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RESEARCH PROJECT: 'THE GROWTH OF URBAN SOCIETY IN FRANCISTOWN'

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PROGRESS REPORT NO. 1.

HOUSING PROCEDURES AND URBAN SOCIAL PATTERNS

A PRELIMINARY STATISTICAL ANALYSIS OF APPLICATIONS FOR SITE–&–SERVICE (SHHA) PLOTS IN FRANCISTOWN IN THE YEARS 1984-1988

[draft]

Francistown, March 1989

TABLE OF CONTENTS

LIST OF HISTOGRAMS

LIST OF TABLES

1. PREFACE

This progress report, the first to be produced in the context of the research project 'The growth of urban society in Francistown', presents preliminary results, observations and hypotheses based on my field-work in Francistown as from the end of November 1988. Its purpose is not, of course, to draw final and lasting conclusions, but to inform those involved in or interested in the present project (more specifically the Applied Research Unit (ARU), Ministry of Local Government and Lands, Republic of Botswana — the institution monitoring the project — and my home institution, the African Studies Centre (ASC), Leiden, The Netherlands) of trends and themes in the project, thus enabling my colleagues inside and outside these institutions to offer comments, criticism and advise for the subsequent stages of the field-work. As such, this report constitutes the quarterly report whose submission was stipulated when a Research Permit was issued for the present project by the Office of the President, Republic of Botswana.

2. ACKNOWLEDGEMENTS

In this phase of the research and analysis I wish to register my particular indebtedness to the following individuals and organizations: The Ministry of Local Government and Land, and specifically its Applied Research Unit, for welcoming and monitoring this project; the Francistown Town Council, and particularly Mr. M. Maje, Principal Housing Officer, and his officers particularly those of the Somerset East Ward Office, for making available essential materials and illuminating my interpretation of them; Mr Maje also extensively commented on an earlier version of this report. In the Netherlands my indebtedness is primarily with the Board of the African Studies Centre (ASC), for funding the project and granting me leave of absence; Mr. J. Nijssen, ASC Bursar, and his staff, for facilitating many practical and financial aspects of the project; Mr. R. Niemeijer, head of the ASC computer section, whose efforts over the years led to a situation where I could efficiently computerize my data while still in the field. Finally I wish to thank the people of Francistown and particularly my neighbours in Somerset East Extension for allowing me glimpses of their urban housing patterns and strategies; Mr. Edward Mpoloka, for research assistance; my wife and children for sharing this research with me and making their own invaluable contributions to it; and Data Processing, Gaborone, for repairing my computer in the nick of time.

3. INTRODUCTION: USES, LIMITATIONS AND IMPLICATIONS OF EXISTING QUANTIFIABLE DATA IN THE BOTSWANA URBAN ENVIRONMENT[1]

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1 Writing under field-work conditions, with no access to a specialized library, the embellishment of this report with references to the scholarly literature will be reserved for a subsequent version. For an extensive bibliography of literature relevant to the present project, cf. my research plan: W.M.J. van Binsbergen, 'Stedelijke cultuur in Francistown, Noordoost-District, Botswana: Voorstel voor een exploratief onderzoek,' Leiden: African Studies Centre, 33 pp., an English translation of which is hoped to be available soon.

As compared to villages, modern towns, in Botswana[2] and elsewhere, are characterized by an often confusing heterogeneity. Their inhabitants have heterogeneous origins, careers and ambitions, cultural orientations and values.

Any urban individual's life is shaped and controlled by his or her relationships with fellow-townsmen, belonging to such categories as neighbours, kinsmen, colleagues at work, fellow-members of religious, cultural, recreational and political organizations. But while the extent of this influence and social control may vary (and to assess this extent for the Francistown case is to be an important task of the present research project) according to urban area, sex, age cohort, socio-economic class etc., by and large it tends to be more diffuse and more difficult to grasp than in classic rural settings. As a result a researcher cannot internalize 'the' urban culture simply by living it, through participant observation, however much this constitutes a time-honoured technique for the study of rural culture in a some integrated and homogeneous village setting.

Moreover, the town is not a social system closed in itself. Towndwellers in Botswana are not necessarily fully-fledged townsmen if the latter word is to imply a set of social and cultural orientations commonly subsumed under the concept of 'urbanism': a way of life which selectively displays distinctly and emphatically urban elements, in the sense of identification with the urban environment, consistent and enduring reliance on that environment for socio-economic security and self-evaluation, patterns of urban consumption, fashion and recreation, in short an urban life-style. In fact, one of the major puzzles of social life in a town like Francistown is that on the one hand it is expanding vast, in terms of geographical space, number of inhabitants, number of dwellings, urban services, urban-based formal organizations etc.; while on the other hand for a considerable part of this urban population the town is only one among several viable options for dwelling, socio-economic activity and social relationships — with the other possible options being located in the home village, the farm, the cattle post, and other towns in Botswana and Southern Africa in general. Quite a few houses in the new residential areas turn out to be unoccupied, or at least not occupied by the owners, not only because they have not yet been completed, or have been rented out, but also because their owners are temporarily away to one of their other residential options, where they are surrounded by a different set of social relationships, roles and cultural orientations from those structuring their lives when in Francistown. Also in the light of this spatio-temporal situationality of urban life the participant observer's personal, face-to-face perception of his or her research population is necessarily truncated and partial.

This state of affairs, far from peculiar to Botswana towns, has caused urban studies to rely on a combination of two types of data collection, when it comes to capturing the confusingly complex nature of urban social life, discerning patterns in it and, on the basis of a preliminary sociological

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2 Where modern towns have to be distinguished from traditional tribal 'villages' such as Serowe, Mochudi, Kanye etc., — the overwhelming majority of whose population, however large (comprising up to tens of thousands) used to be ethnically and culturally homogeneous, under a viable traditional administration. In recent decades, however, these 'villages', under the influences of expanding urban services and administration, and the attending immigrations, have evolved to a hybrid state which approaches the modern town more and more.

analysis of the urban social structure, arriving at more profound insights in urban culture, systems of meaning and symbolism:

a. Prolonged participation, observation, in-depth interviews based on the informant's personal relationship with the researcher and on the trust gradually generated therein. First data of this nature highlight, in the form of individual cases and events, social phenomena of hopefully a more repetitive and structural nature; from these personalized primary data, collected in a context of face-to-face relationships, ideas, hypotheses and draft questions for surveys may be derived. Secondly, beyond their heuristic contribution to the planning of a subsequent, quantitative data collection, these personalized data are essential for the more profound, intimate aspects of research into cultural and symbolic aspects of town life — more typically to be tackled in a later phase of the research.

b. Since generalization from the personalized data of category (a) is problematic, the overall structure of the urban society is habitually approached through quantitative methods, where individuals and their sociological characteristics and attributes are analysed not in their relatively unique individuality, but as exponents of large social-structural categories to which they belong: sexes, age cohorts, people with a particular level of education and income, social classes, ethnic groups, etc.

The research questions to be answered by such quantitative data are usually so specific and specialized that the data required are to be generated and collected purposely as part of the research cycle, which then also involves the drafting and testing of questionnaires.

However, a modern urban environment typically entails a considerable number of formal organizations which work in and upon the urban community and whose formal administrative procedures include the generation and processing of data concerning those individuals who utilize the services of these organizations. These formal organizations comprise, among others, the municipal administration including the housing department, the police, urban courts, the department of national registration, the immigration department, various registered societies in the cultural, religious and political domain which keep records of their members, and commercial enterprises offering services which involve a repetitive or prolonged relationship with their customers (e.g. the utility companies for electricity, water and telecommunication, banks, wholesalers, hire-purchase retailers, outlets for video hire etc.).

One would not expect these existing formal organizations to have at their disposal all the data a comprehensive sociological analysis of a town like Francistown would entail. However, bureaucratic agencies (perhaps in order to impress the clients with their power and with the inflexible and demanding nature of their procedure), in Francistown as elsewhere have a tendency to ask far more information from their clients than is strictly necessary for their immediate internal administration. Urban customary

courts[3] record people's occupation, employer and village of origin, although the law they administer professes to be blind to such socio-economic and geographical particularities. Some video outlets even insist on noting down people's car registration numbers, and hire-purchase companies tend to go to the most uninhibited penetration of privacy when registering a new client. Much of this information, in its redundancy, is neutral in the light of perceived specific interests such as inform the interaction between agency and client, and therefore is likely to be correct — and sociologically relevant at the same time.

Part of the data recorded by these agencies are however far from neutral in this respect, and this may lead to a certain one-sidedness in the records. E.g. the files of a hire-purchase company might not be a reliable record of the financial obligations the clients have towards third parties (it may seem to be in the interest of the client to conceal such obligations), and in the same vein the records of the customary courts, in so far as based on information volunteered by defendants themselves, may not be a faithful reflection of their earlier convictions for similar charges. Equally important seems the fact that bureaucratic organizations, by the very logic that informs their decision structure, tend to impose a particular, stereotypified interpretation upon reality, — a bureaucrat's view of the social reality which, however accepted wisdom inside the organization itself, may be questionable from a more objective sociological point of view. An example relevant for the present study is the following:

> In late 1988 and early 1989 all inhabitants of Botswana, in so far as claiming resident status, were involved in the gigantic 'National Registration Exercise', popularly called O Mang ('Who Are You'). From a point of view of development planning and national administrative management in general the operation would seem to be long overdue, yet it being launched on the eve of, and apparently as a condition for, the 1989 general elections created considerable concern among the general public and the opposition parties. Teams of civil servants, aided by secondary school graduates, would conduct the registration. The administrative status of rural-based individuals would be ascertained by a combination of two testimonies: one from the ward headman and/or village chief, and one from a close relative at least ten years older than the individual seeking registration. In urban areas however the second and occasionally third generation of townsmen, born in town and often having only a limited acquaintance with their parents' village home, headman and chief, would be compelled to refer to these distant persons as witnesses of their identity and nationality status. No urban-based authorities, not even the Presidents of Urban Customary Courts who in the popular perception are considered to be the urban counterparts of the village chiefs, were allowed to sign testimonies in this connexion. As one official engaged in the Exercise told me:
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> > 'My superiors do not entertain the possibility of anyone having been born in town.'

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3 A preliminary study of Urban Customary Courts in Francistown will be presented in a subsequent Progress Report in the context of this research project.

In order words, according to the policy guidelines of the National Registration Exercise all Batswana are rural-born.

By contrast, the administrative procedures of the Self Help Housing Agency (SHHA), concentrating on urban areas in Botswana, often ask people how long they have continuously stayed in e.g. Francistown. This question is included not only in the Family Identification Form used when Francistown squatter areas were 'rationalized' in the 1970s, but also in the application forms on which the allocation of SHHA site-and-service plots largely depends. In a seizable number of cases people would claim lifelong residence in town, saying that they had been born here.[4] Their answers would be recorded in the SHHA files without comment: the SHHA logic as employed in Francistown, where the emergence of a well-established and administratively sound urban environment appears to form one of the principal underlying goals, certainly entertains the possibility of people having been born in town.

However, the SHHA logic as exemplified here has its own bias, of a rather different nature. Contrary to the perspective of residential situationality and optionality as hinted at in my opening paragraphs, it suggests that urban residence is an absolute, not a relative category, and that people stay in town once for all. In its concentration on urban residence (a minimal two years of which is a firm condition for the original allocation of a SHHA plot) it chooses to ignore the obvious alternatives to urban dwelling which many people are likely to have pursued, in addition to if not in lieu of 'living in Francistown', during the period elapsed since they claimed to have immigrated to Francistown for the first time (or having been born in Francistown, as the case may be).[5]

Obviously, not both administrative logics (that of the National Registration Exercise and that of SHHA), however consistent in itself, could be true at the same time, and a sociological critique is therefore needed before the administrative records can be used for empirical research, outside their original administrative context.

Below, when discussing the data set on which the present analysis is based, we shall have occasion to reflect on some other simplifications resulting from the administrative logic involved.

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4 The relative merits of such statements will be discussed below, section 4.2.9.

5 Admittedly, in the Botswana context it is very difficult to do justice to the many shadings of residential options and residential identity. Plurality of residence, controlled by an annual cycle, is central to the traditional structure of Tswana society: the life of every Tswana focusses alternatingly on a. the tribal capital; b. the farm where the fields are; and c. the cattle post. Distances between these three foci may run into scores, if not hundreds, of kilometers. This pattern may not have been traditional among other ethnic groups in Botswana (such as the Kalanga, in whose homeland Francistown finds itself) but it is increasingly emulated as the opportunities for livestock farming spread. In this set-up, one's greatest identification would be with the tribal capital, even to the extent of claiming that one was born there, — a cultural statement of identity, and not necessarily one of biological fact. participant observation indicates that people's allegiance to a modern town as Francistown, in the face of their pursuit of other residential options, somehow takes on the characteristics of this traditional pattern. No policy guidelines could realistically take all this into account. In practice, SHHA understands by 'residence in Francistown' the fact that a person works in that town — although exceptions to this can be noted when going through the SHHA files.

Thus, in the SHHA material, marital status is only measured as either 'single' or 'married', so that the many shadings of more or less informal, more or less publicly acknowledged and approved, and more or less enduring sexual relationships in-between are not taken into account; in this way, also the distinction between customary marriage and so-called legal marriage is by and large ignored, even though this distinction is theoretically important for property relations and the transfer of property rights between generations (as is certainly relevant in the context of housing — one of the major forms of capital accumulation in Botswana today).[6] As official policy in Botswana, the time is past that customary marriage is considered an inferior or merely informal variant of marriage as compared to statutory marriage. Community of property between the spouses, which is the 'default option' for statutory marriage, is not a notion entertained in the traditional customary law as recorded for rural Botswana by such anthropologists as Schapera. However, as we see already in the contemporary practice at Customary Courts both in town and in the rural areas of Botswana, what is now applied as 'customary law' is a diffuse set of neo-traditional notions very heavily influenced by the more formal legal notions that are applied by such bureaucratic agencies as the police (whose officers more and more appear as prosecutors in criminal cases at customary courts), the District Commissioner's office, etc. In line with this overall development, the SHHA policy guidelines regard a customary marriage as equivalent to a statutory marriage (and therefore the distinction is ignored in the records), and associate such a marriage with community of property including such rights as devolve from the allocation and development of a SHHA plot, provided the SHHA officer has reason to believe that the customary marriage has taken on substance because the spouses have stayed together for a number of years, there are children, the respective families have come together to give their consent to the union, and bridewealth has been paid. Of course, not all these criteria are necessarily met in all cases, but in practice the SHHA officers abide by the appicant's own definition of their marital state as single or married, without probing into details.

Another important aspect of the SHHA administrative logic is that the applicant's income is exclusively conceived as cash income in an urban context. That an urban cash income does not mean the same to a person with many rural and urban dependants, and to a person whose kinship obligations are minimal, cannot be taken into account. Likewise, the various other forms of income are ignored: income from rural production (e.g. the partaking, by towndwellers, of crops produced in the home village; or the proceeds from cattle husbandry), and income in the form of unpaid or underpaid services rendered by friends, neighbours and relatives. Of course, participant observation shows the latter to be rather important particularly in the construction of houses, and numerous are the instances where towndwellers supplement their income and diet from rural sources. As fully-fledged members of their own society, the SHHA officers are aware of this state of affairs. If (despite remonstrations to this effect from donor organizations

6 One community development officer engaged in SHHA applications claimed to make a distinction, in the records generated by that officer, between legal marriage (where the female spouse would be registered as 'wife'), and customary marriage, where for the purposes of internal bureaucracy the female spouse would be denoted 'wife-to-be'. However, I have not come across actual instances of this rather Eurocentric practice in the records, except in that officer's own application for a SHHA plot.

such as the World Bank) rural income is yet not taken into consideration when assessing an applicant's financial situation, this is because of the cultural awareness that such rural income is very vulnerable, fluctuating, and that its allocation and use is hardly at the individual applicant's own discretion since it derives from resources (livestock, fields, granaries) which are collectively owned by the kin group and whose proceeds are disposed of through a collective process of consultation and decision. For these reasons the kinship-based aspects of income and spending are impossible to calculate in any objective way. Thus, even though the urban cash income is recognized to constitute only a very rough approximation of an applicant's real financial assets and obligations, it is considered the only indicator of income that can be handled objectively in an administrative context.

In the same vein, when recording the number of an applicant's dependents there is likely to be an over-emphasis on co-residing and/or nearest kin, at the expense of the applicant's often numerous ties within the extended family which do not necessarily involve permanent co-residence, but which yet greatly contribute to the extent of an applicant's potential financial and housing commitments, as well as to his or her potential field of kin support for house building and the financial obligations accruing from this.

From a point of view of urban culture it is important to realize, meanwhile, that the administrative categories imposed on clients in their dealings with bureaucracies, also may be internalized by these clients themselves and subsequently be projected in other social situations outside the administrative sphere. E.g. people with middle-class aspirations (many of whom will never themselves belong to that middle class) seek to crown ('legalize') their conjugal career with a statutory marriage around about their fortieth year of age.

However, the simplifications as imposed by the administrative procedures are understandable and probably unavoidable: policy and procedure always requires a certain amount of simplification, so that the myriad forms of individual cases can be subsumed under a limited number of administratively recognized distinct headings. It is also important to realize that the particular administrative concepts adopted do not fall from the sky, nor can be totally subsumed under the heading of some 'administrative culture', but have a distinct history, which often is the history of an administrative agency's struggle over policy, funds and autonomy with the outside world — as the SHHA position on rural income in the face of challenges from the World Bank makes clear.[7] At any rate, in all these respects the administrative records do not constitute a unique case. The effects of impression management and of artificially imposed perception systems involving their own idiosyncratic logic are at work in any other situation of sociological data collection, including the most intimate participatory observation. Therefore, if we are aware of its possible defects we may use this bureaucratic information and be even able to detect and compensate for the defects to some extent.

When such available data from a variety of urban administrative sources are analysed to their full extent and combined, they are likely to yield an

7 This historicity of a specific administrative subculture also helps to explain the contradiction between such subcultures, as exemplified above by the comparison of the SHHA and National Registration policy guidelines: obviously, both sets of concepts were generated in a slightly different environment, under slightly different pressures of policy and politics.

interesting first insight in the sociology of the town under study — not as an end result of sociological enquiry, of course, but as an important sources of new ideas and hypotheses for further research undertaken both with specifically designed questionnaire surveys and through participant observation and open-ended in-depth interviews.

The primary data in the records of these bureaucratic agencies therefore might, because of their generality and redundancy, yield insights in the broad sociological patterns of urban life. But there is an obvious second consideration why these administrative materials are important for the study of towns. Urban life is largely shaped and structured by these very same urban organizations, and in addition to a generalized sociological pattern, the files are likely to show us the internal workings, optiques, strategies, perhaps biases or the lack of biases, of those specific interactions between towndweller and significant formal organizations which not only reflect urban life in a general sense, but also create urban life in a specific sense. The records of SHHA in Francistown, such as will be analysed in this preliminary report, will turn out to tell us something about Francistown, its population, its social structure and the quality and setbacks of urban life, — but it will tell us even more about the inside of SHHA itself, its procedure, its applicants, its recruitment pattern etc.

These two phases will be distinguished in this report, but inevitably they merge, in real life as well as in my argument.

4. DESCRIPTION OF THE DATA SET

4.1. origin of the data, and administrative procedure

The data analysed in the present report are those concerning the applications for SHHA plots in Francistown in the years 1984-1988, and the decisions taken with regard to these applications, as reported in the minutes of the Site and Service Management Board of the Francistown Town Council. In this form, the data summarize the SHHA Application Form as filled in by the applicants with the aid of the community development officers at the Ward Office;[8] in the minutes, the decision of the Management Board is added for each individual case.

Usually, this decision is predictable on the basis of a confrontation of the applicant's characteristics with the overall criteria for allocation of a SHHA plot: the successful applicant is one who satisfies the following criteria:

— applicant or spouse does not already have a COR[9] plot in Francistown;

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8 In this phase of the analysis, I have not compared the original contents of the application forms with their summaries in the Management Board minutes.

9 COR = Certificate of Rights, issued to the beneficiary when a site-and-service plot is allocated, and granting the occupant a virtually indefinite use of the plot provided that the plot is developed (in the form of the erection of one toilet and one habitable room according to official specifications) within six months. Site and service plots per definition are in a part of town where payment of service levy is due, which in the period covered (1984-1988) stood at P8.50 per month (P 1 [Pula] ≈ US$ 0.52). The occupancy rights devolving from the Certificate of Rights can, after proper surveying etc., be

— applicant is a Botswana national;

— applicant's compound family income, from whatever source (including employment, self-employment and cash contributions from relatives) is at least at the minimum at which the payment of service levy can be deemed affordable,[10] and at the same time is lower than P3,500.00 per year;[11]

— applicant has a minimum of two years of continuous residence in Francistown immediately preceding the date of application.

The Management Board, one of the committees of the Francistown Town Council, comprises both officers of the municipal administration, and Councillors; the mayor is an ex officio member of this Board. The role of the councillors is not only to decide on general matters of policy and principle, but also to specifically test the details submitted for each application, in the light of such personal knowledge as a councillor is supposed to have of the people inhabiting his or her urban ward. Prospective applicants tend to seek the advice if not the support and protection of their ward councillor, and therefore the latter is far more likely to have the required information at hand than could be expected considering the size, composition and in-/outflux in urban wards. When the councillors present at the board meeting raise doubt as to the correctness of the details as supplied by a specific applicant, the decision may be deferred until the discrepancy is sorted out, or the application may even be rejected straight-away. However, the housing officials are aware of the fact that the relationship between a councillor and the inhabitants of his or her ward is of a political nature, and tend to carry out an independent check in case a councillor responds strongly to a certain application. The decision as reached during the board meeting is recorded in the minutes. Subsequent appeals against decisions, or other revisions, are reflected in the minutes but were not in this stage incorporated in the present analysis.

After the granting of a plot the beneficiary can and in most cases does apply for a Building Material Loan, which allows him or her to borrow, under stringent administrative conditions preventing the money to be used for other purposes, to borrow up to P800 (later P1200) from SHHA for the purpose of developing the plot. The loan is redeemed over 15 years by

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changed into a fixed-term grant of long lease, and once this is done the SHHA plot can even serve as surety for collateral purposes, particularly a bank loan for the construction of an accomplished middle-class residence. Applicants are not only asked about the possession of another COR plot than the one presently applied for, but also whether they have a so-called TOP plot: a plot for which, as a phase in the rationalization of a former squatter area, a Temporary Occupancy Permit has been issued. When the term of such a permit expires (sometimes it may be extended for a few months or a year after the first expiry date), the occupant has to vacate the TOP plot in question and, as a so-called displacee from the now upgraded former squatter area, becomes entitled to a COR plot in some other part of Francistown, regardless of the income criterion.

10 Initially, following Latin American examples, SHHA policy formally defined this minimum income as five times the service levy, which with the current rate of P8.50 per month would amount to a minimum income of P42.50 per month or P510.00 per year. Later, in fact throughout the period under study here, this minimum criterion was dropped in practice.

11 The income criteria are waived in the case of displacees. There is also a provision in SHHA that a third party, typically a close kinsman: brother, child etc., can act as a surety for an applicant who himself or herself has no income, provided the arrangement is formalized on paper.

monthly installments which, along with the interest, each amount to roughly 1% of the sum borrowed.

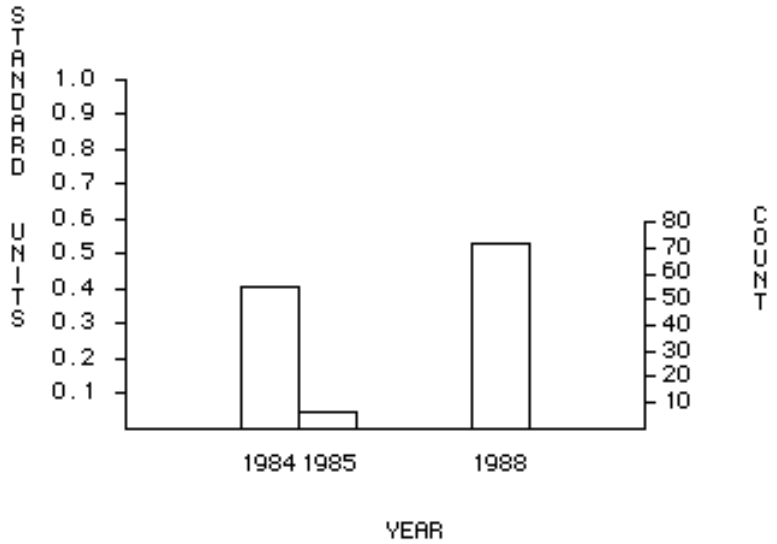
4.2. Overview of the variables

The variables as recorded for each application, and the data entry form used for the computerization of these data, is presented in Appendix 1, entitled 'Data entry and coding form used for computerization of SHHA applications'.

Let us consider each of the variables involved.

4.2.1. Identifying each case

MONTH, YEAR and NUMBER serve to identify each case in the total data set. Month and year are given in the title of the minutes of each of the monthly management board meetings; the number of each case per month is assigned by the researcher. In order to reduce the data set to manageable proportions for this first, preliminary exercise, only the applications for the months of January in 1984, 1985, 1986, 1987 and 1988 were selected for the data set. This yielded 133 cases, many of which had missing values on one or more of the other variables as analysed. When the coding was already being undertaken, it turned out that the concentration on January caused the various years to be far from equally represented in the data set, as can be seen from Histogram 1.



Histogram 1. Years from which cases have been included in the data set.

The total data set available, after coding, for the definitive analysis would comprise approximately 1500 cases. It is not to be expected that such a future, final analysis would yield dramatically different results from those of this preliminary analysis, but that of course remains to be seen. The effects associated the YEAR variable may turn out to be different when substantial numbers of cases are included from years now underrepresented in the data set.

4.2.2. Citizenship

Data on citizenship, as supplied in the minutes, are excluded from coding and subsequent analysis because all cases in the minutes claim to refer to Botswana nationals. This may be a distortion of the reality underlying some of these cases.[12] However, it is equally possible that SHHA applications by non-nationals get nipped in the bud, never reach beyond the stage of the community development officer's interview with the prospective applicant, and therefore are, justifiably, never put before the board nor recorded in its minutes.

4.2.3. Dates of registration and application, and the duration of the application cycle

It is only the minutes for the later years that specify the date of the applicant's registration and, a considerable time later, the date of the actual formal application, which is usually only a few months before the application is put before the management board. This element was introduced into the procedure in view of the shortage of available plots: applicants used to be put on a waiting list, but when after two or thre years a plot would become available the information in their application form would often be obsolete. Therefore it was decided to separate an initial registration from the later, final application which was then immediately to be put before the board.

Since the statistical package used[13] does not have an easy facility for the handling of variables that consist of dates, the information concerned is simplified so as to ignore days leaving only months and years, and then stored under four different variables: MONTH OF REGISTRATION (MONTHREG), YEAR OF REGISTRATION (YEARREG), MONTH OF APPLICATION (MONTHAPP) and YEAR OF APPLICATION (YEARAPP). In those cases that MONTHREG and MONTHAPP happen not to be specified in the minutes but only the respective year, the month is coded as July. These four date variables were not in themselves subject to statistical analysis, but featured only as ancillary variables allowing a new variable to be calculated: DURATION of the application procedure, as measured in months. Using 1st January 1984 as an ancillary base-line,

DURATION = REGAFTER - APPLAFTE,

where

12 By analogy, in the data on Francistown Urban Customary Courts, complainants (plaintiffs) and defendants are invariably entered into the Case Record Book as Botswana nationals, even in those cases when their names, places of origin and other details as recorded either in the Case Record Book or in the case docket plainly reveal the person in question as a national of one of the neighbouring countries around Botswana.

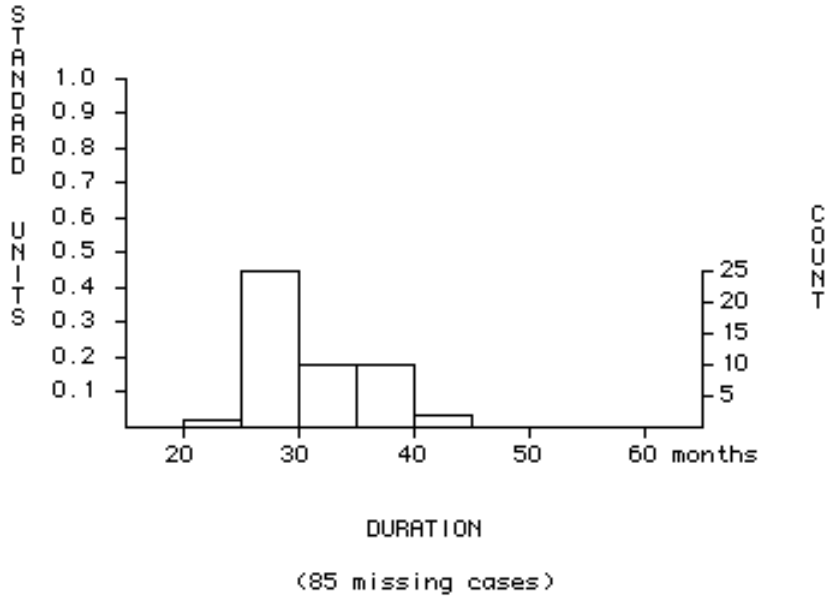
13 SYSTAT, a product of Northwestern University, Evanston, Ill., U.S.A., and used on Apple Macintosh. It only accepts variable names of maximum eight letters, hence the strange abbreviations used in this first version of the report.

REGAFTER = (MONTHREG - 1) + (12 * (YEARREG - 84)),

giving the number of months registration took place after 1st January 1984, and

APPLAFTE = (MONTHAPP - 1) + (12 * (YEARAPP - 84)).

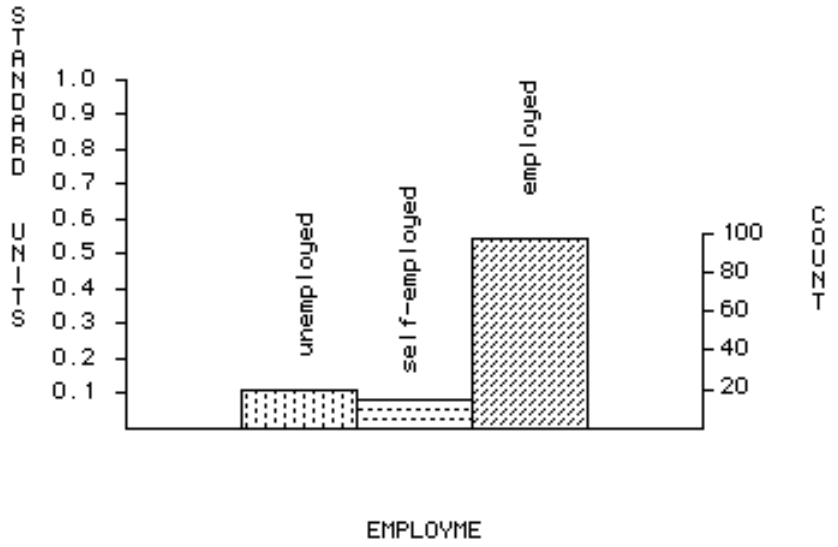
giving the number of months application took place after 1st January 1984. Unfortunately, since so many values on the original date variables are missing, the same is true for DURATION. For the 48 recorded cases, the duration of the application cycle was between a minimum of 24 months and a maximum of 41 months, with the mean at 31.65, i.e. well under three years. DURATION thus measures the number of months that an applicant spent on the waiting list. The histogram shows the fairly balanced distribution of DURATION:



Histogram 2. Duration of the SHHA application cycle in months.

4.2.4. Employment and types of employment

EMPLOYME gives the applicant's employment status. The values are 'unemployed', 'self-employed' and 'employed'. In fact the minutes contain such other categories as 'scholar', 'housewife', 'depends on close relatives (children, husband, father etc.)', but these values occurred very infrequently, and for the sake of not rendering the statistical analysis impotent by the inclusion of almost empty categories, they were coded as 'unemployed'.



Histogram 3. Distribution of employment status among SHHA applicants.

As the histogram indicates, there is an overwhelming majority of employed people among the SHHA applicants. This certainly does not reflect the reality of Francistown society in general.[14] The data strongly suggest that the SHHA applicants, as far as employment is concerned, constitute a positive selection from the Francistown adult population at large. In so far as the allocation of a SHHA plot binds the applicant to effect certain developments on that plot according to formal building regulations and within six months — involving expenses of at least P500 —, a total absence of cash would be of course make the application pointless. However, it is remarkable that in the vast majority of cases such cash turns out to come from salaried employment, which among other things points at the extent of proletarianization (i.e. reliance on capitalist relations of production) in this town.

It is not impossible that the preponderance of wage-earners also reflects a certain selection, in the form of encouragement or discouragement, on the part of the community development officers completing the original applications during an interview with each applicant: perhaps the unemployed are more readily and actively discouraged. However, as the present data set already reveals (Table 1), SHHA plots do get allocated to the unemployed as well as to the self-employed and employed:

14 Participant observation and open-ended interviews throughout Francistown in the course of the present research project revealed an unknown but high percentage of unemployment. Likewise, the Urban Customary Court data to be discussed in another Progress Report yielded a high percentage of unemployed clients of the courts, not only among defendants but also among the plaintiffs. Information from existing employment studies in Francistown, or from national studies including Francistown, will be added in a later version.

	DECISION			
	granted	deferred	rejected	total
EMPLOYMENT STATUS				
unemployed	17	1	2	20
self-employed		9	4	2 15
employed	67	15	14	96
total	93	20	18	131[15]

$X^2 = 3.75$, df = 4, p = .44, ns[16]

Table 1. Decisions on applications by employment status of applicants.

In a later progress report I hope to present an analysis of the vicissitudes of SHHA plots in selected areas of Francistown, looking at the beneficiaries' struggles to develop the plot and to avoid arrears on their service levy and building materials loans. Quite often these struggles end in the plot being repossessed by the Board, after which a new cycle of allocation and occupancy starts. My impression is already that when failures occur on these points, the occupant's lack of cash largely due to unemployment is a principal factor.[17] In this light the preponderance of employed applicants is all the more understandable, even if it were to reflect an element of selectiveness on the part of the SHHA officers.

EMPLOYCA gives the applicant's employment category; it is missing when the applicant is unemployed, or when no details as to the type of employment of an applicant are given. The categories I distinguished are: 'manual unskilled' (including domestic, cleaners and general workers), 'manual skilled', 'commercial' (shop assistants and self-employed beer vendors, hawkers, etc.), 'clerical', and finally 'professional and supervisory' (including trained medical staff). The distinctions are admittedly crude but the actual scoring of each individual case hardly offered problems.

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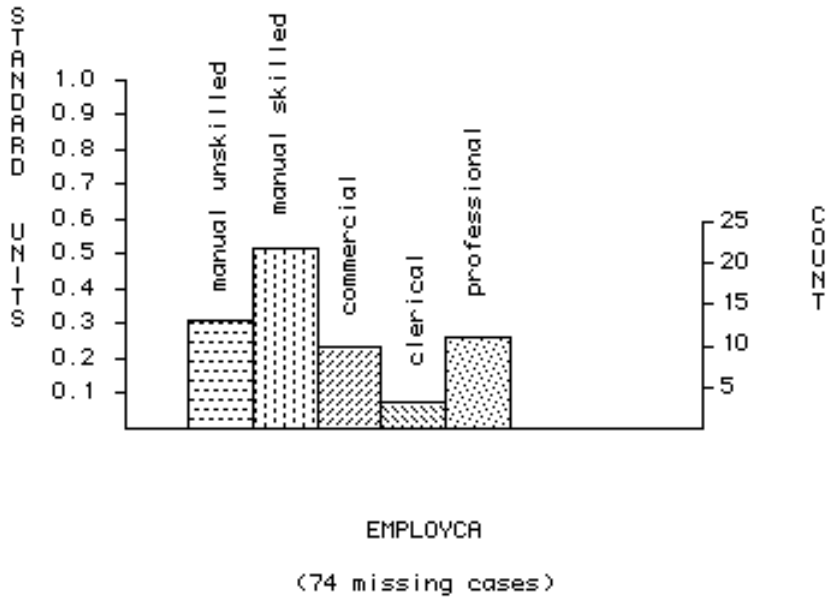
15 When the sum total in contingency tables is less than the 133 cases in the data set, that of course means that missing values occur.

16 For simplicity's sake, for contingency tables of nominal variables only the Pearson chi-square (X2) will be given, , along with the associated number of degrees of freedom (df), the associated probability of the observed differences between sample distributions being attributable to mere chance (p), and the statistical significance of p, taking p => .05 as not significant (ns), and p< .05 as significant (s). Sample size (N) is only indicated when a statistic is used which is affected by sample size; this is not the case with the chi-square statistic. A discussion of alternative tests, especially called for when (like in the present case) more than one-fifths of the cells are sparse (i.e. have a frequency of less than 5), will be reserved for a later version of this report.

17 Another such factor, applying to a very different set of people, is that the applicant (who is screened for eligibility but not for accute housing need!) may be relatively comfortably and cheaply housed at the moment the plot is allocated to him or her, and therefore lacks the incentive to develop the plot within the stipulated six months.



Histogram 4. Employed applicants by employment category.

The distribution as reflected in this histogram reveals the preponderance of manual workers, especially of the skilled variety, and a relative dearth of the other categories, especially clerical workers. This may be related to the income limitations imposed by the SHHA policy; we shall explore that aspect below (4.2.10, 5.1, 6.2). If the distribution of employment categories among the applicants persists among the actual beneficiaries (i.e. if DECISION turns out to be not associated with EMPLOYCA),[18] this finding already gives us a glimpse of the socio-economic characteristics likely to prevail in recently opened SHHA areas: a preponderance of, particularly skilled, manual workers. There is a logic in this: self help housing is far more easily realized, at far lower costs and risks, by skilled manual workers than by clerks and professionals who tend to have 'two left hands'.

Meanwhile, these suggestions must be treated with caution. Once developed, SHHA plots are open to transfer to others than the original beneficiaries.[19] An initial analysis of such transfers as have been formally submitted for approval to the management board[20] suggests that there is a marked element of social class in these transfers. The original beneficiaries, typical members of the stipulated SHHA target group in terms of low income, length of stay in Francistown etc., trade the results of their self-help building for cash, presumably once again become victims of a housing insecurity similar to the one they experienced before having the site and service plot allocated to them; and these original beneficiaries are then

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18 It is not, see 5.1: X2 = 9.20, df = 8, p - .33, ns.

19 Under a number of conditions, which appear to have become more and more lenient with the years: the new owner must be a Botswana national, the plot must be developed in terms of the COR (i.e. have at least one inhabitable room and a toilet), service levy payments must be brought up to date, and there must not be any suggestion of foul play (especially fronting, i.e. that the original beneficiary acted on the new owner's behalf from the start.) At this stage, I am not quite certain whether the prospective new owner, or the latter's spouse, is allowed to have another COR plot, inside or outside Francistown. SHHA policy as regards plot transfers has undergone some changes in the course of the period covered here.

20 On which I hope to report in yet another subsequent Progress Report.

supplanted partly by people of a higher socio-economic class. If this process can be shown to actually occur in a considerable number of cases, it will mean that the socio-economic position of the SHHA site and service areas of Francistown is gradually changing in a process of upward social mobility and selective geographical mobility.

4.2.5. Townships and types of housing areas

TOWNSHIP gives the applicant's Francistown township of residence at the moment of application. Table 2 presents a list of townships so far occurring in my various data sets; not all of these are represented in the present data set.

Table 2. Townships in Francistown (not complete)

name	code used[21]	type of housing area[22]	if upgraded, year of upgrading[23]	number of applicants in this township	
Aerodrome	25	3		1	
Area G	26	4		3	
Area L	20	3		3	
Area S	24	3		8	
Area W[24]	27	3		13	
BDF	17	5		4	
Block 2	28	2	1984	-	
Block 7	23	3		-	
Bluetown[25]	4	2	1979-1980	16	
Catholic Plots	30	5		-	
Coloured Stance	18	2	1988	-	
Donga	21	3		2	
Dumela Ranch	31	6		-	
Francistown Central	3	6		1	
Government Camp[26]	16	5		1	
Impala Ranch	32	6		-	
Kgapamadi	33	2	1981	-	
Lady Mary Farm	34	6		-	
Masimenyenga	2	1		23	
Minestone	15	4		4	
Monarch	8	2	1979	12	
PWD	10	1	due for 1989	-	
Railway Quarters	22	5		2	
Riverside North	9	2	1981	} 7	
Riverside South	9	2	1981		
Satellite North	6	2	1989	} -	
Satellite South	6	3			
Sladden Quarters	36	1		-	
Somerset East	11	2	1979	6	
Somerset East Extension		13	3		6
Somerset West	12	2	1979	8	
Somerset West squatters		42	1		4
Surveyed Tatitown	7	6		-	
Tati West[27]	5	2	1981	4	
Tati Company squatters[28]		43	1		1
White City	14	6		2	

I have tried to find solutions for the problem that sometimes parts of townships (e.g. Madzibalori) are distinguished under a separate name, while in other cases the overall name (for Madzibalori that would be Bluetown) is used. Since we cannot assume that always when Bluetown is entered the other parts of that township outside Madzibalori are meant, in such cases the name referring to the part is suppressed in favour of the whole.

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21 Outside Francistown is coded as 44; two applicants fell in this category.

22 1 = squatter area; 2 = upgraded squatter area; 3 = new site and service scheme; 4. = BHC; 5 = institutional housing; 6 = freehold, private.

23 According to information supplied by Mr. P. Jeremiah, Housing Officer, Somerset East Ward Office.

24 Including Area W Extension.

25 Including Madzibalori.

26 Including Jubilee Hospital.

27 Including Maipaafela.

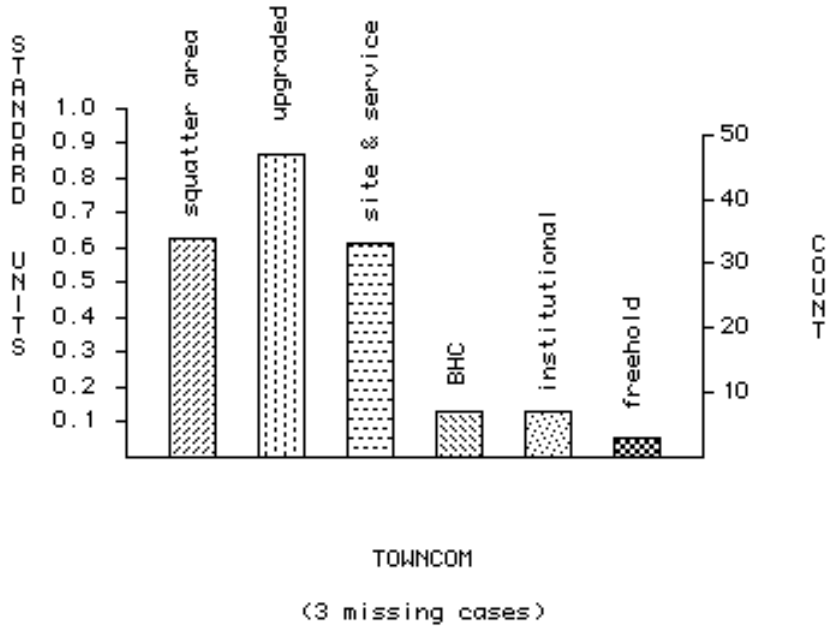
28 Or Somerset East squatters, next to Mahube Primary School.

The townships are very unevenly represented among the Francistown SHHA applicants, as table 2 brings out.

The statistical desirability, alluded to above, of a limited number of categories for nominal variables implies that the many different townships appearing in Table 2 ought to be combined. The most meaningful way of combining them appeared to be according to the nature of the occupancy rights and their specific administrative status of each township. This led to the new variable TOWNCOM (= township combined), featuring the following categories: 'squatter area', 'upgraded squatter area', 'new site and service scheme', 'Botswana Housing Corporation' (BHC)[29], 'institutional housing' (such as offered in Francistown by the railways, the Jubilee Hospital, the Botswana Defence Force, etc.), and finally 'freehold' (as found in the Central Commercial District, White City and Surveyed Tatitown).

With regard to the upgraded squatter areas the time factor is important: if an applicant hailing from such an area applied shortly after the upgrading, it is most likely that in fact we are dealing here with a displaced squatter whose earlier dwelling has been affected either by thinning, or by a development plan stipulating the spot where his or her dwelling was erected for some other use (community, commercial, recreational etc.). Since the total SHHA application cycle in Francistown takes an average of well under three years (see above), I decided to still count as squatters applicants from upgraded areas whose upgrading took place less than 4 years before the application was put before the Management Board (the YEAR variable allows us to ascertain this); had four or more years elapsed since upgrading, then I counted the applicant simply as an inhabitant of an upgraded area. This procedure is likely to have miscoded a small number of borderline cases, but in general would appear to be defensible.

The histogram shows the relative distribution of these types of housing areas among applicants.



29 One of the two main organizations (the other being SHHA) offering housing in Botswana towns, predominantly for rent, although it seems that BHC housing can also be obtained by the occupants on a hire-purchase basis.

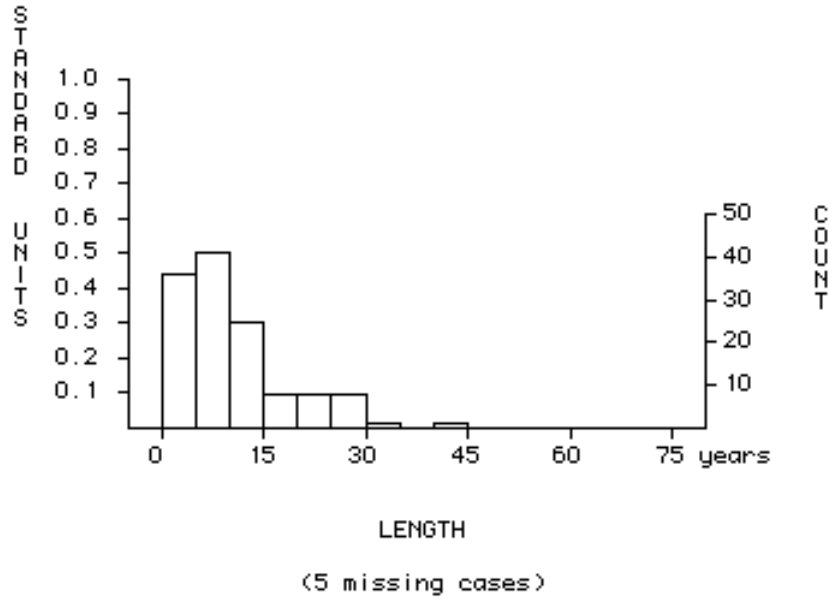
Histogram 5. Distribution of types of housing areas among applicants.

It reveals that, somewhat contrary to what one would expect at first sight, not only squatter areas yield a considerable number of SHHA applicants but also upgraded and site-and-service areas. Typically applicants hailing from the latter types of areas are 'lodgers' in the SHHA terminology: either rent-paying tenants (who may be total strangers, friends, colleages, co-religionists or people hailing from the same village or eithnic group), or junior close kinsmen co-residing with the plot's main occupant who receive accommodation as part of the occupant's parental or kinship obligations. Lodger status (which thus turns out to be a very heterogeneous category) is not specifically recorded in the course of the application procedure, although it is in the context of applications for permissions of plot transfers (without the SHHA management board's approval such a transfer cannot be legalized so that the developments in the plot remain registered in the name of the original occupant). Many people who are listed as lodgers in the SHHA terminology, in fact are just the plotholder's children, younger cousins, nephews, nieves etc., approaching adulthood and developing a desire of urban accommodation of their own. The dynamics of waxing and waning, fusion, fission and segmentation, of co-residing household and kin groups — such an established topic of the sociology of African rural society — has a tangible counterpart in the evolution of urban co-residing family groups, and their housing strategies.

4.2.6. Length of residence in Francistown

LENGTH records the applicant's claimed length of residence in Francistown, subject to the qualifications mentioned above in the context of the specific administrative logic of SHHA (situationality of urban residence). We can only note these possible defects and try to improve them in future data collection.

The histogram presents a graphical image.



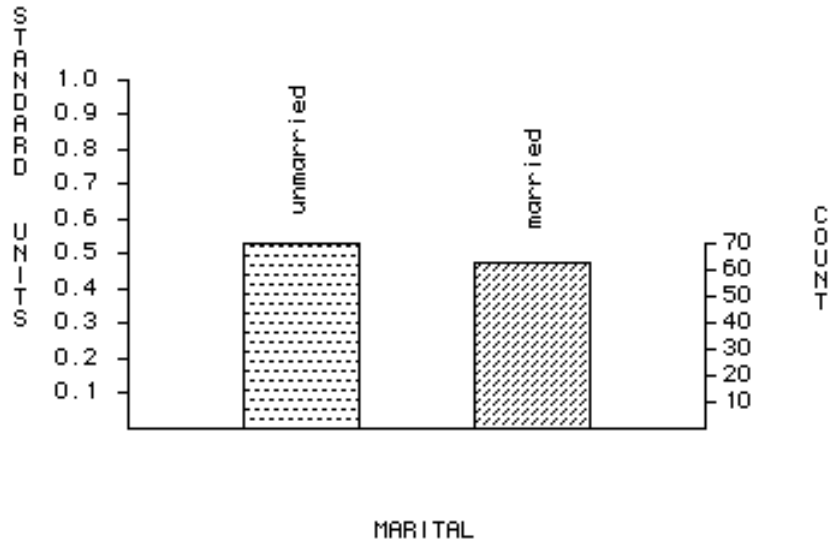
Histogram 6. Distribution of length of stay in Francistown among SHHA applicants

In the light of many towndwellers' options of multiple residence, and without further detailed study of the residential biography of each individual case, it would not be wise to assume these data to be fully reliable reflections of applicant's actual residential association with Francistown. On the other hand, the data certainly allow us the conclusion that — in line with the fact that Francistown is the most established modern town in Botswana, with a history of almost a century — many applicants do not hesitate to claim a permanent association with Francistown extending over many years, even decades, the mean of this rather oblique distribution lying at 9.86 years. Considering the fact that a minimum of two years of Francistown residence is a firm prerequisite for the allocation of a (much coveted) SHHA plot, one would expect few applicants to claim an urban residence of less than that; but if two years is already enough, one would hardly expect applicants to stretch their claims into decades if there was not an element of truth in that. While further analysis in the course of this report (section 6.5) will bring out the heterogeneity of our sample in term of urban or rural orientation (such as would have implications for their actual urban and/or rural residence patterns), at least part of the sample would seem to belong to an established core of urbanites who identify with the town and consider it their main point of reference. On the other hand, Francistown has also many very recent immigrants, whose arrival in town has been prompted not only by the general socio-economic and symbolic pull of the city, but also by the effects of years of disastrous drought in the rural areas in the 1980s. These recent immigrants are also represented in our sample. Once again, only comparison with more general data on the Francistown population could indicate to what extent the SHHA applicants form an a-select sample from this overall population.

4.2.7. Marital status

MARITAL records the applicant's marital status, distinguishing only 'single' and 'married', and therefore again subject to the qualifications mentioned above in the context of the specific administrative logic of SHHA. Categories like divorced', 'separated' and 'widowed' turned out to be almost empty and were therefore subsumed under 'unmarried'.

The high percentage of single people in the sample is remarkable: 52.6%, as against 47.4% married, or in histogram form:



Histogram 7. Marital status of applicants.

In view of the considerations concerning marital status in the introduction, I take it that the 'married' category comprises both customary and legal marriages. Yet one way of explaining the unexpectedly high proportion of single applicants could be to assume that those customarily married were listed as 'single'. I do not think however that this has been the case consistently.

To some extent this reflects the relative youth of the members of the sample, with the mean age at 32.04 years. As a T-test reveals, the unmarried in the sample are significantly younger than the married, the mean difference being 7.90 years:

category	**N**	**mean (years)**	**standard deviation**
single	70	28.33	5.68
married	62	36.23	11.37

t = 4.95, separate variance estimate,[30] p = .00, s

Table 3. Age by marital status.

However, there remain plenty of single people in the higher age cohorts:

	AGE			
	>=20, <30	**30-40**	**>40 years**	**total**
MARITAL STATUS				
single	53	16	1	70
married	25	19	19	63
total	78	35	20	133

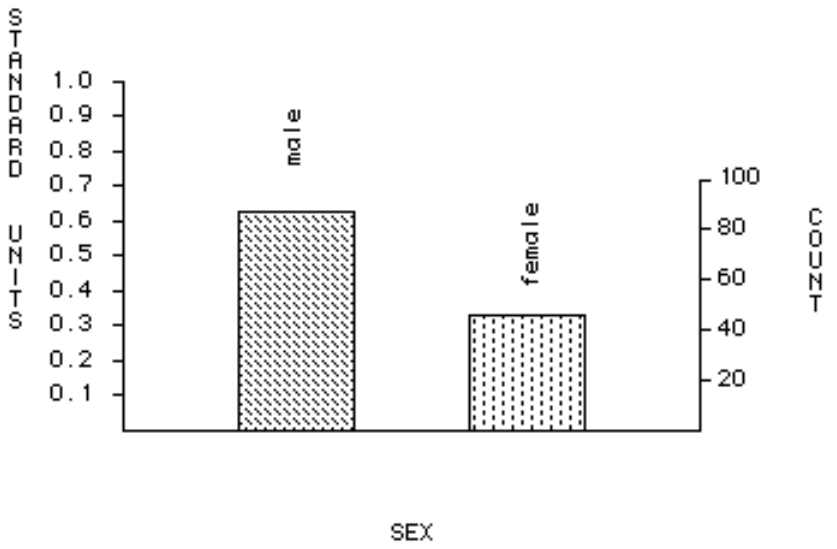
30 The interpretation of the t statistic depends on whether the two sample variances (= squared standard deviations) can be pooled or have to be kept separate because they cannot be assumed to derive from the same population. This is ascertained by the F-test, which however happens not to be available at this stage of the analysis. Therefore, throughout this report application of separate or pooled variance estimates is intuitive and needs to be checked for a later version.

Table 4. Marital status by age.

As suggested above, the marital situation in Francistown is far more complex than can be accommodated by an administrative logic. Participant observation reveals a variety of conjugal and sexual practices, and a variety of conjugal aspirations and models. Even though married people tend to be older than the unmarried, and many people tend to be approaching mature age before engaging in a formal (customary or legal) marriage, age is by no means a sufficient conditions for being married. The incidence of unmarried people, of both sexes but especially women, in the higher age cohorts, is a datum in the social structure of Francistown on which further research is needed, focusing inter alia on the socio-economic opportunities for women inside and outside marriage, the position of the female head of household, etc.

4.2.8. Sex

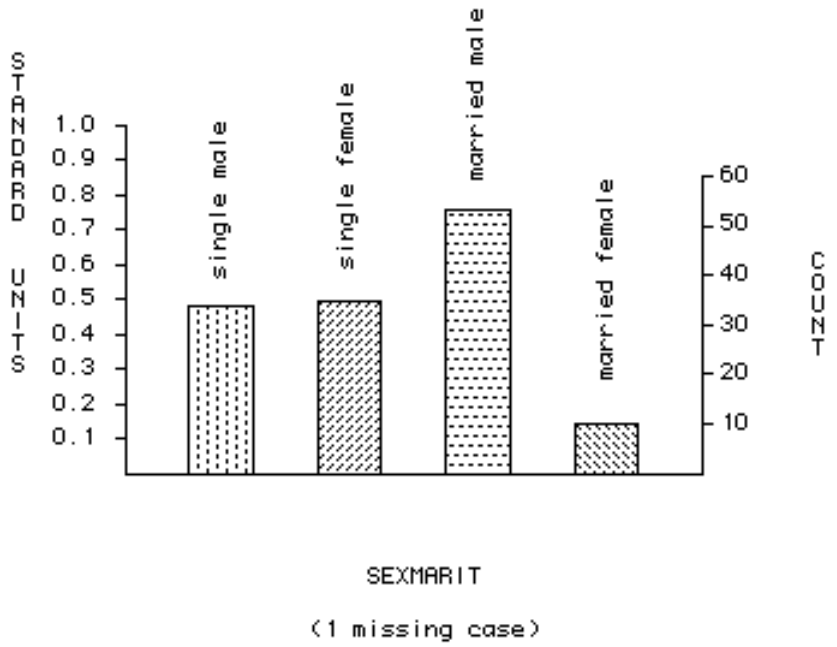
SEX records the applicant's sex. Although the majority of the applicants are male (65.4%), a remarkable proportion is female (34.6%), or in histogram form:



Histogram 8. Sex of applicants.

This distribution reflects the considerable extent to which women seek their own access to the benefit which the modern, bureaucratically organized society can bestow upon its members.

If we want to know to what extent the latter category comprises female heads of households, it is useful to combine SEX with MARITAL. Thus the new variable SEXMARIT is constructed, distinguishing (as the SHHA records do themselves) between 'single male', 'single female', 'married male' and 'married female' applicants. Here the distribution is very interesting:

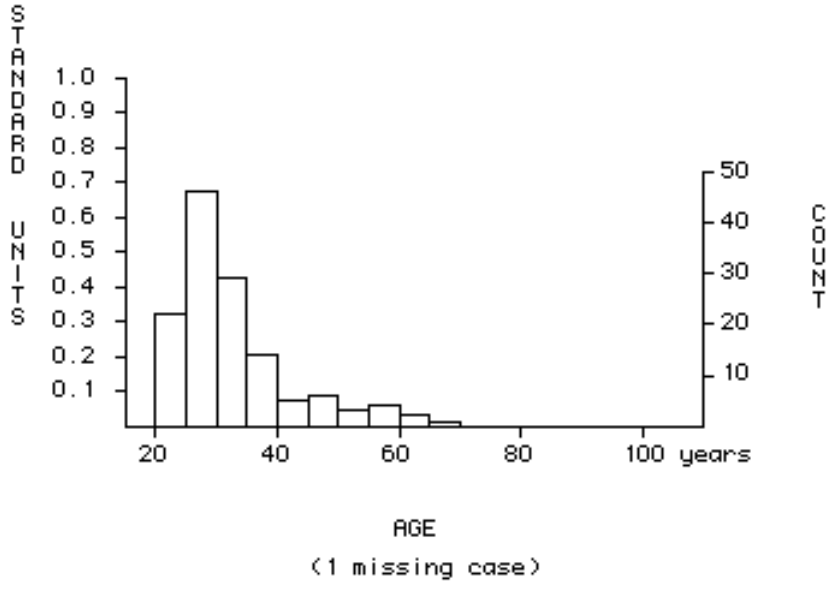


Histogram 9. Sex and marital status combined.

Among the unmarried (who form the majority anyway), male applicants are slightly outnumbered by female ones, while among the married only 15.9% (10 out of 63) are women. This hints at differential patterns of personal initiative, female submissiveness, and of housing need, housing insecurity and housing ambition, among the four categories, such as we shall explore in more detail below (6.4.3, 6.5).

4.2.9. Age, and age at immigration into town

AGE records applicant's age in years. The age of applicants ranges from 20 to 68 years, with the mean at 32.04. The histogram shows the distribution:

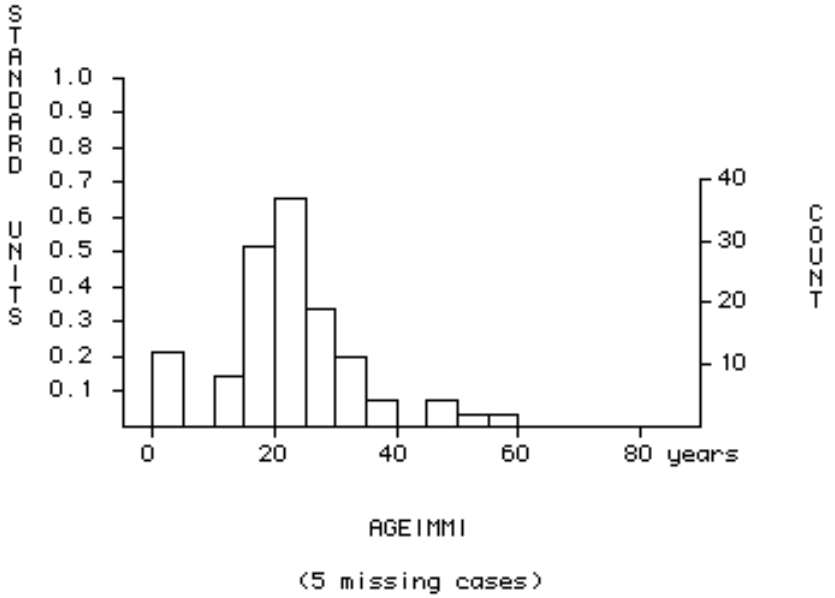


Histogram 10. Age distribution of applicants.

In combination with LENGTH a new variable can be calculated: the applicant's age at the moment of his or her immigration in town.

AGEIMMI = AGE - LENGTH

Of course, when the applicant was born in town AGEIMMI = 0. The AGEIMMI ranges from 0 to 59 years, the mean is at 22.07. The histogram shows the distribution:



Histogram 11. Distribution of applicants' age at the moment of immigration into Francistown.

In this distribution the deep dip between 5 and 15 years of age is remarkable. At present Francistown is also an important centre of educational facilities, and many youths come to town for that reason. Given the tremendous growth of educational facilities in recent years in Botswana, it is possible that this factor was less important when the members of the applicants' sample (whose average age is just over 32) were of school-going age, and that, as far as our sample of applicants is concerned, urban immigration really reached its peak when adolescents and young adults came looking for employment. Another possible explanation for the dip however is that people have exaggerated their urban identity by claiming that they had been born in town, whereas in fact they had only come to town as children of school-going age; that would explain the rather odd pike in the 0-5 years age cohort, by contrast with the dip in the adjacent cohort.

Another aspectshould not be overlooked. Because of the concentration of medical facilities in Francistown it has been common practice among pregnant women, probably for several decades already, to give birth in Francistown, returning to their home village as soon as possible for the traditional period of post-natal confinement of mother and child, which is still generally observed. This would allow people who otherwise had no connexion with Francistown in their early youth, yet to claim, rightfully,

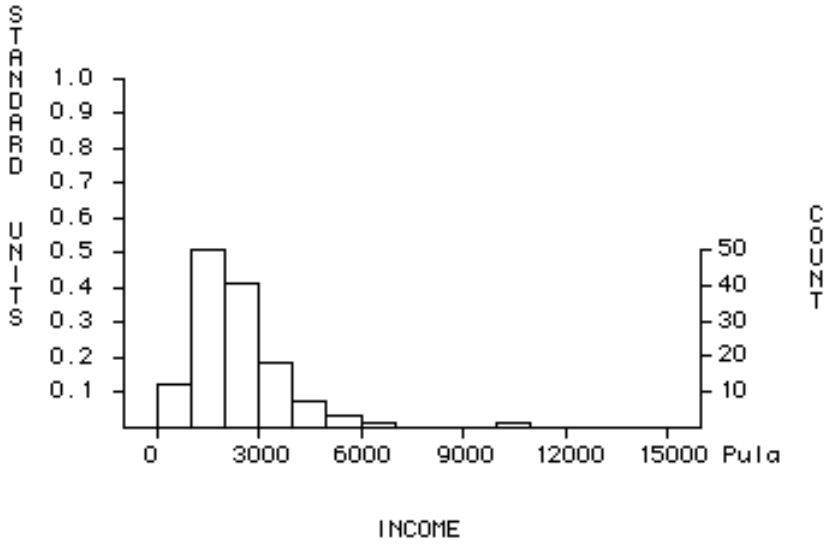
that they were born there — with the spurious implication of having been townsmen from birth onwards!

The higher age cohorts of histogram 11 are equally interesting. They show that many people have only come to Francistown at a mature age. This does suggest a considerable rural background and commitment on their part, but we should not overlook the fact that among their mature-age immigrants there are many who do not come stright from their home village, but from the South African mines, or from other towns in Botswana. For also outside Francistown the situationality of dwelling options applies as hinted at in the introduction to this report.

4.2.10. Income

INCOME measures the applicant's annual monetary income, again subject to the qualifications mentioned above in the context of the specific administrative logic of SHHA.

The monetary income as recorded in the minutes ranges from P480.00 to P10,334.00 per annum, with a mean of P2,342.96. The histogram gives the distribution:



Histogram 12. Income distribution.

We note that an annual income of P3,500 or above would disqualify the SHHA applicant, unless he or she is a displacee or specifically applies for a bad plot. It is not unthinkable that applicants, aware of this regulation have claimed a lower income than they actually had, in order not to pass the P3,500 line. However, as far as formal monetary income is concerned, the SHHA administration is fairly reliable: each applicant has to submit a so-called 'Verification of income' declaration, filled out and signed by his or her employer; it is unlikely that here fraud would occur to any degree that would substantially affect the data.[31]

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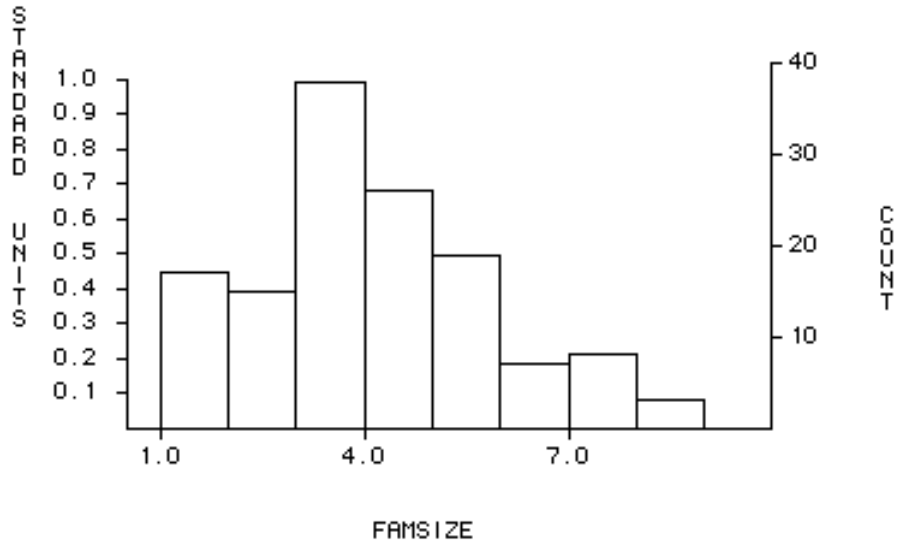
31 When inspecting hundreds of SHHA files, in only a handful of cases did I find such a declaration missing in the case of employed applicants. In a few cases, however, more than one 'verification of employment' declarations was found, with contradictory information. One strategy which some applicants with relatively high incomes from self-employment seem to pursue, is to temporarily

Far more data on the general income distribution in Francistown would be needed before any conclusions could be attached to these data. By the standards of the industrialized North Atlantic part of the world (whose consumption patterns, and price standards, are amply represented in the retail trade for which Francistown is a regional and even an international centre) the mean income in the sample, and even the maximum SHHA-eligibility income, is really very low. Local people are not unaware of this: Francistown informants familiar with the income levels of Black workers in South Africa (and many informants know South African working conditions from personal experience) assert that Francistown incomes are much lower; whether they feel that this is counterbalanced by the effects of the apartheid state is another matter. In the sample we are mainly dealing with poor people (although, on the average, probably not the poorest people that can be found in Francistown). It is particularly in this respect that the SHHA philosophy and its realization inspires one with great admiration. It offers to people with almost minimum spending power, all the more vulnerable because they live in the monetary economy of the city, one of the great values of urban life: the opportunity of housing security, in the form of a long-lease plot, their own house built in accordance with simple but adequate building and sanitary regulations, and that against costs which yet would seem to be affordable for the majority of applicants.

4.2.11. Family size and pro capita family income

FAMSIZE records the applicant's family size as reflected in the minutes. Common SHHA procedure scores this variable as 'not applicable', rather than '1', if the applicant is single and does not claim any further dependents. This suggests that in an unknown number of cases, SHHA officers may not have included the applicant himself or herself in the size of the applicant's family. That there may be some systematic defect in the original recording procedure is also suggested by the dip in family size for the value 2 as recorded in the present data set:



engage in salaried employment at a low wage rate, file or revise their SHHA application with a verification of employment declaration from this new job, and return to their earlier, more highly remunerative occupation once the SHHA application is well under wing.

Histogram 13. Claimed family size of applicants.

On the other hand, if the applicant himself or herself were to be systematically excluded from the family size (in other words if FAMSIZE would essentially measure the applicant's number of dependants) we would expect some cases to occur of a married applicant with a family size of less than 2 (the only dependent being the spouse); however, in all cases of a married applicant the family size appears as minimum 2 in the minutes. I therefore assume the data on family size to be more or less valid, with this proviso that when 'not applicable' was recorded, I put the actual FAMSIZE at 1 (= the applicant is the only member of the family). Family size of applicants, then, ranges from 1 to 8, with an average of 3.62.

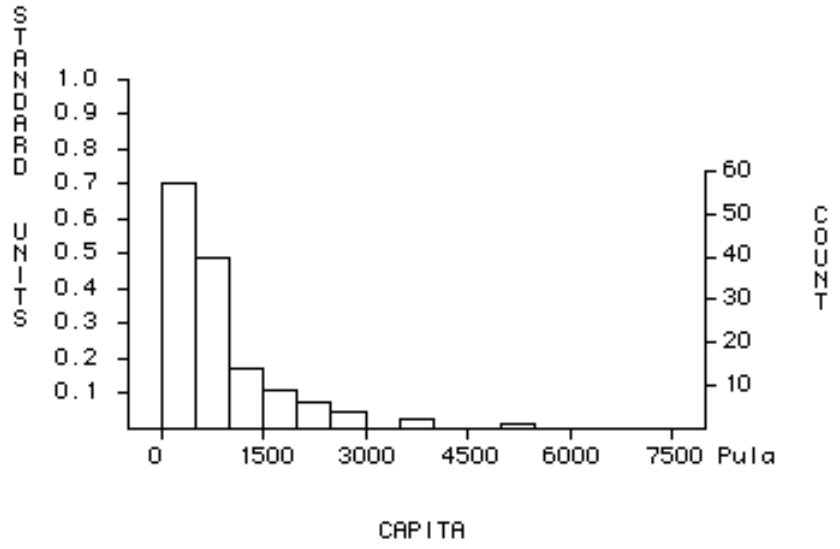
Note that FAMSIZE does not in itself reflect the number of dependents, a variable often used in other bureaucratic procedures relating to housing. By and large we could assume this number of dependents to be equal to:

(FAMSIZE - 1)

Using the information on FAMSIZE in combination with INCOME, in order to get an impression of an applicant's financial situation, I created a new variable CAPITA (= per capita annual income in the household group), defined as:

CAPITA = INCOME / FAMSIZE

This new variable vividly brings out not only the extreme financial need of people who, in the sample, find themselves at the lower end of the distribution of CAPITA, but also the large differences in spending power within the sample. Ranging from P80.00 to P5,167.00 (i.e. the highest value is more than sixty times the lowest value), the mean per capita annual income in the household group lies at P884.07. The histogram confirms the obliqueness of the distribution:



Histogram 14. per capita annual income in the household group

Of course, these figures should not be taken at face value as reflections of real life situations: the higher the number of members in a family, the more likely that these members belong to different age groups, including young children whose marginal costs for food, clothing and other life essentials may be considerably lower than those for adults. Despite this distortion, and even though the calculation of this variable CAPITA does not add any new information to the data set, its inclusion turned out to make a significant contribution to the analysis. Particularly the principle component analysis to be described below (section 6.5) yielded rather more convincing results (in terms of percentage of total variance explained in the data set, as well as in terms of the interpretability of the factors thus identified) than when INCOME and FAMSIZE were only utilized in their original form, without their compound function CAPITA.

4.2.12. The Board's decision

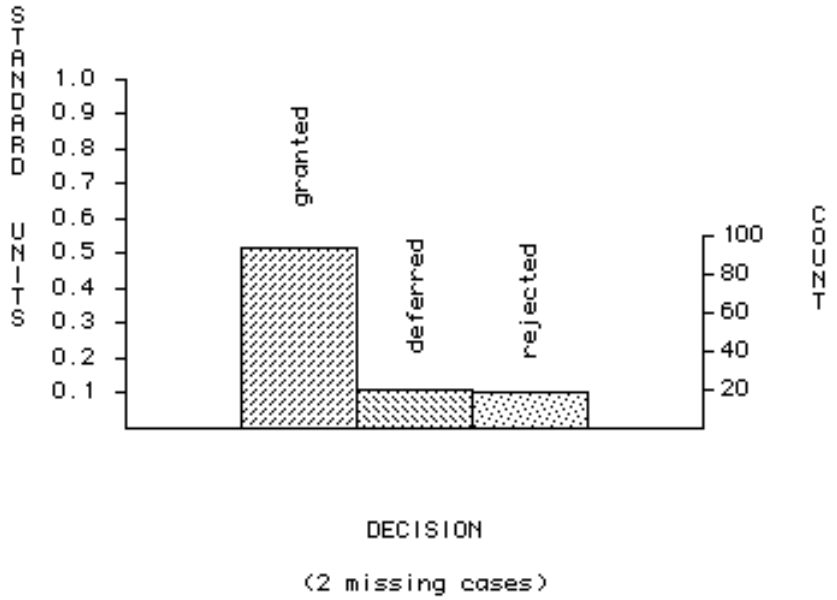
The variable DECISION records the decision taken by the board and recorded in the minutes. Here the comments in the minutes yielded a great many different categories in addition to the three basic ones of 'granted', 'deferred', and 'rejected':

— granted because flood victim

— deferred on income; deferred in view of insufficient information

— rejected in view of high income; rejected in view of spouse's plot ownership; rejected on the basis of not being a resident (of Francistown); rejected on the basis of too short a stay in Francistown; rejected but put on a waiting list (= deferred); rejected but put on a waiting list because under age (= deferred); rejected call for interview (= deferred); rejected in view of false information on income.

With the limited numbers involved in the present preliminary analysis it was of course impossible to entertain all these different categories. The histogram gives the distribution for these major categories:

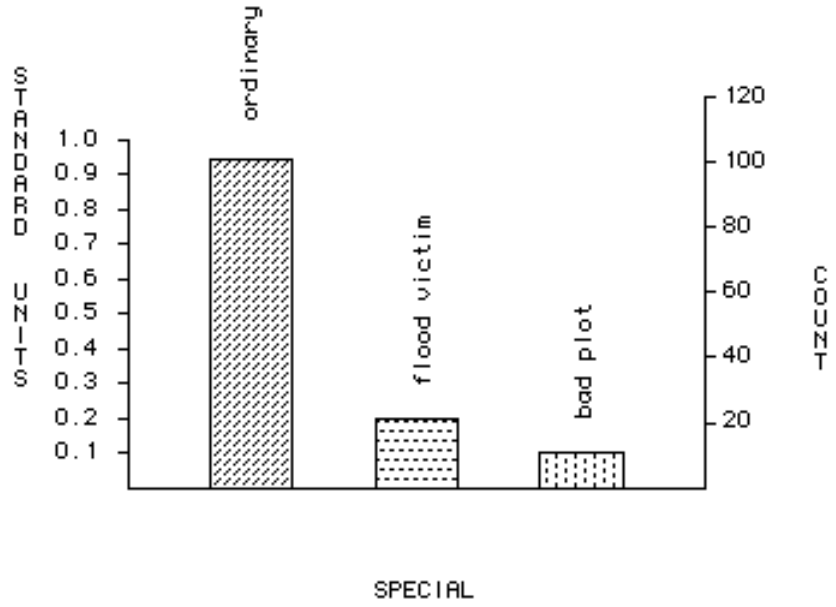


Histogram 15. Board decisions on applications in the sample

It is suggestive of the open and accommodating nature of the SHHA procedure that the vast majority of the applications result in a positive decision. Only 13.7% of the cases is rejected in the first round. However, part of this effect may be attributable to a certain built-in selectiveness during the two or three years of the application cycle: the intensive coaching of the applicants by the community development officers when filling out the forms, and such additional information as they eagerly seek, and probably obtain, from their ward councillors and other sources, makes it likely that applicants who are in principle eligible get all the encouragement and guidance to submit an adequate application, while those who are in principle ineligible are likely to be discouraged and perhaps weeded out even before their application appears before the board.

4.2.13. Special categories of SHHA applicants

After several years of drought Francistown was hit by severe rains and floods during the rainy season of December 1987 to April 1988, and this caused such distress to a number of squatters, particularly from Masimenyenga, that the town council decided to give these people priority in the allocation of site and service plots. Another special category of applicants is formed by those who specifically apply for a so-called bad plot: one whose development would pose more than the usual problems to the occupant because of the exceptionally rocky condition of the soil, etc. These two categories, and their negation, are subsumed under the variable SPECIAL. The histogram shows these two categories to be of limited size as compared to the majority of ‘ordinary’ applications.



Histogram 16. Special categories of applicants.

4.3. Assignment of values to nominal variables

When numerical values were allocated to the various values the nominal variables would assume, care was taken that wherever the number of values exceeded two (it is two in the case of SEX and MARITAL only), the ascending order of the code values would make some sense. The coding of the tripartite nominal variables EMPLOYME and DECISION was fairly obvious: 'unemployed/self-employed/employed', and 'granted/deferred/ rejected', constitute ascending or descending orders which one might treat as ordinal scales. Ordering the values of the EMPLOYCA variable was more arbitrary: one could look at income, experience, skill, and educational level required. I decided to let the ordering being primarily inspired by the latter; the many missing cases (for the unemployed) mean that this variable is to be treated with caution anyway. The ordering of the values of SPECIAL (not special/flood victim/applicant for bad plot) is arbitrary. For the types of housing areas (TOWNCOM) I decided on an order: 'squatter area', 'upgraded squatter area', 'new site and service scheme', 'BHC', 'institutional housing', 'freehold'. This order is loosely inspired by considerations of housing security, housing comforts and social status combined, and is to some extent backed up by Table 5 tabulating broad income groups against housing areas. Among the applicants, the inhabitants of squatter and upgraded areas tend to have lower incomes than those occupying other housing types (cf. below, 5.3):

TYPE OF HOUSING AREA	INCOME =<P2000	P2000-P4000	>P4000	total
squatters	17	15	2	34
upgraded	23	21	3	47
s&s	18	12	3	33
BHC	2	5	0	7
instit	1	2	4	7
freehold	1	2	0	3
total	62	57	12	131

Table 5. Income by type of housing area.

Having now defined the data set and the individual variables, I shall proceed with a presentation of the results of the statistical analysis of relations between variables: first with regard to the SHHA procedure itself (section 5), then with regard to the sociology of Francistown as a whole (section 6).

5. STATISTICAL RELATIONS IN THE DATA SET: THE SHHA PROCEDURE

Our analysis reflects on the nature of the procedure by means of which SHHA plots are being allocated.

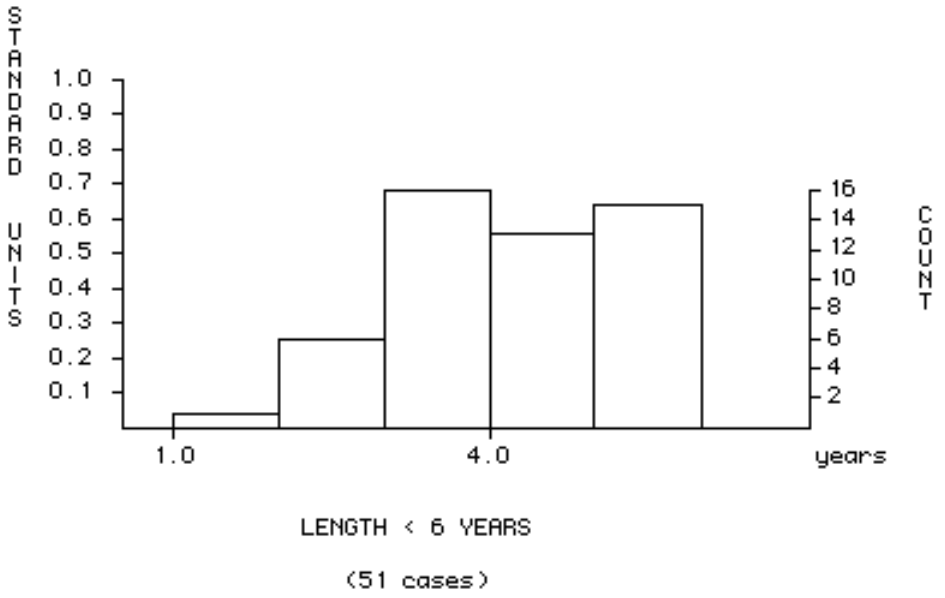
5.1. Decision

Let us recapitulate the criteria for successful application: applicant or spouse does not already have a COR plot in Francistown; Botswana nationality; total family income not exceeding P3,500.00 per year; and a minimum of two years of residence in Francistown.

Not all these criteria are directly measured by our data set. It is assumed that applications which do not satisfy the nationality criterion never make it to the point where they are formally submitted before the Board. Similarly, the wide range of negative decisions as recorded in the minutes include ‘rejected because wife has already COR plot’, but this information had to be subsumed under the general heading ‘rejected’ and therefore is no longer available for detailed analysis.

Of the criteria, family income and length of residence are measured in our data set. Is the final decision significantly associated with them?

There is in the data set no statistically significant association between decision, and the length of residence (N = 126, R^2 = .04, F = 2.32, df = 2, p = .10, ns). At first sight this would appear to run counter to established procedure, but in fact histogram 6 above suggests why in the data set no such association would appear: with the mean length of stay at nearly 10 years, the great majority of cases does satisfy the formal criterion. When we further inquire into the relatively small group of applicants that claim a length of residence of under 6 years, we find the following distribution:



Histogram 17. Applicants with a length of residence of under 6 years.

The table below shows that the minimum requirement of two years of residence was actually enforced in the decisions in these cases:

	LENGTH OF RESIDENCE (YEARS)					
	1	**2**	**3**	**4**	**5**	**total**
DECISION						
granted	0	3	11	9	13	36
deferred	0	1	4	4	2	11
rejected	1	2	0	0	0	3
total	1	6	15	13	15	50

Table 6. Length of residence under six years, by decision.

Meanwhile, as expected on the basis of the formal criteria we do find in the data set a statistically significant association between decision and applicant's income (N = 131, R^2 = .33, F = 31.94, df = 2, p = .000, s). The nature of the associated is suggested by the table below:

	DECISION			
	granted	**deferred**	**rejected**	**total**
INCOME				
=<P2000	54	7	1	62
P2000-4000	37	12	8	57
>P4000	2	1	9	12
total	93	20	18	131

Table 7. Decision by income

<u>The lower the income, the more likely an application is to be granted.</u>[32]

32 Another part of my study of SHHA housing, notably an analysis of applicant's failure to develop plots and of the subsequent repossession of plots by SHHA, reveals a negative side of this state of affairs:

Although family size is among the variables recorded in the application procedure, it is not an explicit consideration in the Board's decision. Larger families do not stand a better chance of having their application granted, even though their housing needs may be far more dramatic than that of single persons without dependants. This is reflected by the fact that there is no statistically significant association between decision and family size ($N = 131$, $R^2 = .02$, $F = 1.10$, $df = 2$, $p = .34$, ns).

Pro capita family income has been defined as a function of income divided by family size. Here an interesting reversion can be noted of the relationship that was found between income and decision. There is a statistically significant relationship between pro capita family income and decision ($N=131$, $R^2 = .16$, $df = 2$, $F = 12.46$, $p = 000$). The table indicates the nature of the relationship:

	DECISION			
	granted	**deferred**	**rejected**	**total**
PRO CAPITA FAMILY INCOME				
=<P1000	76	13	7	96
P1000-P2000	12	4	6	22
>P2000	5	3	5	13
total	93	20	18	131

Table 8. Decision by pro capita family income.

Those with the lower pro capital family income tend to see their applications more often granted, and those with the higher pro capita family income see it more often rejected. This is in line with the purpose of the income criterion: to insure that SHHA housing is provided for those income groups that cannot afford the more expensive housing alternatives.

One of the aims of the SHHA programme is to provide housing of standard quality for those presently deprived of this eminently central urban value. In this respect it stands to reason that inhabitants of squatter areas are not only prominent among SHHA applicants (histogram 5 shows them to form an important, but not the largest category of applicants according to types of housing areas),[33] but also tend to receive some priority when plots are actually allocated. This is reflected in the data set. There is a significant association between decision and type of housing area:

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particularly in the case of displacees, plots may be allocated to people who do not meet realistic minimum income requirements, and the result is often that we see their plot repossessed after some time.

33 As noted earlier, the distribution underlying this histogram partly depends on the way applicants from upgraded squatter areas are still counted as squatters during the first three years after upgrading. The three years are justified because the application procedure tends to take rather less than three years. However, when in stead of three years another division point is chosen, the proportion of squatters in the data set will be somewhat affected.

	type of housing area						
decision	squatter	upgraded	S+S	BHC	instit	freehold	total
granted	26	35	23	3	2	3	92
deferred	5	7	2	4	2	0	20
rejected	1	5	8	0	3	0	17
total	32	47	33	7	7	3	129

X2= 26.18, df = 10, p = .004, s.

Table 9. Decision by type of housing area.

Down the series ranging from squatters (who stand the greatest chance of a positive decision), via upgraded areas, site and service areas, BHC housing, institutional housing, to freehold housing, the applications is less likely to be granted, and more likely to be deferred or rejected.

We have now looked at the way the explicit criteria of allocation can be seen at work in the present data set. Equally relevant is to ascertain whether the decision is not inadvertedly influenced by considerations or unconscious effects which are not an explicit part of SHHA policy. Within the limitations of our data set, there is no evidence of such. There is no statistically significant association between decision and employment status (X2= 3.75, df = 4, p = .44, ns). Neither is there any statistically significant association between decision and employment category (X2= 9.20, df = 8, p = .33, ns). Neither marital status (X2 = .10, df = 2, p = .95, ns), nor sex (X2= .76, df= 2. p = .68, ns) are significantly associated with the outcome of the decision, in other words there is no bias in favour of the unmarried or the married, nor in favour of male or female applicants. Also when the categories of sex and marital status are combined, there is no statistical difference between the four groups (single male, single female, married male and married female) as far as decision is concerned (X2= 6.66, df = 6, p=.35, ns). There is no statistically significant association between decision and age (N = 130, R2 = .03, F = 1.68, df = 2, p = .19, ns); the one case where an application was deferred because the applicant was under age suggests that the screening as to age is done at an earlier stage, during the intake procedure. Neither is there any statistically significant association between decision and age at immigration into town (N = 126, R2 = .03, F = 1.62, df = 2, p = .20, ns) — in other words the more established townsmen with presumably more experience in the operating of bureaucracies do not stand a better chance in getting their application approved than relative newcomers to the urban environment.

All this testifies to the impartiality of the Board's decision procedure.

5.2. Duration

So far we have looked at the contents of the Board's decision in the light of explicit criteria and important underlying socio-economic variables. The performance of a bureaucracy can also be gauged from the amount of time that it takes clients to complete a particular bureaucratic procedure. This is measured by our DURATION variable.

Duration could not be analysed along with the main variables in the data set, because it has non-missing values for only a minority of the cases. A multiple regression analysis of this variable brought out clearly the extent to which it is unrelated to the major other variables in the analysis. Approximating DURATION as an equation of the following type:

DURATION = constant + A1X1 + A2X2 + A3X3 +...etc.,

and entering into the analysis the variables employme, length, marital, sex, age, income, famsize, decision, ageimmi, towncom and capita, only an R2 of .10 could be found (adjusted R2 = .00), and the constant of 36.40 months is the only element in the equation with which a statistically significant probability is associated (p = .000; the lowest — i.e. closest to significance — other associated probability is that for CAPITA, p = .20, ns). In other words, the duration of the procedure is largely if not entirely a rather constant sui generis characteristic of the internal organization of the SHHA bureaucracy, and is hardly if at all affected by the particular characteristics of the individual applicants. This again testified to the impartiality of the procedure.

In particular, the amount of time elapsing between the initiation and the completion of the application procedure is not related to the outcome of the decision. There is no statistically significant association between decision and duRAtion (N = 48, R2 = .03, F = .43, df = 2, p = .65, ns). Applications that are granted tend to take just as long as those that are deferred or rejected — the same formal scrutiny seems to be applied in all cases.

5.3. Time trends in the data set

So far we have treated the SHHA procedure as a constant through the years. However, the YEAR variable, however imperfectly represented in this data set (see above), allows us to see time trends in the performance of the board. If through the years there has been a gradual change in performance, this is likely to be reflected by a statistically significant association between YEAR and the other variables in the data set.

Such significant associations can in fact be found.

The decision-making pattern itself appears to have undergone a gradual change. There is a statistically significant association between decision, and the year the application was brought before the board (N = 131, R2 = .12, F = 8.56, df = 2, p = .000, s). The nature of the association is indicated by the table below:

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34 Cf. the mean duration of 31.65 months as recorded above, and histogram 2.

35 This finding is also borne out by the following separate test results. There is no significant association between duration and marital status (t= .31, df = 46, pooled variance estimate, p = .76). There is no statistically significant association between duration and sex (t = .59, pooled variance estimate, df = 46, p = .56, ns). There is no statistically significant association between employment status and duration (N = 48, R2 = .05, F = 1.13, df = 2, p = .33, ns). There is no statistically significant association between duration and the type of housing area (N=46, R2= .13, F= 1.23, df = 5, p = .31, ns).

year	granted	decision deferred	rejected	total
1984	35	14	6	55
1985	1	4	1	6
1988	57	2	11	70
total	93	20	18	131

Table 10. Decision by year.

The main point is that deferments tended to occur more frequently in earlier years.

This finding seems to indicate that gradually the quality of information as supplied upon application, and the officers' processing of this information, has improved so that univocal decisions can be taken in almost all cases. However, what could also be involved here is a gradual routinization of the decision process, in the face of increasing numbers of applications and perhaps shortage of staff and equipment. The procedure may have lost some of its initial ability to assess the merits of individual cases, so that positive or negative decisions are increasingly reached by the application of formal criteria alone.

With the ongoing process of the rationalization of squatter areas in Francistown — an exercise that was in full swing throughout the period covered by our data set, and which despite massive progress has not yet been completed — one would expect the data set to reveal some time trend as regards the type of housing area among the applicants. However, an analysis of variance reveals no statistically significant association between the year the application was put before the board, and the type of housing area (N = 131, R2 = .08, F = 2.21, df = 5, p = .06, ns). Our expectation is not confirmed by the statistical evidence, but, as the associated probability (p) indicates, this is a borderline case, and a contingency table does suggest such a relationship:

type of housing area	1984	year 1985	1988	total
squatters	9	0	25	34
upgraded	20	2	25	47
s&s	17	1	15	33
BHC	5	1	1	7
instit	2	2	3	7
freehold	2	0	1	3
total	55	6	70	131

X2= 22.31, df = 10, p = .02, s.

Table 11. Type of housing area by year.

The main point seems that in the earlier years fewer squatters were found among the applicants than in the more recent year (1988). It is as if the process of squatter rationalization increased so much in scope over the years that an ever increasing number of squatters were caught into the orbit

of SHHA. However, this finding again might well be an artifact: a combination of the imperfections of the YEAR data, and of my procedure through which presentday upgraded areas were counted as squatter areas depending on the year of upgrading.

Being an occupant of a squatter area is a legal rather than a sociological characteristic: it defines the occupant as having a particularly loose legal right on the terrain he or she occupies. Despite the widespread popular stereotypes as to the deviant sociological characteristics of squatters (in terms of unemployment, criminal behaviour, lack of internalization of middle-class values and urban values) the remainder of our tentative analysis in this report will suggest that being a squatter in Francistown is certainly associated with a limited number of socio-economic characteristics (cf. 6.3) , but that these characteristics do not converge to confrim the popular, negative stereotype. The housing shortage is simply so large that people of very different socio-economic positions find themselves thrown together in 'spontaneous' residential areas. At the same time the selective process of subsequent out-migration from these squatter areas to other urban or rural residential alternatives does bring into play a whole set of sociological characteristics, which however cannot be approached with the present data set. For the latter only looks at those who, as SHHA applicants, actively seek to pursue one specific urban residential alternative — the establishment of a permanent, solid urban dwelling within the context of SHHA; per definition the data set does not tell us anything about those who stay on as squatters, return to some rural base, or find alternative: housing in town outside the site-and-service schemes.

Looking now at trends in the more specifically sociological characteristics of the applicants, there turns out to be a statistically significant association between employment status, and the year a case was put before the board (N = 133, R2 = .12, F = 8.41, df = 2, p = .000, s). The nature of the association is indicated by the table below:

	employment status			
	unemployed	self-employed	employed	total
year				
1984	3	12	40	55
1985	0	0	6	6
1988	17	3	52	72
total	20	15	98	133

Table 12. Employment status by year.

With the years, the proportion of unemployed among the applicants increased, and that of the self-employed decreased.

Without access to other data external to our data set we have no way of ascertaining whether this trend (if not merely an artifact of the imperfections of the YEAR data) reflects a change of policy on the part of SHHA (a relative increase in the extent to which the unemployed are encouraged to apply — a point on which the responsible officers could enlighten us), or — more unconsciously and structurally — a gradual shift in the composition of the group of applicants. If the latter will turn out to be the case, then this might even be interpreted, ultimately (with much more data at our disposal) as an indication of changes in the overall socio-

economic structure of Francistown: an increase, perhaps, of the proportion of unemployed towndwellers, with the continuing rural-urban influx (perhaps not unrelated to the drought in the 1980s) as an important possible explanation.

Particularly in view of the emphasis, towards the end of this report, on sex and marital status as relevant variables in the sociology of Francistown, it would be interesting to ascertain whether a time trend occurs with regard to these variables. The evidence is negative. There is no statistically significant association between sex (X2 = 1.23, df = 2, p = .54, ns), marital status (X2 = .02, df = 2, p = .99, ns), or sex and marital status combined (the four categories of single male, single female, married male and married female) (N = 132, R2 = .04, F = 1.83, df = 3, p = .15, ns), and year that the application was put before the board.

5.4. Special applicant status

While we are still discussing aspects of the internal SHHA procedure, it is relevant to look at the fact that some applicants claimed a special status, either as flood victims or in their desire for a so-called bad plot.

There is a significant association between the nature of the Board's decision, and an applicant's special status:

	special applicant status			
	none	flood	bad plot	total
decision				
granted	72	19	2	93
deferred	12	0	8	20
rejected	17	0	1	18
total	101	19	11	131

X2= 37.51, df = 4, p=.000, s

Table 13. Decision by special applicant status.

Applications for bad plots are more often rejected, and applications by flood victims tend to be more often granted.

Likewise, there is a significant association between special applicant status and type of housing area:

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36 It is accepted wisdom among planners and politicians in Botswana that the lesser rainfall in the 1980s has had disastrous affects on rural production, and caused rural-urban migration to accelerate. At this stage I have no empirical data to confirm or question this interpretation. However, according to at least one Motswana colleague the relationships are not that straightforward. In his view, the lesser rainfall does still allow to grow crops for subsistence, but reduces the possibility for long-term storage, and this ties in with the trends towards the annual sale of produce and the purchase of foodstuffs as already stimulated by market forces and drought relief measures. All this makes for a gradual erosion of the rural economy, which perhaps does not immediately causes high rates of rural poverty in Francistown's hinterland, but certainly does reduce the viability of the rural alternative for towndwellers.

37 This effect occurs in the field of employment status, discerning between the unemployed, self-employed and employed. Once we leave out the unemployed, there is no statistically significant association between employment category (manual unskilled, manual skilled etc.) and year the application was put before the board (N = 59, R2 = .02, F = .32, df = 4, p = .87, ns).

special applicant status	type of housing area squatter	upgraded	S+S	BHC	instit	freehold	total
none	8	45	32	6	5	3	99
flood	21	0	0	0	0	0	21
bad plot	5	2	1	1	2	0	11
total	34	47	33	7	7	3	131

X2= 84.61, df = 10, p = .000, s.

Table 14. Type of housing area by special applicant status.

The association is largely due to the presence of a considerable number of flood victims, all from the same squatter area:

A similarly fairly accidental, although statistically significant association can be found between the year an application was put before the board, and special applicant status:

year	special applicant status none	flood	bad plot	total
1984	50	0	5	55
1985	0	0	6	6
1988	51	21	0	72
total	101	21	11	133

X2= 91.26, df = 4, p = .000, s.

Table 15. Special applicant status by year.

Little meaning should be attached to this finding: it basically reflects the fact that in the Board minutes of January 1985 only a few new applications were recorded, all of them for bad plots.

No statistically significant associations could be found between special applicant status and socio-economic variables such as employment status (X2= 6.39, df = 4, p = .17, ns), employment category (X2= 5.65, df = 4, p = .23, ns), family size (N = 133, R2 = .01, df = 2, F = .35, p = .71, ns), pro capita family income (N=133, R2= .01, df = 2, F = .91, p = .41, ns), marital status (X2= 3.74, df = 2, p = .15, ns) or sex (X2= 1.79, df = 2, p = .43, ns).

Applicants are likely to resort to special status because they are less eligible in terms of the normal established procedure. Since our data set illuminates particularly the length of residence and income requirements stipulated by the established procedure, one would expect significant associations between these two variables and special applicant status. The results however are negative: there is no statistically significant association between special applicant status and length of residence (N = 128, R2 = .03, df = 2, F = 1.83, p = .17, ns), or income (N = 133, R2 = .03, df = 2, F = 1.89, p = .16, ns).

6. A GLIMPSE OF THE SOCIOLOGY OF FRANCISTOWN

6.1. Introduction

It is very tempting to use our data set not only to look inside SHHA administrative procedures, but also as a vantage point from where to get a glimpse of the sociology of Francistown as a whole. The extent to which this is permissible depends on the extent to which the set of applicants analysed here can be taken as a representative sample not only from all SHHA applicants (the arbitrary selection on the basis of the first month of each year makes this plausible), but also from all inhabitants of Francistown. The latter claim is far less plausible. Already we have come across findings which cast considerable doubt on this claim (e.g. 4.2.4), and below we shall find further indications. Anyway, without a perusal of more comprehensive data on the town as a whole we have no means of judging our limited data set in this respect. Yet, as a simple heuristic exercise aimed at the exploration of possible connexions and at the formulation of possible hypotheses (to be subsequently tested on other, more extensive and purposely collected data sets) a tentative analysis of the data as if they were reliable data on Francistown society as a whole is worth-while. Even if the distribution of the individual cases may not be representative, they might yet give us some hints as to such underlying relations between variables as are typical for the population as a whole.

It is emphatically with these reservations that the following tentative analysis is presented.

6.2. Income and employment

In the course of its history as a centre of gold mining, a railway siding, a centre of the production and trade in manufactured commodities, and (because of its airport where since the 1920's labour migrants from South Central Africa were flown in en route for the mines of the Witswatersrand) as a major node in the international labour migration so characteristic of the economy of Southern Africa, Francistown has historically been one of Botswana's few major centres of the expansion of the capitalist mode of production. Capitalist relations of production, wage labour and in general a money economy have characterized the town from its beginning almost a century ago. Although it it likely that in the relations between urban and rural kinsmen including spouses, and in the relations of production shaping the informal sector of the urban economy, neo-traditional alternatives to cash transactions still play an important role, in general the money economy dominates urban life and has penetrated even those sectors which in other parts of Africa are often surviving enclaves of non-capitalist relations of production. It is therefore fitting to explore what our data set, however limited, suggests about the socio-economic make-up of the town.

Among applicants, there is no statistically significant association between employment status, and income ($N = 133$, $R2 = .04$, $F = 2.86$, $df = 2$, $p = .06$, ns).

This is a rather unexpected finding, for we would assume that, with salaried employment being the main source of income in the modern, monetary economy of Francistown, people who are unemployed would tend to

have significantly lower (family) incomes. The self-employed would be a less clear-cut case. On the one hand self-employment is an escape for those who, for lack of skill, education or contacts, or because of their attitude towards work, because of domestic tasks requiring their constant attention, etc., have no access to the formal labour market. Here we find particularly women who scrape together a small income from the sale of alcoholic drinks. On the other hand, the self-employed include business people operating at a larger scale, and in the expanding economy of Francistown in the 1980s they are likely to attain income levels rather higher than those of average wage-earners.

The table below reveals that the expected association (according to which the unemployed would have a lower income), is obscured not so much by the income pattern of the self-employed but by the presence of unemployed with average or even higher than average incomes: applicants depending on close kin including spouses.

	income			
	=<P2000	P2000-P4000	>P4000	total
employment status				
unemployed	11	7	2	20
self-employed		9	6	0 15
employed	42	46	10	98
total	62	59	12	133

Table 16. Income by employment status.

In underplaying the relation — such as in all probability exists in reality — between employment and income, the sample of applicants reveals itself to be not a-select as compared to the Francistown population as a whole. Of course, even the unemployed can only survive in the Francistown monetary economy if they have some access to cash, particularly through their kinsmen including co-residing dependents — else they would return to their village. Only those (relatively few?) unemployed whose access to cash is such as to justify embarking on a long-term investment like developing a SHHA plot, make realistic applicants; but I have already referred several times to the existence of non-viable applicants, who failing to develop their plots see them repossessed within a few years.

There is no statistically significant association between employment status, and family size (N = 133, R2 = .04, F = 2.35, df = 2, p = .10, ns). The unemployed, self-employed and employed all have by and large the same number of (co-residing) dependents including children. Despite this finding, and the equally negative finding concerning the association between employment status and income, we yet find a statistically significant association between employment status and pro capita family income (N=133, R2 = .07, df=2, F = 4.93, p = .01, s). The table below indicates the nature of the relationship:

	employment status				
	unemployed		self-employed	employed	total
pro capita family income					
=<P1000	18	14	66	98	
P1000-P2000		2	1	19	22
>P2000	0	0	13	13	
total	20	15	98	133	

Table 17. Pro capita family income by employment status.

The unemployed and self-employed tend to have a relatively low pro capita family income.

Further, there is a statistically significant association between employment status, and age (N = 132, R2 = .05, F = 3.26, df = 2, p = .04, s). The nature of the association is indicated by the table below:

	employment status				
	unemployed		self-employed	employed	total
age					
20-30 years	8	8	62	78	
30-40 years	6	5	24	35	
>40 years	6	2	12	20	
total	20	15	98	133	

Table 18. Employment status by age.

The main point is that the unemployed tend to be older than the applicants who are self-employed or employed. Are these unemployed a group that, due to the marked lack of educational opportunities in Botswana's past, lacks the skills that if present would have made them eligible for employment? Or, alternatively (and somewhat more likely, considering the apparent abundance of manual unskilled jobs in Francistown), are they a group of people who, because of their more advanced age, have had more opportunities to surround themselves with kinsmen (children, dependents, but also spouses of whatever degree of formality) who can support them financially?

There is no statistically significant association between employment status, and the length of residence (N = 128, R2 = .04, F = 2.35, df = 2, p = .10, ns), nor between employment status, and the age at immigration (N = 128, R2 = .02, F = 1.37, df = 2, p = .26, ns).

These two findings suggest that, somewhat contrary to expectations based on parallels with other African towns with saturated labour markets, access to salaried employment in Francistown may not so much be a matter of finding a needle in a haystack, with the aid of the mobilization of particularistic relations based on shared regional, ethnic, linguistic, religious and political orientation, kinship ties, knowledge of the urban economy and the formal organizations that shape and control it — in short everything one learns to operate and exploit through prolonged residence in town. Rather, the relationship appears to be more straightforward, and suggests the following hypothesis: there is work for those who want it, including recent urban immigrants, but that work is unattractive and very

lowly paid, so people may opt out of that type of wage labour whenever other alternatives (including kin support, self-employment and rural production) would seem equally or more attractive.

Turning now to employment category, we find a statistically significant association between employment status and employment category:

	employment category						
	manual unskilled	manual skilled	commerc	cler	prof	total	
employment status							
(unemployed	0	0	0	0	0	0)	
self-employed		1	2	7	0	1	11
employed	12	20	3	3	10	48	
total	13	22	10	3	11	59	

X2 = 21. 09, df = 4, p = .000, s

Table 19. Employment status by employment category.

The main point is that those in the commercial category are more self-employed than those in other categories of employment: as said before, petty trading (especially in alcoholic drinks) is an important resort of those who have no access to, or opt out of, formal wage labour. These activities would be listed as self-employment, whereas income from rural sources (livestock, production of grain) would probably not be so classified but could still form an important source of income among people who are formally unemployed in so far as they do not participate in the formal salaried sector.

There is a statistically significant association between employment category and income (N = 59, R2 = .30, F = 5.86, df = 4, p = .001, s). The following table gives an impression of the nature of this association:

	employment category					
	manual unskilled	manual skilled	commerc	cler	prof	total
income						
=<P2000	12	10	7	0	2	31
P2000-4000	1	11	3	2	5	22
>P4000	0	1	0	1	4	6
total	13	22	10	3	11	59

Table 20. Employment category by income.

The income of manual unskilled and commercial workers tends to be lower, that of manual skilled, clerical and professional workers higher — very much as expected.

There is no statistically significant association between employment category and family size (N = 59, R2 = .09, F = 1.39, df = 4, p = .25, ns). Coupled with the association, stated above, between category of employment and income, we are not surprised to find a statistically

38 Unemployed not included.

significant relationship between pro capita family income and category of employment (N=59, R2=.24, F=4.27, df = 4, p = .004, s). The table indicates the nature of the relationship:

	employment category						
	manual unskilled	manual skilled	commerc	cler	prof	total	
pro capita family income							
=<P1000	12	17	10	0	5	44	
P1000-P2000		1	2	0	3	3	9
>P2000	0	3	0	0	3	6	
total	13	22	10	3	11	59	

Table 21. Employment category by pro capita family income.

The pro capita family income of the manual unskilled and commercial workers tends to be lower, that of the professional category higher than average.

Category of employment turns out to be as indifferent to age and urban experience as employment status was: there is no statistically significant association between employment category and age (N = 59, R2 = .14, F = 2.12, df = 4, p = .09, ns), length of residence (N = 57, R2 = .11, F = 1.67, df = 4, p = .17, ns), nor age at the moment of immigration (N = 57, R2 = .04, F = .47, df = 4, p = .76, ns).

6.3. type of housing area

In any urban status system, people tend to attach specific connotations of socio-economic status and life style to particular sections of the urban space. Does the information on types of housing area in the data set reflect something of this?

At first sight the information would seem to be negative. There is no significant association between employment status and type of housing area (df = 8.36, df = 10, p = .59, ns). Neither do we find a significant association between employment category and type of housing area (df = 29.64, df = 20, p = .08, ns). However, the latter negative result — somewa borderline case as the p-value suggests) might be partly due to the limited size of our data set, and the many missing values on EMPLOYCA. The table below suggests (but no more than that) that the commercial and manual unskilled categories are somewhat overrepresented among squatters, whereas the manual skilled category is overrepresented in upgraded and site-and-service areas:

	type of housing area						
	squatter	upgraded	S+S	BHC	instit	freehold	total
employment category							
man. unskil	3	7	2	1	0	0	13
man. skil	1	11	7	1	2	0	22
comm	4	2	3	1	0	0	10
cler	1	1	0	1	0	0	3
prof	0	2	3	2	2	2	11
total	9	23	15	6	4	2	59

Table 22. Type of housing area by employment category.

On the other hand there does exist a statistically significant association between income, and the type of housing area (N=131, R2= .25, F= 8.41, df = 5, p = .000, s). The table below, identical to table 5, indicates the nature of the association:

	income			
	=<P2000	P2000-P4000	>P4000	total
type of housing area				
squatters	17	15	2	34
upgraded	23	21	3	47
s&s	18	12	3	33
BHC	2	5	0	7
instit	1	2	4	7
freehold	1	2	0	3
total	62	57	12	131

Table 23. Type of housing area by income.

The inhabitants of squatter areas and upgraded areas tend to have relatively lower incomes.

There is no statistically significant association between family size and the type of housing area (N=131, R2= .03, F= .86, df = 5, p = .51, ns). But again the association with income makes here for a statistically significant association between the pro capita family income and the type of housing area (N=131, R2= .10, F= 2.72, df = 5, p = .023, s). The table below indicates the nature of this association:

	pro capita family income			
	=<P1000	P1000-P2000	>P2000	total
type of housing area				
squatters	29	5	0	34
upgraded	34	6	7	47
s&s	22	8	3	33
BHC	5	1	1	7
instit	3	2	2	7
freehold	3	0	0	3
total	96	22	13	131

Table 24. Pro capita family income by type of housing area.

The pro capita family income tends to be lower among squatters, and higher among the inhabitants of upgraded and site-and-service areas.

This suggests that those who make the step out of the squatter area to the site and service area, or those who find their squatter area being upgraded while continuing to reside there, enter a somewhat different socio-economic environment. The administrative component of this statement is that upgraded areas and site-and-service areas are subject to the payment of service levy, which however limited (P8.50 per month) yet in the lowest income groups may represent a substantial proportion of the monthly income; moreover, in those areas one is in principle eligible for a Building Material Loan, whose monthly cost tends to be of the same order of magnitude as the service levy. Is an element of selection and of selective migration involved here, in the sense that a relatively more affluent section of the squatter population successfully moves on to site-and-service schemes (i.e. managing to develop the new plot and not incurring substantial arrears on service levy and loan payments) respectively manages to stick it out in the upgraded area? What happens to the lowest income groups among the squatters? Are they pushed out of town, or alternatively are they pushed into the lower echelons of the formal urban economy — adopting wage labour as the only means of countering the increasingly monetary demands of their urban housing situation?

With regard to type of housing area, we encounter the same indifference vis-à-vis the various time-related variables that we found when analysing employment. There is no statistically significant association between the type of housing area and age (N=130, R2= .08, F= 2.10, df = 5, p = .07, ns), length of residence, and the type of housing area (N = 128, R2 = .04, F = 1.08, df = 5, p = .37, ns), and age at immigration (N = 128, R2 = .03, F = .76, df = 5, p = .58, ns). This does not mean, of course, that there is not a marked difference in age and social maturity between the various residential areas in Francistown: ranging from new, environmentally and socially barren site-and-service schemes as Somerset East Extension to an established, time-honoured squatter area as PWD, with its core of squatters who have up to twenty years of local residence with all the ties of neighbourliness, friendship and kinship that one could expect after such a lapse of time. But since individuals, not townships form our units of analysis here, these differences did not come out in the present, limited data set.

Below we shall explore the significance of the variables sex and marital status for the analysis of the urban situation in Francistown. As far as type of housing area is concerned, there is no statistically significant difference between men and women (X2 = 3.81, df = 5, p = .58, ns): we cannot say that, among the applicants, certain type of housing are more associated with either sex.

There is however a significant association between marital status and type of housing area:

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39 The PWD squatter township is due for rationalization (i.e. demolition) in 1989, however; within the present project I hope to devote a special study to its social structure and the process of its rationalization.

	type of housing area						
	squatter	upgraded	S+S	BHC	instit	freehold	total
marital status							
single	12	28	21	5	1	2	69
married	22	19	12	2	6	1	62
total	34	47	33	7	7	3	131

X2=11.97, df = 5, p = .04, s.

Table 25. Type of housing area by marital status.

Squatters and occupants of institutional housing among the applicants are more likely to be married, and the occupants of site-and-service are more likely to be single.

An interesting, statistically significant pattern is also revealed when we combine sex and marital status with regard to type of housing area:

	type of housing area						
	squatter	upgraded	S+S	BHC	instit	freehold	total
SEXMARIT							
single male	3	14	11	2	1	2	33
single female	9	14	10	2	0	0	35
married male		20	18	7	2	4	1 52
married female		2	1	5	0	2	0 10
total	34	47	33	6	7	3	130

X2= 26.08, df = 15, p = .04, s.

Table 26. Type of housing area by sex and marital status combined.

While the pattern for married and single women seems to be average, single males are underrepresented among the squatters; and married males overrepresented among the squatters and underrepresented among the site-and-service areas.

Squatting thus, far from being the slightly disreputable urban life style it is often portrayed to be in popular stereotypes, very much appears to be a simple (if for reasons of Francistown housing policy — aiming at the rationalization of all squatter areas — fairly temporary!) solution to a simple problem:

> ‘how to acquire urban shelter in a context of overall shortage of housing and of the pressing needs of an established family, whose financial resources are minimal to begin with and moreover have to be shared among a relatively large number of family members?’

6.4. Sex and marital status

6.4.1. Men and women

An increasing number of studies of African towns have called attention to the fact that the urban experience tends to be rather fundamentally

different between men and women. Does our data set cast light on this highly relevant and timely topic, as far as Francistown is concerned?

There is among the applicants a significant difference between men and women in employment status:

	sex		
	male	female	total
employment status			
unemployed	8	12	20
self-employed		6	9 15
employed	72	25	97
total	86	46	132

X2= 13.27, df = 2, p = .001, s

Table 27. Sex by employment status.

Men tend to be more employed, whereas women tend to be more unemployed and self-employed.

Likewise, there is a statistically significant difference between men and women with regard to employment category (X2= 14.29, df = 4, p = .01, s):

	employment category					
	manual unskilled	manual skilled	commerc	cler	profess	total
sex						
male	6	19	2	2	7	36
female	7	3	8	1	4	23
total	13	22	10	3	11	59

Table 28. Sex by employment category.

Women are overrepresented in the manual unskilled and commercial category, and underrepresented in the skilled manual category. This suggests women's more limited grasp of the urban labour market: their skills are less rare and more interchangeable.

Despite the previous finding there is, however, no significant difference in income between men and women. (t= 1.27, df = 66.5 (separate variance estimate), p = .21, ns). This unexpected negative result is partly attributable to the considerable standard deviation in the female group, in other words while women seem to earn somewhat (but not significantly) less than men (on the average just under P30 less per month), income differences are larger among the women than among the men in our sample

40 Again, the F-test indicated here is not available at this stage of the analysis.

	N	mean (Pula)	standard deviation
female	46	P2,113.61	P1,683.32
male	87	P2,464.22	P1,115.86

t = 1.27, df = 66.5 (separate variance estimate), p = .21, ns.

Table 29. Income by sex.

For the rest, concentrating on mere sex differences without taking marital status into account, the results on the other variables in our analysis are negative. There is no statistically significant association between sex and family size (t = .76, pooled variance estimate, df = 131, p = .45, ns), pro capita family income (t = 1.72, pooled variance estimate, df= 131, p = .09, ns), age (t= 1.14, separate variance estimate, df = 113.9, p = .26, ns), length of residence (t= .63, pooled variance estimate, df = 126, p = .53, ns), and age at immigration (t = 1.26, pooled variance estimate, df = 126, p = .21, ns).

6.4.2. Marital status

Turning to marital status we find a significant difference in marital status between men and women in the sample:

	marital status		
	single	married	total
sex			
male	33	53	86
female	36	10	46
total	69	63	132

X2= 19.11, df = 1, p = 0.00, s

Table 30. Sex by marital status.

Women among the applicants are less likely to be married than men. To some extent this reflects the dynamics of the acquisition of SHHA plots: for single women, who are rather conspicuous in the social life of Francistown (where there is an absolute preponderance of women anyway), securing a residential plot of one's own is a major step in a career perspective that seeks to enhance personal independence, as well as socio-economic security for oneself and one's (in practice often fatherless) children. The married women appear to be in a different category from their unmarried sisters: often relying on financial support from their husband (who may not be co–residing and more typically is employed on a long-term basis in South Africa).

Meanwhile, there is no statistical association whatsoever between marital status and employment status (X2= .05, df = 2, p = .97, ns.) or employment category (X2= 1.62, df = 4, p = .81, ns). If the sample may be considered representative, Francistown employers appear to be indifferent as to the marital status of their employees. A number of facts help to make this finding all the more understandable. Throughout formal sector employment in Botswana considerations of married life and family life are

largely ignored when it comes to geographical transfers of individual employees across the wide distances typical for this country, and of the Southern African region as a whole. The culture of employment is such that long-term family separation is considered a matter of course. When the fact of having a spouse is not allowed to affect a worker's freedom of movement and commitment, every worker is practically considered a bachelor. Another similar limitation in a worker's availability could be: having children. This again bears little relation with the eligibility for employment, partly because a large proportion of children in Francistown (and Botswana as a whole) are born out of wedlock, and partly because many children born in town are not looked after by their mothers but by other female relatives (typically in a rural setting). The two possible (but not actual) impediments to wage employment, having a spouse and hanving children, need to be separated, because in practice many children are born out of wedlock and without a sustained relationship of the parents involving co-residence.

In many other respects, however, marital status turns out to be a significant dimension of the urban socio-economic structure.

There is a significant association between income and marital status:

	N	mean (Pula)	standard deviation
single	70	2,006.59	983.28
married	63	2,716.70	1,580.44

t = 3.07, df = 101.6 (separate variance estimate), p=.003, s

Table 31. Income by marital status.

The married ones in the sample have a significantly higher income than the single ones.

Likewise, is a significant association between family size and marital status:

	N	mean	standard deviation
single	70	2.90	1.58
married	63	4.43	1.55

t = 5.62, df = 131 (pooled variance estimate), p=.000, s

Table 32. Family size by marital status.

The married ones in the sample have a significantly larger families than the single ones.

Apparently the effect on marital status on income is slighter than that on family size: there is a significant association between pro capita family income, and marital status:

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41 In the sociological and historical literature on Southern and South Central Africa in the colonial era the role of mature migrant worker's 'bachelor wages' in the formal sector economy has often been discussed; it looks as if, despite Botswana's attainment of territorial independence in 1966, the culture of employment in Francistown has retained some of the characteristics of colonial labour relations.

category	N	mean	standard deviation
single	70	P1,015.62	P875.77
married	63	P 737.90	P722.428

t = 2.00, df = 130.0 (separate variance estimate), p = .047, s.

Table 33. Pro capita family income by marital status.

The pro capita family income among the single applicants is significantly higher than amongst the married ones.

Understandably in a country where marital status does not to any serious extent regulate a person's access to a sex life and parenthood, but where getting married is certainly a major social and symbolic achievement associated with conspicuous consumption, there is a significant association between age and marital status:

	N	mean (years)	standard deviation
single	70	28.33	5.68
married	62	36.23	11.37

t = 4.95, df = 87.1 (separate variance estimate), p=.000, s

Table 34. Age by marital status.

The married ones in the sample are significantly older than the single ones. Yet the proportion of single applicants in the age group of 30-40 years is remarkable, as we have already seen in table 4.

Being married or being single does not appear to be a matter of urban experience and identity in any straightforward sense. The evidence on this point aoppears to be contradictory. On the one hand, there is a significant association between age at immigration, and marital status:

	N	mean (years)	standard deviation
single	68	18.57	8.94
married	60	26.03	12.46

t = 3.84, df = 105.6 (separate variance estimate), p=.000, s

Table 35. Age at immigration, by marital status.

The married ones in the sample were significantly older when they immigrated into town than the single ones. On the other hand, there is no significant association between length of residence and marital status (t = .17, df = 126, p=.86, ns). I have no ready suggestions to reconcile the apparent paradox underlying these two findings.

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42 Perhaps the paradox can be cleared up when we analyse sex and marital status combined, against age at immigration. Here again the association is statistically significant (N = 127, R2 = .13, F = 6.34, df = 3, p = .000, s). The nature of the association is indicated by the table below:

6.4.3. Sex and marital status combined

When the categories of sex and marital status are combined, there is a statistically significant association between sex and marital status combined, and income (N = 132, R2 = .09, F = 4.34, df = 3, p = .006, s). The nature of the relation is indicated by the table below:

	SEXMARIT				
	single male	single female	married male	married female	total
income					
=<P2000	15	24	20	2	61
P2000-P4000		18	8	27	6 59
>P4000	1	3	6	2	12
total	34	35	53	10	132

Table 37. Income by sex and marital status combined.

Among the applicants, the single women tend to earn less than any other category. Here the distinction of four categories defined by both sex and marital status turns out to be relevant.

	SEXMARIT				
	single male	single female	married male	married female	total
age at immi-gration					
=<20 years	22	19	19	5	65
20-40 years	12	15	28	4	59
>40 years	0	1	6	1	8
total	34	35	53	10	132

Table 36. Age at immigration by sex and marital status combined.

The effect is largely attributable to the age difference between single males and married males: the single males tend to be younger. The difference in age at immigration does hardly seem to hold between single and married women.

43 It turns out not to be so with regard to a number of other variables in our analysis. Thus there is no statistically significant association between sex and marital status combined, and the length of residence (N = 127, R2 = .02, F = 0.86, df = 3, p = .46, ns). In other cass the association between a socio-economic variable and sex and marital status combined may be significant, but merely so because either the SEX or the MARITAL component is significantly associated with that variable, and not the SEXMARIT combination per se. Thus there is a statistical association between SEXMARIT and employment status:

	employment status			
	unemployed	self-employed	employed	total
SEXMARIT				
single male	2	3	28	33
single female	8	5	22	35
married male	6	3	44	53
married female	4	4	2	10
total	20	15	96	131

There is likewise a statistically significant association between sex and marital status combined, and family size (N = 132, R2 = .26, F = 15.29, df = 3, p = .000, s).

	SEXMARIT				
	single male	single female	married male	married female	total
family size					
=<2	18	10	2	2	32
2-4	14	19	28	3	64
4-6	1	4	19	1	25
>6	1	2	4	4	11
total	34	35	53	10	132

Table 40. Family size by sex and marital status combined.

The pattern for the various categories appears to be as follows: single males tend to have smaller families; both married men and married women tend to have larger families; whereas the family size among single women (most of whom are mothers) is average.

The specificity of each of the four categories is further brought out by the fact that there is a statistically significant association between pro capita family income and sex and marital status combined (N=132, R2 = .14, df = 3, F = 6.83, p = .000, s). The table below indicates the nature of the association:

X2= 22.46, df = 6, p=.001, s

Table 38. Employment status by sex and marital status combined.

However, the effect is largely attributable to the fact that sex and employment status are associated; marital status does not make much difference in this respect. Similarly, there is a statistically significant association between sex and marital status combined, and age (N = 131, R2 = .18, F = 9.28, df = 3, p = .000, s). The nature of the relation is indicated by the table below:

	SEXMARIT				
	single male	single female	married male	married female	total
age					
>20, =<30 years	27	26	21	4	78
30-40 years	7	8	18	1	34
>40 years	0	1	14	5	20
total	34	35	53	10	132

Table 39. Age by sex and marital status combined.

Here, the effect seems largely attributable to marital status, regardless of sex: the married tend to be older.

	SEXMARIT					
	single male	single female	married male	married female	total	
pro capita family income						
=<P1000	17	28	43	9	97	
P1000-P2000		8	5	9	0	22
>P2000	9	2	1	1	13	
total	34	35	53	10	132	

Table 41. Pro capita family income by sex and marital status combined.

The pro capita family income of the single males tends to be higher than that of any other category; the latter do not differ greatly from each other.

While certain significant aspects of the socio-economic structure of Francistown (as viewed, myopically, from the point of view of our limited data set, and assuming it to be somewhat representative) can be said to be somewhat indifferent to the variables of sex and marital status, this analysis certainly brings out the very different urban experience of single women as compared to single men: the former earn less, but have larger families, a smaller pro capita family income, and therefore are under far greater financial stress than their male counterparts.

One implication of this finding is that the laudable impartiality that we have analysed for the SHHA procedure, has hidden and unintended effects which, once realized, might call for further reflection and perhaps a slight amendment of policy. It is clear that, in line with explicit rules and with the equality of citizens as ensured by the Botswana constitution, men and women, married or single, receive equal treatment when undergoing the SHHA application procedure. Yet in terms of the goals and target group of SHHA one might ask if such impartiality, by denying such differences in income and family obligations as in fact exist particularly between single men and single women, does not in fact favour the single men excessively. In so doing the present procedure might inadvertedly contribute to a situation where the predicament of the many single women of Francistown will increase, and their chances of attaining the independence and security they aspire to, decrease.

6.5. Patterns of response to the urban situation: A principal components analysis of the data set

6.5.1. Introduction

So far we have analysed the interrelations within the data set on the basis of the original variables as available in the records, augmented with such new variables as could be computed by simple arithmetical operations. We may however suspect that underneath these data a network of more fundamental relations is hidden, of which the original variables and their derivations are merely surface manifestations. The vagaries of for instance the time-related variables, as brought out by our analyses above, suggest that the information contained in the variables measuring length of

residence, age, and age at immigration — highly correlating with each other, still displaying their own associations with the other variables in the data set — contains one or a limited number of underlying factors which, when brought out, might cast more light on the processes and structures informing people's socio-economic characteristics, and strategies, in Francistown.

Principal component analysis, or factor analysis, is a powerful analytical technique to bring out such a hypothetical underlying factor structure. It allows us to project the information in the original data set, with mutually correlating and reinforcing variables, onto a new set of mutually totally unrelated variables — so that for instance the principle of an individual's life cycle or aging, which underlies all the time-related variables in the analysis, is not spuriously counted as many times as the data set contains time-related variables. The statistical technique allows us to blindly construct this new set of factors, and to show what the 'loading' (varying from -1.00 to +1.00) of each new factor original variable is on the original variables. But it does not assign a name nor a real-life meaning to the factors thus constructed on purely mathematical grounds. The subsequent interpretation of these factors is an exciting, sometimes revealing, process which involves considerable sociological imagination but (because of the artificiality of the mathematical constructs) also involves serious dangers of wishful thinking and over-interpretation.

The point of departure is a correlation matrix (table 42) of the major variables in the data set — those for which missing cases are minimal. The matrix of component loadings as found in factor analysis upon the original correlation matrix is presented in table 43. In the bottom row, this table also shows which percentage of the variance in the total data set is explained by each of the constructed factors. Let us try to describe each of them in discursive language, and then tentatively assign a sociological meaning to them.

6.5.2. tentative discursive description, and interpretation, of the factors:

FACTOR1 is higher for a person who has a higher pro capita family income, is younger, immigrated at an earlier age, has a smaller family, has a higher income, (whose SHHA application is rejected, is unmarried, lives in a more established area, and is employed).

This evokes a whole syndrome of youthful urban freedom from compelling social commitments in the marital and kinship sphere, and moreover socio–economic security and spending power, which reminds us of recent analyses of life-style trends North Atlantic urban society in terms of the Young Urban Professional (YUP). Of course, given the nature of the data set as describing a group of applicants for urban housing supposed to cater for the lower income strata, the parallel should not be stretched too far. Yet one cannot help to think that almost a quarter of the total variance in the data set is explained by a variant of socio-economic position, and of the corresponding life-style, which one often finds popularly described in the African urban

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44 Only variables with a factor loading >.5 are included in the interpretational discussion below, in descending rank order; variables with a factor loading between .3= and <.5 are included between parentheses.

setting as 'the man (or woman) about town'. I am tempted to baptize this factor 'YUPPINESS'. At the other end of the scale proffered by this factor, is the person (typically of mature age, and married) with a minimum pro capita family income because of extensive marital and kinship commitments, — one who immigrated into town at a mature age, has a low income from other sources than wage labour, and lives in a squatter area: an equally well-known social personality in Francistown as his or her counterpart, the habitual customer of Francistown's disco's, music shops, clothes boutiques, hair parlours and cinema.

FACTOR2 is higher for a person who has a higher income, is married, (whose SHHA application is rejected, is male, immigrated at a riper age, and has a higher pro capita family income). I would interpret this factor, which explains almost 16% of the total variance, as a measure of 'SOCIO-ECONOMIC ACCOMPLISHMENT'.

FACTOR3 is higher for a person who has a longer stay in Francistown, who made his or her SHHA application more recently, (lives in a less established area, immigrated at an earlier age, and is unemployed). This evokes a pattern of passive urbanism, in which the potential at upward social mobility and full exploitation of the urban bureaucracies is not realized — a variant of stagnated urban life style without the dynamism found in other sectors of Francistown society. By analogy with similar patterns described for towns elsewhere in Africa I suggest to speak here of 'URBAN INTRANSIGENCE', perhaps also reflecting a reluctance to use (urban) bureaucratic structures outside one's everyday experience and (limited) educational orientation. At the other end of this scale is the relatively recent urban immigrant of relatively mature age, who is committed to the acquisition of urban housing through SHHA and knows how to operate urban bureaucracies in this connexion, who lives in a more established area, and is employed: not exactly a 'YUP', but certainly one on whom the new urban environment has a stimulating rather than a stagnating effect, and who has the socio-economic requirements to exploit it in a fuller sense.

FACTOR4 is higher for a person who is unemployed, is female, lives in a more established area, (whose SHHA application is rejected, has a larger family and applies for a bad plot). I would read in this variable a measure of 'GENDER-RELATED MIDDLE-CLASS DEPENDENCE'.

FACTOR5 is higher for a person who applies for a bad plot, is female, (and lives in a less established area). This factor appears to measure a particular type of housing need such as occurs particularly among (unmarried?) women. I would tentatively call it 'GENDER-RELATED HOUSING NEEDS'. In the course of the previous analysis we have seen enough of the gender aspects of housing in Francistown to get the general picture. Among the many unmarried women with children, the need to acquire and develop a plot of their own is particularly acute: they have no permanent male support, yet tend to find themselves in the lowest income brackets, and while they may be co-residing with kin the pressures they encounter in that situation are likely to make them all the more keen on acquiring their own independent housing. In the SHHA officers' experience, women in this category are in general quick to develop their plot. Their commitment is also said to be

shown in their loyalty to lowly paiid and unpleasant jobs, which they endure for the sake of the housing and general needs of their children. The counterpart of this category of women are the single men, whose domestic requirements conducive to seeking one's own accommodation are minimal, and who therefore tend to delay in the development of their plot once allocated, even if the skills and spending power at their disposal far exceeds that of single women. In between these categories are the married people of both sexes.

FACTOR6 is higher for a person who made his or her SHHA application more recently, (immigrated at a riper age, and has a shorter stay in Francistown, and is unemployed): probably this factor can be interpreted as a measure of RURALISM, possible including the reluctance to use bureaucratic strategies to solve the urban housing problem, because of inexperience and lack of confidence in urban bureaucratic structures and procedures.

FACTOR7 is higher for (a person who is younger, lives in a less established area, and made his or her application more recently). This factor I take to reflect the underlying time-related element that is a ubiquitous factor in the assessment of career attainment, marital status, income etc.: 'LIFE CYCLE'.

FACTOR8 is higher for a person who (is not applying for a bad plot nor is likely to be a flood victim, who is employed, sees his SHHA application rejected, and is older). This factor does not seem to measure an urban lifestyle variant, but to operate on the level of the SHHA application procedure. Such a factor is of course to be expected in a data set derived from bureaucratic records. I would tentatively call this factor 'SHHA INELIGIBILITY'.

FACTOR9 is higher for a person who (is employed or at least self-employed, and lives in a more established area). Although we are on very thin ice here because of the relatively low loadings on only a small number of variables, perhaps 'RESPECTABILITY' would do to describe this factor tentatively.

FACTOR10 is higher for a person who (is female, and sees her application granted): this factor is uninterpretable.

FACTOR11 is higher for a person who ?: this factor is uninterpretable.

FACTOR12 is higher for a person who ?: this factor is uninterpretable.

These factors are, by the nature of principle component analysis, so constructed as to have no statistically association whatsoever with each other.

Are these principle components mere dummies, mathematical constructs without any relation with social reality? The fact that many of them could rather readily be interpreted, suggests otherwise. A next step in the data collection and analysis is to find, in the form of questionnaire entries, real-life indicators and predictors through which these factors could be measured more directly. We can also try to identify individuals who each are

typical for the extreme ends of each of the factors identified, and collect extended cases and life histories which show them in action as typical exponents of (hopefully) significant tendencies in Francistown urban life and urban culture. But of course we have to realize that every individual in the data set scores higher or lower on each of these factors; in other words, if these factors have any real-life significance, they suggest that for each individual (at least for each SHHA applicant in the sample) major aspects of his or her urban existence can be measured, simultaneously, along the various dimensions of YUPPINESS, SOCIO-ECONOMIC ACCOMPLISHMENT, URBAN INTRANSIGENCE, GENDER-RELATED middle-class dependence, gender-related housing NEEDS, ruralism, life cycle, SHHA INELIGIBILITY, and RESPECTABILITY. These factors do at least suggest direction in which the more qualitative dimensions of urban life-style, culture and symbolic response patterns (the central themes in the present research project as a whole) can be further explored. If they have any real-life meaning at all, the relevance of these factors is probably not limited to Francistown alone but extends to other situation of urban development in Botswana. Their further exploration would then have important implication for housing policy, since they help to situate the planning and administrative process in the socio-economic environment and in the predicaments and strategies of the individual occupants and their families.

The limitations of the original data set, meanwhile, imply that certain factors which on comparative grounds would be considered significant in the urban situation in Francistown, do not enter the present analysis at all. Here I mean particularly cultural and ideological elements as clustered around ethnic identity and religious affiliation, or such relatively well-studied dimensions of urban life elsewhere in Africa, as the involvement in voluntary associations of a recreational, cultural, humanitarian or political nature.

Such factors as urban intransigence and ruralism suggest to measure something of the extent to which individuals adhere or do no longer adhere to rural ties, to the ethnic particularly that is often implied therein, and to typically urban forms of ethnicity such as participant observation shows to exist in Francistown. Much more data are to be collected on this point, since there are indications (again from participant observations) that the extent of someone's rural ties within the overall Francistown/North East region is an important factor (although by no means working in a simple, one-directional manner) in that person's identification with town life, and the success of his or her urban survival and mobility strategies. The religious dimension falls totally outside the present data set; yet on the basis of participant observation I would suggest that at the extreme end of the URBAN INTRANSIGENCE scale (perhaps in combination with the RURALISM scale) we find the typical expressions of the smaller independent, Zionist healing churches so abundantly represented on the Francistown scene, whereas SOCIO-ECONOMIC ACCOMPLISHMENT, and RESPECTABILITY, may not be unrelated with the expressions of more established Christian churches forming a North Atlantic pattern of spirituality and organization — with the large and powerful Zion Christian Church (ZCC) occupying perhaps a middle position between classes and between phases of urban adaptation.

Finally, it is customary in principal component analysis to rotate factors so as to bring out each factor with the maximal loadings. In the present case

this is not a very attractive procedure, since — with four exceptions — it gives us virtually back the original data set, as indicated by the matrix (table 44) of rotated factors (with this proviso that the rotated principal components, are, of course, mutually not associated). Does this add credibility to the suggestion that the sociologically interpretable factors identified above are yet mere artifacts of advanced statistical analysis? Expert advice is welcome on this point.

45 Family size and pro capita family income combine in rotated FACTOR1; pro capita family income and income as such combine in rotated FACTOR2; length of residence and age at immigration combine in rotated FACTOR3; and age at immigration, and age as such, combine in rotated FACTOR4. It should be noted that these combinations only occur for those new variables which have been computed by simple arithmetical operations from the original data set.