidence in this paper suggests that when the owner was in control of the construction process, the residents are less critical of the quality of the physical structure than when the house was constructed by someone else. This conclusion emphasises the importance of utilising the people's housing process. The people's housing process will probably also create a different architecture than the current uniform pattern of most low-income housing projects. Furthermore, experience in the Free State suggests that houses constructed by the people's housing process are larger than the 40 m² guideline for houses constructed by means of project subsidies (Marais 1999).

Four subsidy categories currently apply to utilize capital grants in terms of the different income bands (see Table 8). Project subsidies are required when a developer initiates a housing project, and individual subsidies are available when an individual wants to build a house. However, the provincial housing development boards do not easily approve individual subsidies because they are too difficult to monitor and control. Institutional subsidies are available for rental and social housing. Consolidation subsidies, which are only R7 500 per beneficiary, are available to households who live on sites that were previously serviced by funds from governmental or nongovernmental institutions. This amount is available exclusively for the construction of a housing structure.

The case study indicated that there are probably theoretical advantages to having different forms of housing delivery systems as both public houses and self-built houses elicited positive and negative evaluations. It would probably be valid to have different forms of land tenure, for example ownership and rental housing, as they both have distinct advantages. However, in practice not many institutional subsidies (subsidies for rental housing) have been accessed. In fact, in the Free State only 600 institutional subsidies were utilised between 1994 and 1998. It should

also be noted that the state did not act as a developer for these institutional subsidies. Whether these subsidies should be used for government-constructed rental housing and whether such housing makes sense in terms of budgetary constraints, should be argued at a different level. However, it should be acknowledged that this type of subsidy would probably never reach the poorer sections of the population.

Current policy in the Free State insists that at least a 40 m² house should be constructed, emphasising the size and quality of the end-product (Mayekiso, 1995). This study found that living conditions are currently better in the public sector housing as far more residents in these dwellings than in the self-built houses mentioned enough living space as a positive aspect. However, at the same time the residents of the public houses were more critical about the physical conditions of their housing units. Although size seems important, pride in constructing one's own home also plays an important role.

South African housing policy and the subsidy scheme are mostly linked with ownership (except the hardly used rural housing subsidy). This case study emphasised the importance of formal tenure, but it is acknowledged at the same time that ownership may have negative consequences for low-income groups. Gilbert (1997) indicated for example that it could restrict the mobility of low-income households. This is surely an aspect which should be further researched in South Africa.

CONCLUSION

This article analysed the most important theoretical concepts in the housing theory of Turner. This analysis was followed by an empirical investigation in two areas in Mangaung, namely Pelindaba as an example of public housing, and Freedom Square as an example of self-built housing. It was established that the residents of self-help housing were more satisfied with the physical structures than the residents in public houses. Despite the perception that public houses have structural deficiencies, these residents were more satisfied with a number of aspects of which the size of the house was an important aspect.

In general it is concluded that the current different types of housing subsidies that are available to low-income groups should be maintained and that the people's housing process should receive more prominent attention.

REFERENCES

- ABRAMS, C (1964): Squatter settlements: the problem and the opportunity. Department of Housing and Urban Development. Washington DC.
 BOTES, L, KRIGE, S & WESSELS, J (1991): Informal settlements in Bloemfontein – a study of migration patterns, socio-economic profile, living conditions and future housing expectations. Bloemfontein. Urban Foundation.

- BURGESS, R (1978): Petty commodity housing or dweller control? A critique of John Turner's views on housing policy. *World Dev* 6:105-1033.
- BURGESS, R (1982): Self-help housing advocacy: a curious form of radicalism. A critique of the work of John FC Turner, in Ward, P (ed). *Self-help housing. A critique*. London. Mansell.
- GILBERT, A (1997): On subsidies and home-ownership. Colombian housing policy during the 1990s. *Third World Planning Rev* 19(1):51-70.
- GILBERT, A & GUGLER, J (1992): *Cities, poverty and development. Urbanization in the Third World*. Oxford. Oxford University Press.
- GRIMES, OF (1976): *Housing for low-income urban families: economics and policy in the developing world*. London. John Hopkins University Press.
- HARMS, H (1992): Self-help housing in developed and Third World countries, in Mathey, K (ed). *Housing policy in the socialist Third World*. London. Mansell.
- KRIGE, DS (1991): Bloemfontein, in Lemon, A (ed). *Homes apart: South Africa's segregated cities*. London. Chapman.
- LAZENBY, JAA (1988): *Bewoningsbevrediging in die blanke woonhuissektor binne die munisipaliteit van Bloemfontein: 'n Studie van proses, patroon en strategie*. Ongepubliseerde PhD-proefskrif. Universiteit van die Oranje-Vrystaat. Bloemfontein.
- MAASDORP, G & HAARHOFF, E (1983): *Housing policy in conditions of rapid urbanization. Low-income housing in the Durban metropolitan region*. University of Natal. Durban.
- MANGIN, W (1967): Latin American squatter settlements: a problem and a solution. *Latin Am Res Rev* 2:65-98.
- MARAIS, L (1999): *Post-apartheid low-income housing delivery database for the Free State (1994-1998)*. Vista University. Bloemfontein
- MATHEY, K (1997): Self-help approaches to the provision of housing: the long debate and the few lessons, in Gugler, J (ed). *Cities in the developing world. Issues, theory and policy*. Oxford. Oxford University Press.
- MAYEKISO, V (1995): Our mission is to deliver as soon as humanly possible. *Hous South Afr* July:9.
- MAYO, SK & GROSS, DJ (1987): Site and services - and subsidies: the economics of low-cost housing in developing countries. *World Bank Econ Rev* 1(2):301-335.
- MAYO, SK, MALPEZZI S, & GROSS, DJ (1986): Shelter strategies for the urban poor in developing countries. *World Bank Res Obs* 1:183-203.
- NIENTIED, P, & VAN DER LINDEN, J (1985): Approaches to low-income housing in the Third World. *Int J Urban Reg Res* 9(3):311-329.
- POTTER, R & LLOYD-EVANS, S (1998): *The city in the developing world*. Singapore. Longman.
- PUGH, C (1997): The changing roles of self-help in housing and urban policies, 1950-1996. *Third World Planning Rev* 19(1):91-101.
- RODELL, MJ & SKINNER, RJ (1983): Introduction: contemporary self-help programmes, in Skinner, RJ & Rodell, MJ (eds). *People, poverty and shelter - problems of self-help housing in the Third World*. London. Methuen.
- RODWIN, L & SANYAL, B (1987): Shelter, settlement and development: an overview, in Rodwin, L (ed). *Shelter, settlement and development*. London. Allen & Unwin.
- RUST, C & RUBENSTEIN, S (1996): *A mandate to build. Developing consensus around a national housing policy in South Africa*. Johannesburg. Raven.
- SEARS, D, FREEDMAN, JL & PEPLAU, LA (1985): *Social psychology*. London. Prentice-Hall.
- STREN, R (1989): Urban housing in Africa: the changing role of government policy, in Amis, P & Lloyd, P (eds). *Housing Africa's urban poor*. Manchester. Manchester University Press.
- SOUTH AFRICA (1995): *White Paper on Housing*. Department of Housing. Pretoria.
- TOMLINSON, M (1998): South Africa's new housing policy: an assessment of the first two years, 1994-1996. *Int J Urban Reg Res* 22(1):137-146.
- TURNER, JFC (1967): Barriers and channels for housing development in modernizing countries. *J Am Instit Plan* XXIII:67-181.
- TURNER, JFC (1968): Housing priorities, settlement patterns, and urban development in modernizing countries. *J Am Instit Plan* XXIV:354-363.
- TURNER, JFC (1976): *Housing by people: towards autonomy in building environments*. London. Marion Byers.
- TURNER, JFC (1978): Housing in three dimensions: terms of reference for the housing question redefined. *World Dev* 6:1135-1145.
- WARD, P (ed) (1982): *Self-help housing. A critique*. London. Mansell.
- WORLD BANK (1993): *Housing. Enabling markets to work*. Washington DC.
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