

THE KOMBI TAXI
AN ALTERNATIVE MODE OF TRANSPORT

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PREFACE

In recent years the South African transportation system has witnessed the rise of intermediate forms of transport, in particular the kombi taxi. Though referred to as a taxi, the kombi taxi differs from the typical sedan taxi. As a taxi, the kombi is a minibus vehicle, typically of Volkswagen, Toyota or Datsun make. In South Africa, the kombi taxi is legally allowed a maximum passenger capacity of eight, whereas the sedan taxi is generally licenced to carry a maximum of five passengers. In terms of patronage, the sedan taxi is more often used by businessmen and holiday makers, as well as commuting youngsters and the elderly on a sporadic basis. Like the sedan taxi, the kombi taxi is privately owned and operated. However, the kombi taxi is used on a more regular basis and frequently conveys passengers along a set route, operating more like a bus service than a taxi service. Fares charged by kombi taxi drivers are set according to route as opposed to the metered rate charged by the sedan taxi operator. The kombi taxi is used by the non white community in particular and has become a feature of commuter demand satisfaction.

Interest in the South African kombi taxi was sparked as a result of the 1983 Commission of Inquiry into Bus Passenger Transport (Welgemoed, 1983). The report, among other things, considered the effect of taxis on the

bus industry and covered future transportation policy. One of the recommendations of the Welgemoed Commission was that the kombi taxi be phased out over a four year period in order to protect existing and future bus services in the Republic. Given the spatial patterning of South African cities and the important role of intermediate forms of transportation in filling an existing mobility/demand gap, it became apparent that the issue of the kombi taxi required further analysis in order that its role and function as part of the South African transportation system could be better understood. Thus the Cape Town Metropolitan Transportation Area was chosen for specific study (Figure 1).

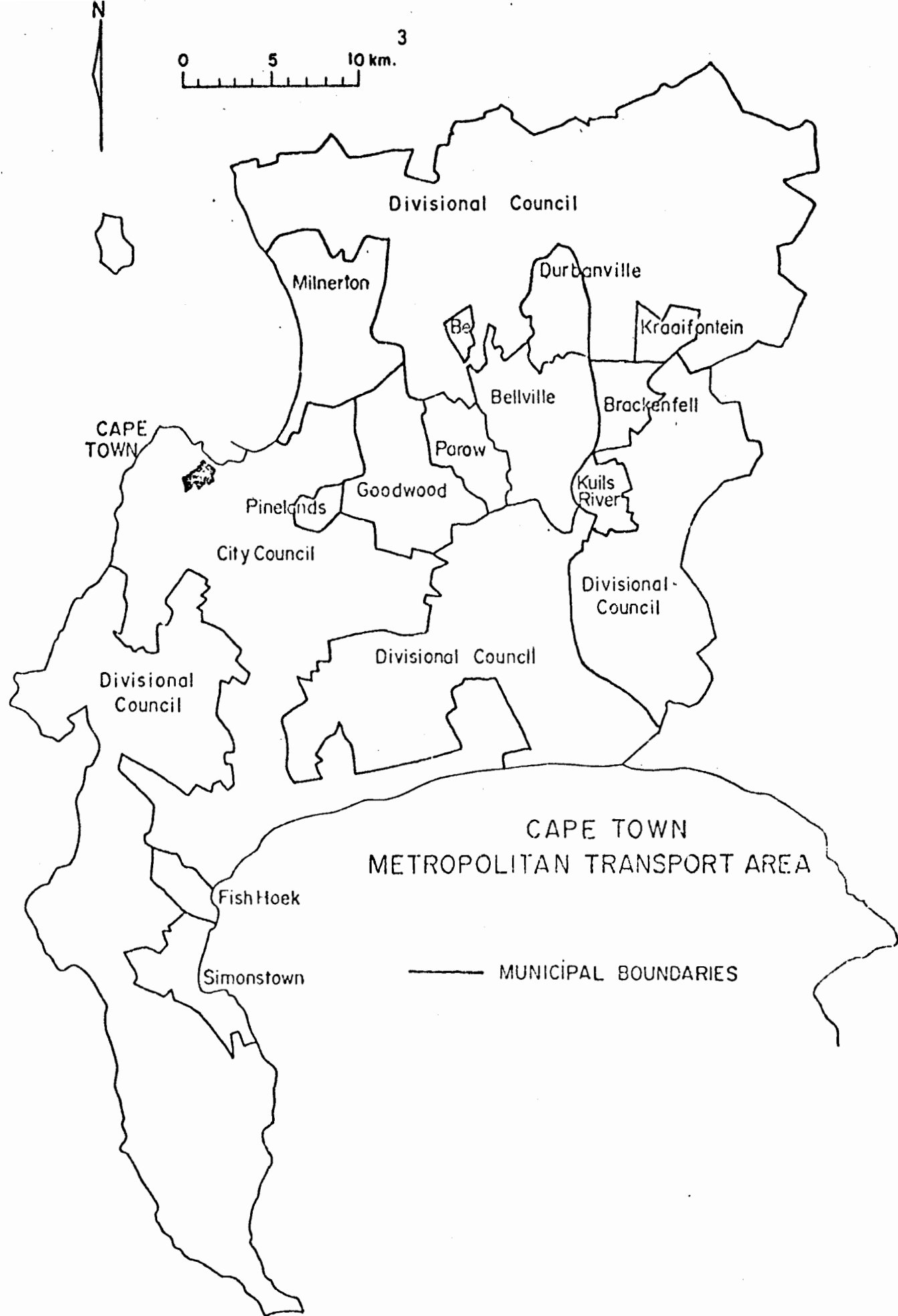


Figure 1

CHAPTER ONE

THE TAXI - A PERSPECTIVE

In a responsive society, the transportation network develops and adapts in view of changing public demand. These demands encompass the expansion of existing modes, as well as the creation of new modes. Thus, changes in technology as well as population increase, urban growth and legislation generate the necessary forces which enable new and varying modes of transport to develop and be maintained. The greater the choice of modes available for transportation, the more integrated and well balanced the system. From the point of view of the users, factors which influence modal choice decisions are more than merely economic. Other issues which arise in the modal choice decision making process include perceived factors of comfort, convenience, cost and safety. As a form of transportation, the taxi represents a mode of choice available to cater for public demands. As a means of mobility, the taxi caters more for individual needs than do other forms of mass transport, yet fulfills demand at a lower investment cost than private transport. Thus, the taxi plays an integral role in the transportation market by satisfying particular commuter demands of comfort, convenience and cost. Given a choice of mobility, individuals are thus better able

to satisfy personal transportation needs which arise.

In South Africa the taxi is particularly associated with meeting the demands of the urban black commuter. Given the spatial implications of the 1950 Group Areas Act and the economic stratification of South Africa along racial lines, the transportation network changed to accommodate a new scenario of longer distance commutes, longer commuting times and increased transportation costs of the steadily increasing number of non white commuters living on the periphery. Train links were relatively slow to develop and bus service did not always match demand patterns (Western, 1981), while low rates of private vehicle ownership created and maintained a large demand for mass transportation. As a result, overcrowding on buses and trains lessened safety and resulted in crime becoming a feature of non white commuting (Human Awareness, 1982). A mobility/demand gap within the transportation market resulted which entrepreneurs quickly emerged to fill. One of the intermediate transport modes to develop was the taxi, initially a sedan type vehicle popular in the 1950's - 70's and commonly referred to as the 'black taxi' or 'old valiant'. This mode of transport is able to provide door to door service upon request, convey a small number of people in relative comfort and operate with a significantly lower crime rate than that experienced by the bus or train commuter.

The sedan taxi has, in the past seven years been almost completely replaced by a kombi type vehicle. In 1978 a change in vehicle technology concurred with a relaxation in regulation pertaining to taxi operation. At that time the automotive industry began to market mini-

bus type vehicles in South Africa at an economic price. The Volkswagen Kombi, already available in the country for nearly twenty years, was joined by two other soon to be top sellers, the Toyota Hiace and the Datsun E-20. The regulations regarding taxi operating characteristics were relaxed as the kombi became used more and more frequently to transport small groups of people for a fee. The entrepreneur favours the kombi as a taxi because it is capable of carrying more passengers than the sedan taxi at a lower cost, while at the same time it conforms to the official definition of a taxi which allows for the conveyance of eight passengers. As a result of relaxed regulations, changing vehicle technology, increasing petrol prices, kombi fuel efficiency and black commuter demand the kombi has become an economically important component of the black taxi transportation market. It provides an alternative form of mobility and enjoys a small but lucrative share of the market.

It appears therefore that the kombi taxi, as an intermediate form of transportation, fulfills three significant functions. Firstly, it serves as a mode to facilitate the movement of people. As an integral part of the transportation system, it appears to increase access and satisfy individual travel demands. Secondly, the kombi taxi seems to provide social benefits e.g. it can offer the convenience of door to door service and meet the demands of small groups and individuals. It apparently provides security above other public transportation modes and may accommodate relatively large fluctuations in demand. Finally, the kombi taxi appears to play a significant economic role by being both an employment provider and an income generator.

Unfortunately, very little is known about the role and function of the kombi taxi. Most transportation studies which have been conducted in South Africa have only touched on the issue of the taxi as a transportation mode. The few exceptions which deal with taxis in particular, tend to be vague in their discussion of the complexities involved in the functioning of the taxi (Hawkins, Hawkins and Osborne, 1982; Stroud, 1981; Luk, 1980; Falk, 1979). To date, no indepth studies regarding taxi services in the Republic have been conducted by geographers. Yet, the functioning of the taxi is essentially geographical in terms of the transportation system in which it operates, the friction of distance effects and the spatial patterns created through movement and accessibility.

Stimulated by this lack of knowledge, a project to examine the role and functioning of the kombi taxi has been undertaken, thus identifying the underlying forces generating the demand for this type of intermediate transport, showing how the kombi taxi operates to fill that demand and briefly considering those for whom the kombi taxi is an important mode of transport. The major aspects analyzed are the level of service provided by the kombi taxi and the necessity of that service in the satisfactory functioning of the transportation system operating in South African cities. In order to achieve this aim, information regarding the role of the kombi taxi was attained by

- reviewing particular characteristics of the existing transportation system;
- noting the number and locations of taxi ranks; and
- estimating the demand pattern for the kombi taxi in terms of use frequency and preference

Information regarding the functioning of the kombi taxi was gathered by

- surveying kombi taxi owners, drivers and passengers to determine route locations and use patterns;
- observing kombi taxi operating characteristics; and
- examining the various rules and regulations associated with kombi taxi operation.

The available literature suggests that kombi taxi operations are similar throughout the major metropolitan areas of the country. Thus, in order to concentrate this study and thereby gather meaningful and precise data, the study was restricted to a specific area. Cape Town, the area selected for analysis, was chosen because of three particular attributes. Firstly, mass transportation in Cape Town, includes a bus network and a commuter rail line which together form an integrated system comprised of nodes (some of which clearly act as important modal interchange points) and linkages (Figure 1.1). Secondly, the three racial groups which predominate, i.e. coloured (53,3%), african (13,6%) and white (33,1%), are locally based within specific residential areas. And thirdly, zoned industrial employment areas are well defined (Figure 1.2).

After deciding on Cape Town, limits were placed on the exact locational bounds of that area. The study area is that used by the Transportation Planning Section of the Cape Town City Council termed the Cape Town Metropolitan Transport Area (Figure 1). This area corresponds fairly closely to the built-up area of the city, houses an estimated 1 512 000 people, incorporates eleven local municipalities and all sixteen journey to work origin points as defined in the Cape Flats

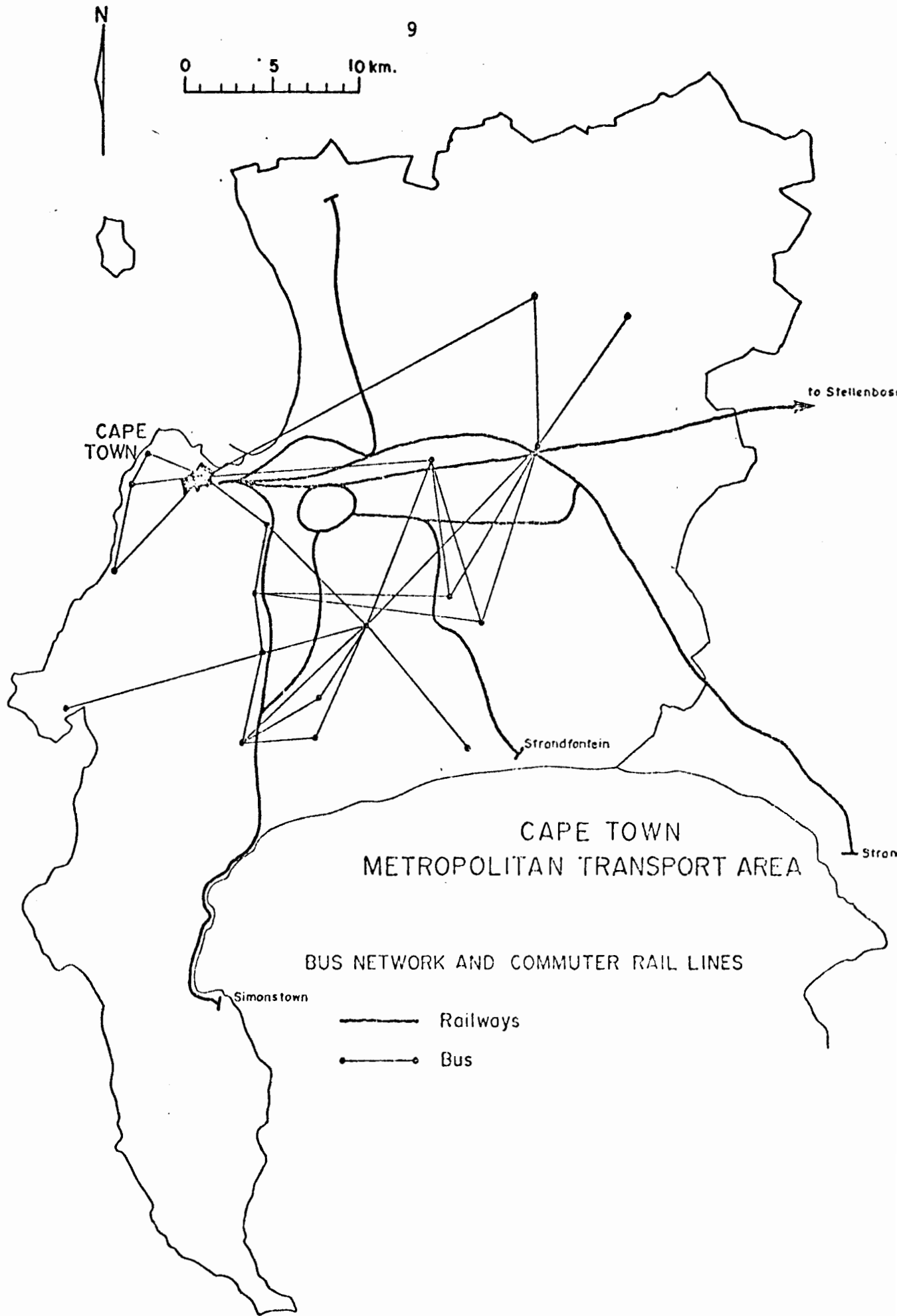


Figure 1.1

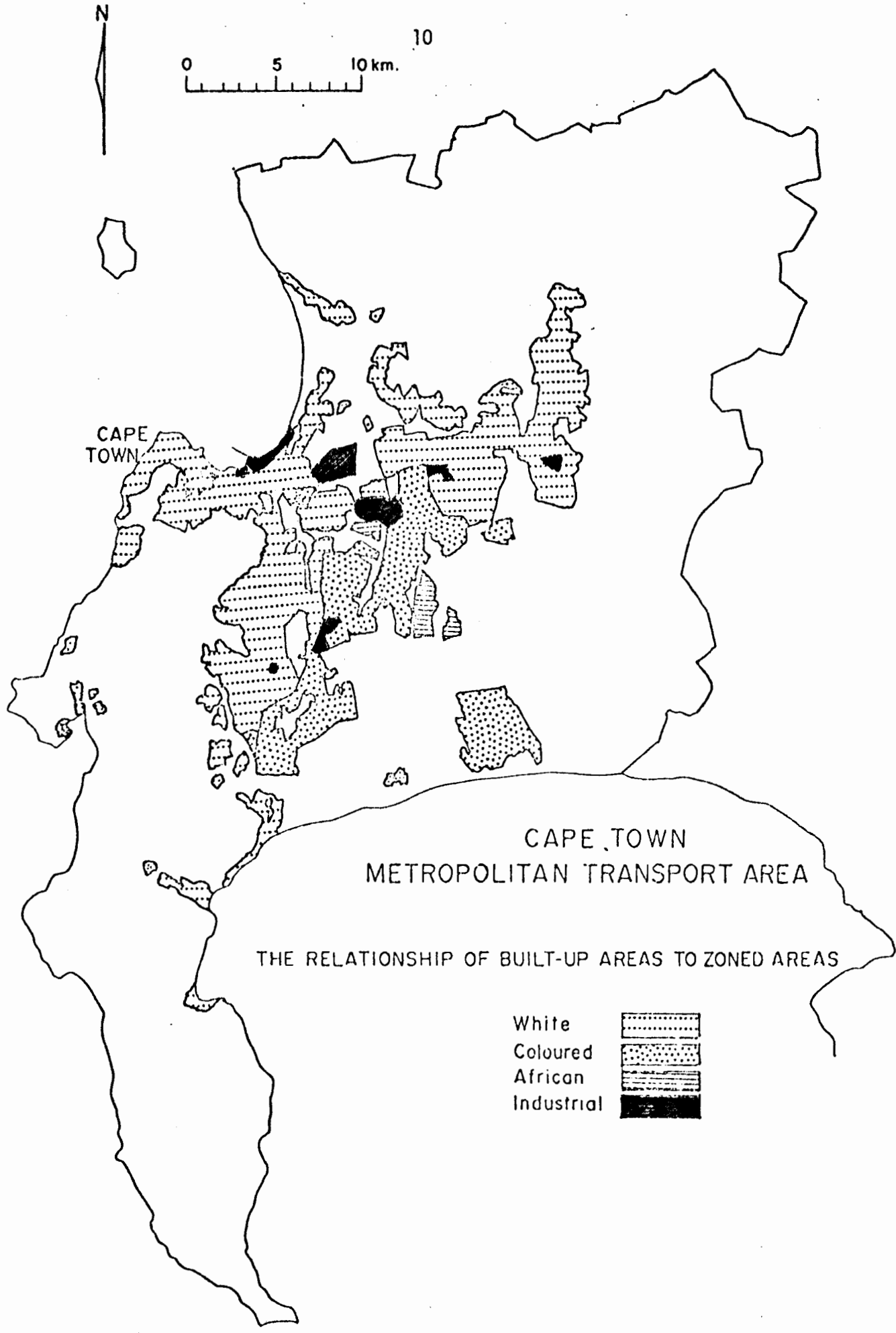


Figure 1.2

Commuter Study (Cape Town City Council, 1983 b). Unlike other major metropolitan areas of South Africa, the kombi taxi in Cape Town operates relatively short routes of between two and eight kilometres, acts specifically as a feeder service to the suburban rail line where both rail and bus linkages merge to form nodes of activity concentration (Hawkins, Hawkins and Osborne, 1982). It plays an important role in both coloured and african commuting and the Metropolitan Transport Area is clearly a suitable frame within which to study kombi taxi service.

Work carried out in order to achieve the aim of establishing the role and function of the kombi taxi in Cape Town is reported in five chapters of this thesis which are structured as follows. Chapter Two lays the theoretical base of the study. Transport in today's city is viewed as an activity system comprised of nodes and linkages which in turn mold and are molded by urban land use patterns. Analysis of various city structures within the context of transportation identifies mobility demands within capitalist, socialist and non western societies. It is shown that demands reflecting mobility needs in the past and in different political and social environments today are almost invariably filled by alternative forms of transport. In Chapter Three, this global demand for alternative transport is viewed in light of the South African city structure. The demand for alternate transport by black commuters in South Africa is highlighted and the particular mode which most satisfies this demand, the kombi taxi, is identified. Kombi taxi operation is then reviewed specifically in terms of legislation and regulations of control. The kombi as a taxi in Cape Town is the focus of Chapter Four. The number of kombis operating in the Cape Town Metropolitan Transport Area and the organization and control of the service provided

are issues of discussion. This leads into Chapter Five which deals with particular aspects of kombi taxi operation achieved by means of survey analysis. Aspects of kombi taxi operation encompass the identification of kombi taxi operator and passenger characteristics, route characteristics, journey frequencies, operating costs and a review of fare structure. Chapter Six forms the concluding chapter of the thesis. The role of the kombi taxi as a necessary component of the metropolitan transport system in South Africa is highlighted. Problems and issues identified in previous chapters result in a series of recommendations to provide for the efficient operation of kombi taxi services in South Africa. In this way it is hoped that greater insight may be brought to bear into the issue of intermediate transport and its significance in a transportation activity system.

CHAPTER TWO

AN EXAMINATION OF UNDERLYING FORCES GENERATING THE NEED FOR INTERMEDIATE TRANSPORT

2.1 Transport and Today's City

Because of the specificity of land use inherent in today's city, areas are dependent on one another for a variety of functions. The reciprocity results in a demand for interaction between different locations. In many instances this interaction requires movement to take place and thus the parts of the city are joined by a system of roads and railways to create a complex activity system. Individually, urban activity systems vary in class, scale and organization, but are typified by different types of flows and by fluctuations in direction and extent of movement. Metropolitan transportation systems are the most obvious reflections of urban activity linkages and arise out of, and in turn mold, urban land use patterns.

A modern transportation system provides the opportunity for interactions to take place on a metropolitan level. Formed as a combination of interdependent elements, interactions occur between various modes of

transport and the network on which they operate. Components of such a metropolitan system include both mass and individually operated transport. Mass transport is transport which caters for public use, whereas individually operated transport caters for private use. Mass transport generally makes use of two modes, viz. a suburban rail system and a bus system, both of which are geared primarily to satisfy commuter needs. Rail and bus systems differ in terms of organization. Rail systems tend to be company or state (local to national) owned as they require tremendous initial investment and maintain large overheads. In terms of responding to changes in passenger demand, the rail route is subservient to the predetermined structural layout of the rail line. Bus systems may be either state, company or privately owned and in the two latter cases they may operate on a free market system or may be financially protected by government subsidy. Differing from the rail system in terms of locational constraints, bus services are more easily able to accommodate changing demand as a result of operating on the road network. If a bus route becomes uneconomical as a result of low commuter demand, the bus may change its course to operate on roads which pass high commuter demand areas. Individually operated private automobile transport offers an even greater choice of mobility options than either rail or bus systems since the vehicle operator has the ability to satisfy personal mobility demands and may travel an unfixed route.

The network on which mass and individually operated transport functions is comprised of nodes and linkages. Nodes correspond to locations of activity concentration and each is unique in that it has a specific location and is not shared by any other node (White and Senior, 1983). At its most basic level a nodal point is that point of initial trip genera-

tion. The first-order nodal point represents a single stop. A node of this sort may be a compulsory stopping place, e.g. a predesignated bus or rail stop (often a fare stage or timing point) or it may be an optional stop, e.g. a hailed stop. A second-order nodal point may be recognized where different modes, e.g. bus and rail, coincide at the same location. And a third-order nodal point is located where three or more modes come together at the same place, e.g. car, bus and rail. Thus, within any metropolitan area there exists a hierarchy of nodal interchange points aimed at increasing accessibility in all parts of the built-up metropolitan area.

The nodes are joined by a system of transportation linkages. Consisting primarily of rail and road, the linkages create a transport network for each mode by merging and overlapping at nodal intersections to create a transportation mesh. Within this transportation net there are links specifically for mass transport, links for individually operated transport and links for both mass and individually operated modes of transport. Thus, the modes and networks on which they function combine to form the physical structure of the metropolitan transportation system. The mass transport side of this system may include rail lines (underground, level or elevated) or bus services (tracked, electric or independent). Given a particular transportation system, the aspects of operation reflect specific demand and use patterns. Linkages may be created for particular modes of transport. Commuter rail links, for example, are specifically constructed for mass transport purposes, whereas roadway operate for the utilization of both individually operated and mass transport, as well as intermediate transport. Links may also be adapted according to speed flows. Higher speed transport links consist

of bus lanes and freeways. Such links attempt to facilitate quick and efficient movement. Other roadways may represent lower speed transport links given conditions of high demand and congestion. Transport characteristics at a particular time and in a particular place are a response to technological developments and population demand. As technology provides for the creation of new transportation modes or more efficient use of existing modes, so established networks change and adapt to cater for population demand. Use patterns for the various transportation links are governed by commuter demand and preference. For example, traffic congestion is partially the result of high demand for individually operated transport in conjunction with a system of linkages unable to cope sufficiently for peak demand characteristics. This desire for personalized transport is often a reflection of mobility preference rather than necessity. Though mass transport may function along a given road, an individual may choose to commute by way of a more personalized mode, such as private automobile, at a greater economic cost than that service provided by mass transport. The demand for mass transport services may be met by a system of frequency scheduling and/or routing. Demand and preference characteristics therefore give rise to use patterns which in turn are reflected by linkages. The better a transportation system, the more clearly links match actual use patterns.

A second aspect of the metropolitan transportation system is more abstract as it consists of flow characteristics. Flows of varying type and direction occur within the bounds of the transportation network. Patterns of human flow which arise as responses to population demand are employment, commercial, recreation and social related flows. These flows are

reflected in the patterns of use within the metropolitan transport system. For example, employment responses affect direction of flow through journey to work trips. In the morning period heavy traffic flows (mass and privately based) tend to be in the direction of work place and in the evening period reverse towards residential areas. In addition, types of flow vary according to time of day and day of week. Employment journeys may characterize traffic in the morning and evening periods, commercial journeys (shopping) in the mid-morning, recreational journeys in the afternoon and social journeys in the late evening (Berry and Horton, 1970).

Thus, a metropolitan transportation system is characterized by both its physical and abstract components. The networks and flows which form that mesh attempt to satisfy both private and group demands. The transport user, given sufficient funds, has relative free choice to satisfy his mobility demands by determining on which mode to travel. Viewed as a continuum, aspects of transportation demand that are left unfulfilled create mobility demand gaps. These gaps are the result of stress on the existing transportation network. From the point of view of the user, stress may be caused by overcrowding, long waiting times, journey time, money costs and modal changes. These stresses may cause the user to look for alternative forms of transport. Intermediate transport has evolved in an attempt to satisfy mobility demand gaps which exist between private transport on the one end and public transport on the other. Operating with a greater degree of flexibility than mass transport, intermediate transport is able to adapt to changing demands and also provides alternative forms of mobility.

Most transportation studies have been conducted by traffic engineers or planners (Johnston et al,1981). Their research consists primarily of network studies, terminal studies and movement studies and has been incorporated in geographical literature (Berry and Horton, 1970). Work of this sort frequently neglects to consider the social role of transport. Transportation studies by geographers, as reflected in the report by Greenwood (1983) and from works listed in Geo Abstracts(1979) have also tended to focus on transport modelling. Especially included are issues of the economic effects of improved transit, spatial patterns of transport (Hay, 1973), trip distribution, trip generation modelling (Wilson, 1979), transport policy and decision-making techniques (Williams, 1978), traffic forecasting, environmental effects of transport (Hopkinson, 1974) and aspects of land use organization (Conzen, 1983). In view of the above transportation related research done by urban and transportation geographers, there is clearly a lack of work on the informal economy of transport, i.e. intermediate transport and the interactions which exist between different mobility forms. Even the work done on metropolitan systems by transport experts and urban transport geographers exposes the particular deficiencies of research which exists in the field. In fact, few geographic transportation studies actually go beyond the initial steps of pattern identification to include transport innovations (Eliot Hurst, 1974). There is a need for bringing a holistic view to the issue of urban transport development, in particular with regard to the relationship between primary and intermediate modes of transport. In order to understand how transport systems have influenced and been influenced by urban form and movement patterns an historical perspective must be taken which views the transport system in its totality.

2.2 Transport and City Form

For the historical urban geographer, primary and intermediate transport innovations have held little appeal despite their importance in geographical change in the evolution of cities (Conzen, 1983).

Evolution of available transportation has been a major influence on the shape of today's city structure. Historically, a sequence of transportation related innovations, i.e. the horsecar, the railroad, the streetcar and the internal combustion engine, have all left their impact on the growth, patterns, form and internal structure of the present day city.

In the preindustrial city transport depended solely on human or horse power. Such constraints led to the compact nature of the city which was governed by walking distances for the majority of the residents (Yeates and Garner, 1980). The few who could afford the extra cost travelled by sedan chair carried on the shoulders of the transporters. Dating back to ancient times, the sedan chair was in relatively popular use by the mid-seventeenth century. Because of the reliance on walking, a varied land use pattern emerged in which a mix of activities occurred within short distances of one another. Narrow streets also characterized the preindustrial city which were crowded despite the limited modes of transport available (Knox, 1982). It became within the power of the elite group to superimpose a pattern of streets and wide avenues on the city (Gallion and Eisner, 1980). Mobility was greatly facilitated in the routeways, but within the interstitial areas and along the narrow crowded streets and alleys walking predominated.

Innovative transport modes developed as new sources of power were harnessed. In 1819 came the introduction of the horse bus in Paris. Later termed an 'omnibus', this new mode of transport provided increased mobility for a greater number of individuals. The horse drawn carriage allowed for more personalized transport than the omnibus, but at a greater cost to the user. Access of these vehicles was limited only by the street network and as street traffic increased congestion occurred. However, changing technology allowed for transport to move underground and people to spread outward. The advent of the railway era in 1826 extended city limits and temporarily relieved some of the apparent congestion. Suburbs sprang up along these railway lines and offered relief from the central city for those who could afford it. London's first subway consisting of a steam railway was completed in 1863. Another development to alleviate street congestion was elevated transport, as opposed to underground. New York City had the first operating elevated railroad in 1867. Electric street tramways appeared in the 1880's and became the principal mode of urban transport to which was added the electric trolley-bus, first introduced in France in 1901.

These early modes of electric mass transport were characterized by fixed routes. The electric tramway was constrained by both tracks and wires and the electric trolley-bus by wires. Unlike the tramway, the trolley-bus could operate off the tracks, thus giving rise to greater manoeuvrability. The combination of modes operating in the larger urban areas created a mesh of transportation linkages and, for the first time, allowed people a choice of mode and thus increased relative freedom of movement. The elite, besides their own carriage,

had the option of another personalized mode, the hackney carriage, which could be hired. This acted as a sort of taxi, operating similar to the present day conventional taxi, but was horse drawn.

Residential separation, industrial development and the age of the streetcar and suburban railway gave a whole new dimension to the urban structure. Contiguity was no longer a necessary condition for urban/ industrial growth. Public transport provided a means of access for steadily increasing numbers of people to distances further and further from the city centre and the industrial city emerged to consist of zones of differentiated land use with the majority of the population relying on mass transport to satisfy mobility needs. During this early period it was still a relatively short commute from the central city to the industrial locations. Because of the increasing concentration of activity in the industrial parts of the city and the concentration of people in residential areas, mass transport was economically and functionally viable. Those who could afford to, moved away from the congestion of activity into outlying areas to enjoy the experience offered by a rural life while at the same time benefitting from the convenience of urban life. The early compact city, characterized by an intense land use mix, was altered to become a sprawling metropolis as mobility increased and transport lines stretched outward.

The invention of the internal combustion engine brought a whole new dimension to the transportation mobility phenomenon. The mass transportation system became freed from tracks and wires and could better respond to demand. With the advent of the automobile, those who

could afford the capital outlay were now independent of foot or mass transport. The automobile remained a novelty and a luxury until 1908 when Henry Ford capitalized on the market. Ford turned the automobile into an item of necessity by making it cheap, versatile and easy to maintain. The new market demand for convenient transport was not a response to a remarkable automobile, but rather to a less expensive one. Ford thus uncovered the latent need of individuals for personal mobility which had been left unfulfilled by mass transport.

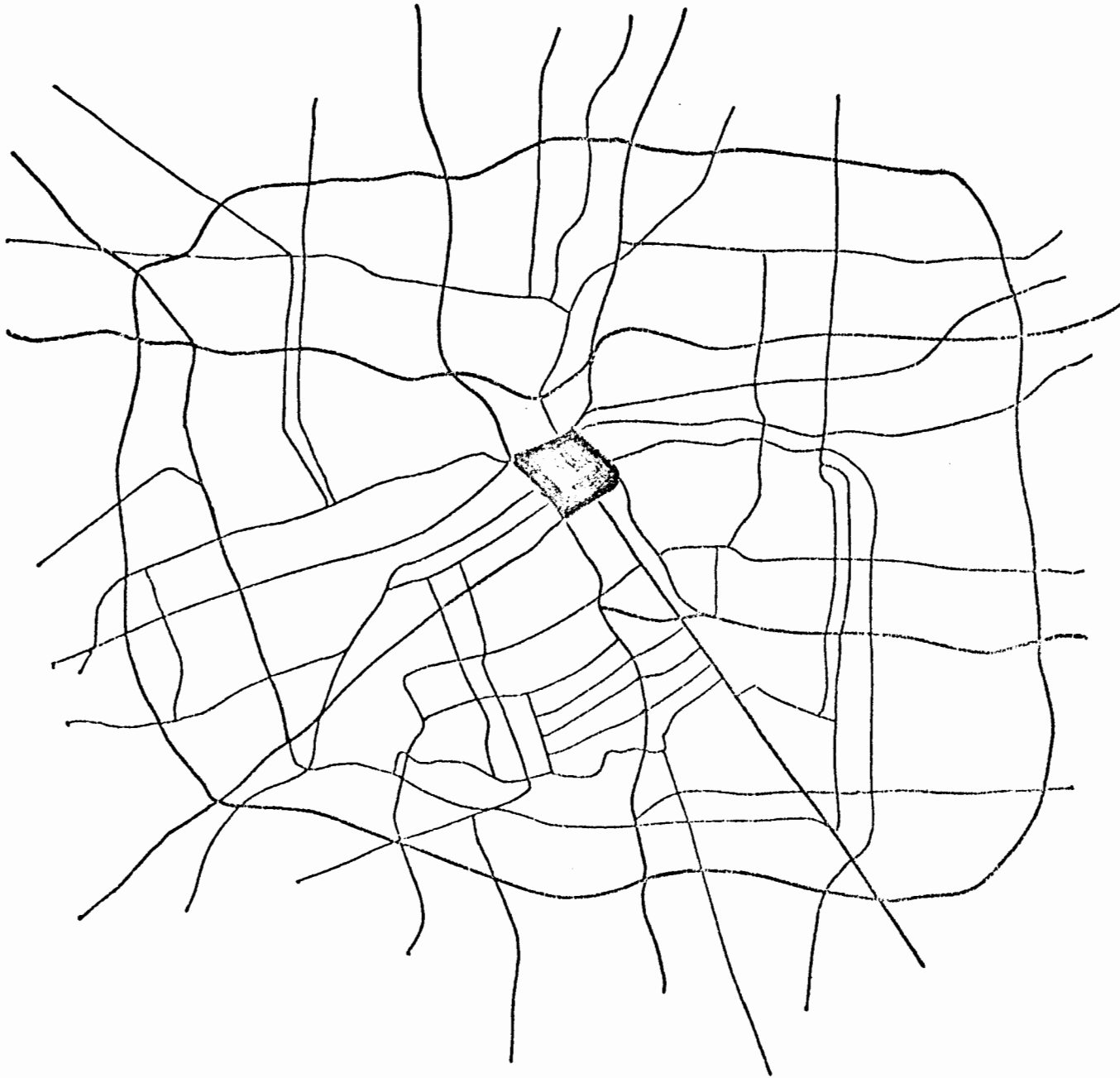
2.3 The Capitalist City

The ascendancy of the automobile as the dominant means of personal transport has been a key factor in shaping the modern auto reliant city of the capitalist world in particular. By the end of 1970 there was one car for every 2,5 persons in the United States and one for every 4,8 persons in the United Kingdom. In 1980 the total number of automobiles in use in the United States was estimated at one hundred and eleven million. In Great Britain the figure was nineteen million (Bendixson, 1977). Automobiles serving as taxis (called jitneys) replaced the hackney carriage and first appeared in Los Angeles in 1914 (Stokes, 1983). A cross between the conventional taxi operations and the scheduled bus operations, the number of jitneys soared to an estimated 700 in Los Angeles alone by the end of 1914. The appearance of the jitney in the United States coincided with the first sign of decline in the mass transit industry. By the end of World War I, one-third of the transit companies in the United States were in bankruptcy (Saltzman and Solomon, 1972). The automobile did, in part, contribute

to the decline of the transit industry. However, it did so by filling a service gap which the industry was unable or unwilling to fill. By the 1920's jitney service fell to political pressures from private transit companies and was essentially regulated out of existence so that today the conventional sedan taxicab is all that remains of the original jitney service (Technical Council Informational Report, 1981).

Vehicles other than the private automobile took to the internal combustion engine. The motorized bus slowly replaced the electric streetcar. The advantage of the bus over the streetcar was that the bus was not fixed to tracks or overhead wires and could thus alter and change route patterns. By 1930 the bus had become the most widely used form of public transport in urban areas. The introduction of freeways in the 1930's designed to allow for faster, unimpeded movement of vehicles by the shortest route concurred with steadily increasing car ownership (Gallion and Eisner, 1980). After World War II automobile sales soared as more and more individuals realized automobile ownership. Decreased demand made it uneconomical for cities to maintain existing mass transport supplies. Services were cut, thus creating an even greater need for personal mobility.

The present shape of today's capitalist city is based on the assumption of perfect personal mobility (Knox, 1983) (Figure 2.1). It is characterized by concentric rings of highway around an urban core (Meyer, Kain and Wohl, 1965). The speed of travel associated with personal mobility and the highway network has resulted in services and facilities being located at greater distances than perviously. Arterial road networks, on which the bus functions, radiate from the core. Rail links



TRANSPORT IN THE CAPITALIST CITY
HOUSTON - TEXAS

—— Roads

Figure 2.1

both encircle and go through the central business district. Financial investment for mass transport comes from either state subsidies or private companies. In general, mass transport operates like a business, seeking profit making gains. Fares for mass transport rise in a series of steps. One rate may be quoted for a given stretch of route rather than rates changing with every station or according to road distance. Thus, the rate is constant between certain points, with steps tending to become longer as distance increases from point of origin (Smith, 1971). It is possible to get reduced rates for regular rides and sometimes one is able to change modes without additional cost. In general, all modes act independently and are separately scheduled. In effect then, two independent transportation systems exist, one for individually operated transport and one for mass transport. Together they form the metropolitan transportation system. Increased automobile use and the decreased use of mass transport has created numerous urban problems. The current trend of transportation planners has been to move people out of the individually operated vehicle and back into the shared vehicle. However, the high investment cost of mass transport and the individual desire for personal mobility has led to a rise in the use of intermediate transport in the capitalist city. The existence of intermediate transport is based on an unsatisfied demand for personal mobility.

Alternative services which develop cannot be considered a substitute for fixed route transit. Rather, they provide a supplementary and complementary role to the traditional systems by filling specialized demand gaps. In the United States especially, alternative transport is designed and implemented to meet the specific needs of particular

markets (Falcocchio and Cantilli, 1974). Such alternative services include the taxi, ridesharing, dial-a-ride and car rentals. Taxis generally operate from a rank, as well as roam the streets for potential passengers, and tend to fill the occasional mobility demands of the elderly, ill and visitors. As a taxi passenger, the individual who hires the vehicle has the reserved right to be transported in it. Taxis are usually equipped with radios and thus have contact with a base location which directs the taxi driver to areas of service demand. Two methods of pricing occur with taxi service. A metered rate is a charge related specifically to distance and waiting time. An initial flag fall is charged, then a set fare per kilometre travelled. This fare is estimated on a return basis, thus giving rise to a high cost per journey ratio. A zonal rate is a uniform rate associated with both origins and destinations. Price increases occur in stages as zonal boundaries are crossed. Within any given zone, no matter the distance between origin and destination, the fare is standard and does not vary from zone to zone (Lowe and Moryadas, 1975). Ridesharing makes up a form of prearranged transport. This sort of transport may be planned by groups living in similar areas and travelling similar routes, e.g. journey to work trips or school commuting trips. Alternate drivers and vehicles may be used among the ridesharing group (Bautz, 1980). Shared vehicles provide the dial-a-ride system of demand responsive transportation. Given the dial-a-ride system, a number of travellers may be conveyed in the vehicle, each having different origin and destination points. In the United States the dial-a-ride system of transport is used particularly by elderly and handicapped persons (Bautz, 1980). As an intermediate mode of transport, car rentals come closest to the most private form of individually operated transport.

Upon being issued the vehicle, the individual becomes the operator and has the ability to travel according to his personal desires. Tourists and travelling businessmen are typical patrons of car rentals.

Strategies for inducing people away from the automobile include the promotion of intermediate transport services as supplementary and complementary to conventional transit services rather than in direct competition. Federal funding for intermediate transit planning and citizen participation in local transportation planning and development are two other strategies employed (Sloan, 1974). Intermediate transport has been recognized as critical to the total mobility program so that personal mobility needs may be fulfilled (Technical Council Informational Report, 1981). Transportation demand must be identified and met with the most appropriate service, whether it be publicly or privately provided, fixed route, demand responsive or subscription. In the United Kingdom efforts have been made to introduce the minibus into urban areas as well as other forms of intermediate transport (Hamer, 1983). For example, the Transportation Amendment Bill, introduced in 1976 to the British Parliament, intended to enable automobiles seating fewer than nine people to be used for hire and reward without a licence and minibuses with up to seventeen seats to be exempted from public service licencing provided the appropriate county council considered them safe and not in direct competition with the existing bus service (Bendixson, 1977).

The reliance on private vehicle transport rather than public has caused many capitalist cities to be choked by traffic congestion and its associated ills, i.e. pollution and increased fuel consumption. To

relieve this congestion and associated problems, transportation planners have tried to stimulate the movement of people out of the private automobile and once again onto more public forms of transport such as buses and trains. It was recognized that the fixed routes and fixed schedules of public transit could not effectively serve all markets needing an alternative to the private automobile. Thus, in an effort to meet personal mobility needs, one approach has been to integrate conventional transit systems with alternative transport modes. By utilizing traditional ideas in innovative ways, the struggle for personal mobility may better be achieved.

2.4 The Socialist City

Until 1917 growth and development of socialist cities occurred along somewhat similar lines to that of capitalist cities (Bater, 1980). In that year, the socialist state chose to replace the existing system rather than function within it. Today, extensive planning and a highly structured economy exist in which decision making is centralized through state organizations. The high order of control granted the state in socialist societies results in the state actually controlling the pace, scale and direction of growth within that society (French and Hamilton, 1979). A primary goal of the socialist city structure is one of spatial efficiency and a comprehensive and reliable transportation system is but one component of that spatial efficiency.

In the socialist city as industrialization occurred reliance on the state controlled public transportation network was stimulated. When new technology allowed for the emergence of industries manufacturing

private automobiles, the socialist government did not encourage their development. This approach resulted in automobile supply being kept to a minimum. The lack of growth in the private arena of transportation has been conducive to the spread and continued existence of a dependable mass transportation network. A key feature of socialist policy is the reliance on the state to provide geographical access for all its people. Thus public transportation is state supplied, financed and organized and is geared to meeting the majority of the mobility demands of the society. In fact, to ensure equality of access, the state guarantees efficient, quick, reliable, low cost public transportation which is coupled with a highly integrated but specialized land use pattern (Hamilton and Burnett, 1979).

Socialist city form is characterized by a block shape in which various transportation networks and patterns overlap (Figure 2.2.) Accessibility is guaranteed through an intricately meshed transportation system consisting of a set of inter-related modal networks. Mass transit timetables are geared to coincide at nodal interchange points, thus increasing efficiency and decreasing nodal change time. Fare payment on mass transit systems is based on a credit card type ticket issued to all workers. This ticket entitles the worker to travel freely within the urban area on any mode, at any time, in any direction and over any distance. In Budapest for example, those who are not locally employed pay a minimal charge for tickets bought in advance at the nodal point and validate them at machines located in the vehicle. Individual tickets for different modes are colour coded, i.e. tram tickets are yellow and bus tickets are blue. Children under school age are permitted to travel free of charge when accompanied by an adult (Hungarian Tourist Board,

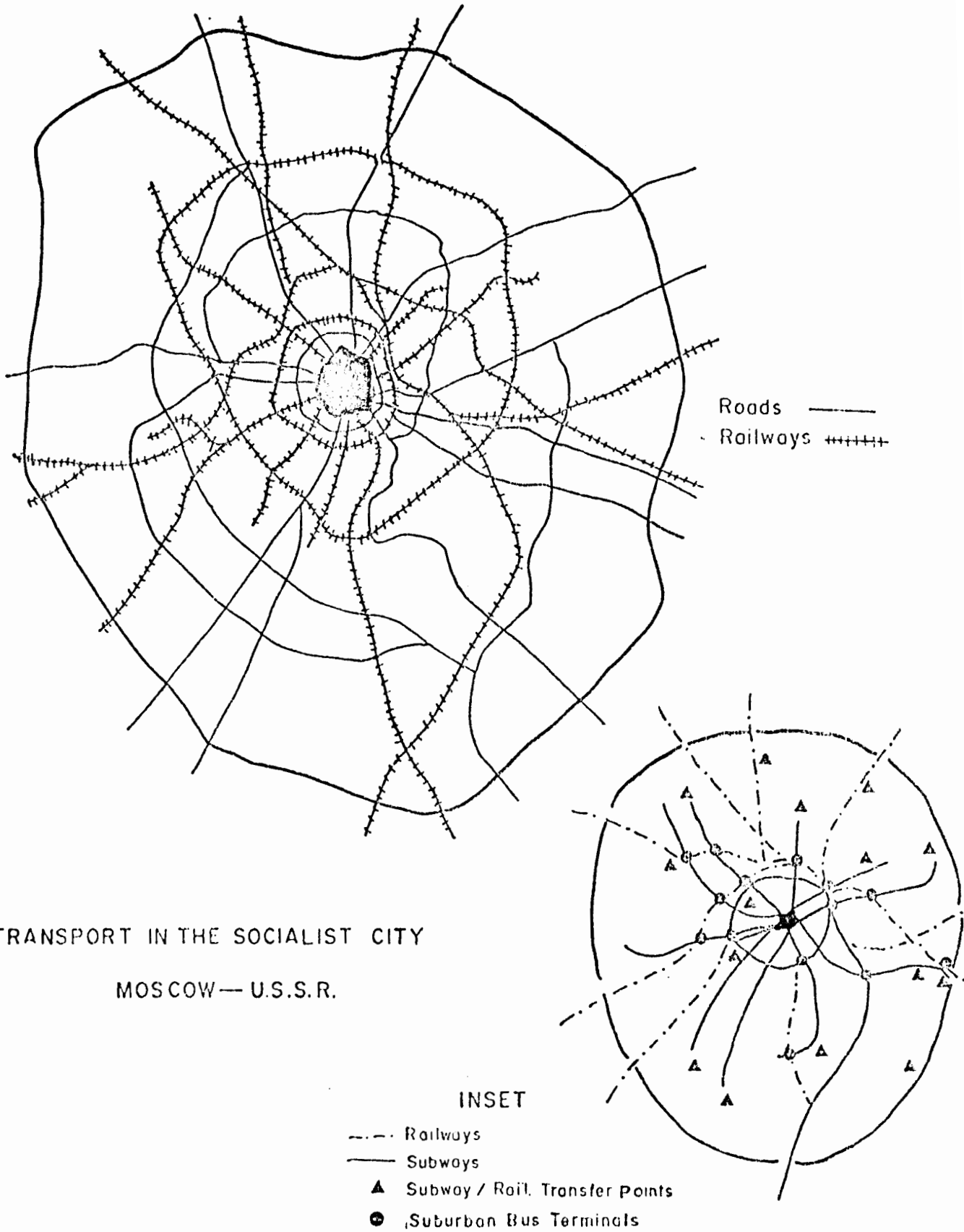


Figure 2.2

1982). As urban expansion extends along existing transport routes, corridors comprising blocks of growth occur simultaneously with the development of the transportation network (Hamilton, 1979). The state provided transportation network is thus so successful that individuals have little actual need for acquiring their own modes of transportation. Thus, a very limited demand for private automobile ownership exists (French, 1979).

In contrast to the capitalist city it is clear that mass transport in the socialist city is given priority over individually operated modes of transport. In the USSR for example, over 90% of commuters utilize mass transport (Fuch and Demko, 1978). This high percentage is largely attributed to an increase in bus routes and capacities. Demand for personal mobility is largely neutralized, yet those who have the money or access to automobiles do travel by private transport (Fuchs and Demko, 1978). The extensive, easily used transport network coupled with the low demand for individually operated transport makes intermediate transport in the socialist city almost nonexistent. Where taxis are available, they are government contracted.

The role of transport in socialist societies is so closely integrated with city structure and planning that there is a scarcity of specifically transport related research information. Studies which deal with transportation focus on issues of commuter forecasting, travel distances and efficient mass transport (Gol'ts, 1983). For example, a recent study of commuting by residents of Moscow found that commuters tend to work in areas that have easy access to suburban rail lines and stressed the need for more careful planning of Moscow transport services to commuter

needs (Fomina, 1983). Geographic studies which are even less specific tend to view the entire socialist city as a system and transport being just one part of that system. Thus, the transportation mesh incorporated within the socialist city structure is merely a reflection of the socialist typology (Bater, 1980; French and Hamilton, 1979).

2.5 The Non Western City

The non western city forms a relatively distinct city type (Hay, R. 1977) (Figure 2.3). In some respects its basic structure is typical of the medieval walking city. However, a capitalist type city structure has, in many instances, been superimposed upon the initial compact form. Non western cities generally experience phenomenal urban growth rates due to an influx of people from rural areas to urban centres (Brand, 1976). As a result they are characterized by a lack of financial capital and dense populations, while unemployment and concentrated pockets of poverty typify the urban areas (Mountjoy, 1975). Financial allocation from government sources for mass transportation is not readily available and the state provided transportation system is generally inadequate to cater for growing demand as urban growth exceeds the expansion of mobility networks (Hilling, 1978). In most non western cities, cars are quite prevalent in relation to population (Fouracre, 1977). As the void between public bus service and private car ownership is often quite large, there exists an area of unsatisfied mobility demands. The low incomes of large numbers of urban dwellers in non western cities has led to some entrepreneurial enterprises providing inexpensive bus facilities for local residents with little regard for service quality. That these services do not meet the demand for personal mobility is clear from the

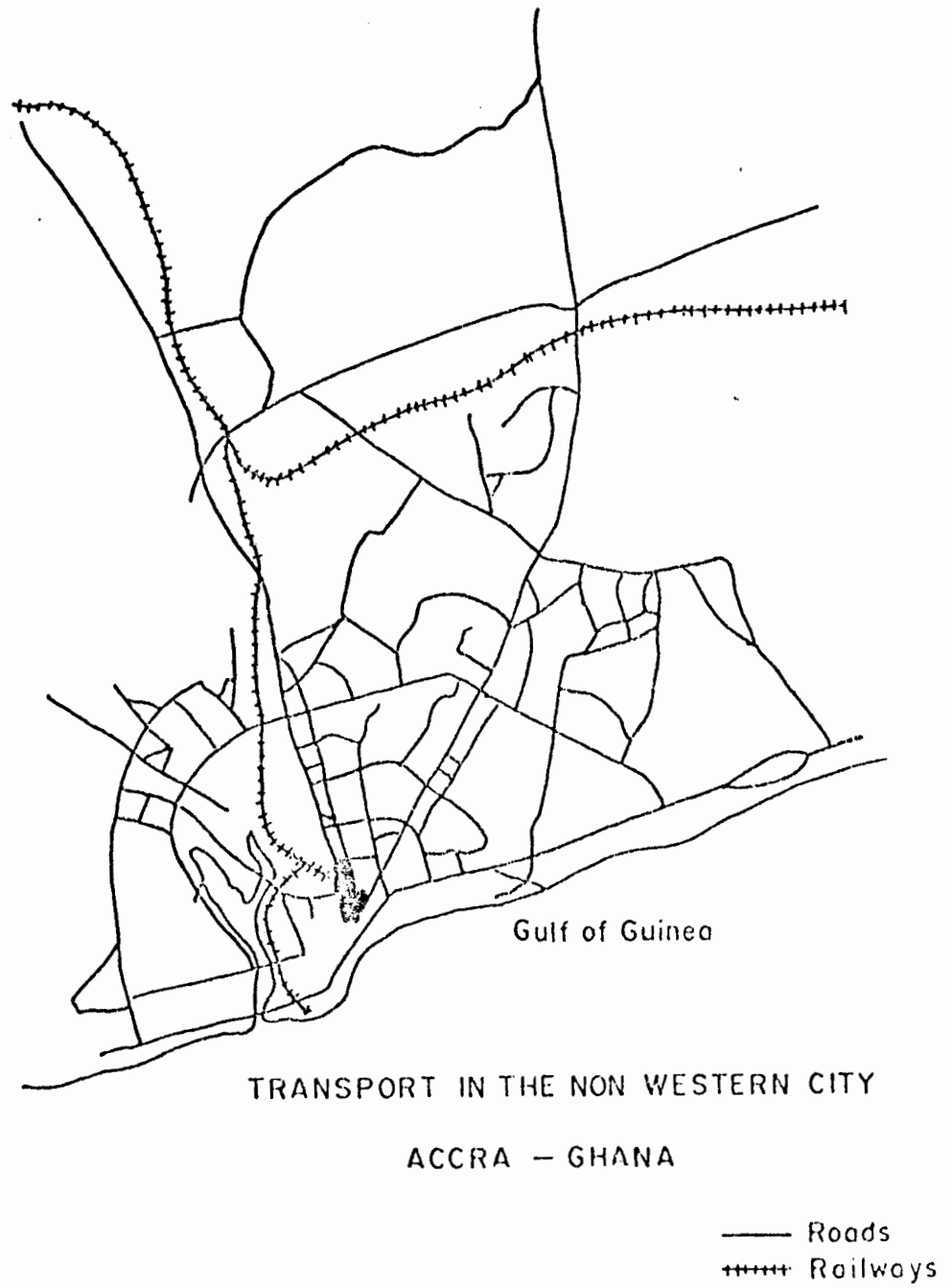


Figure 2.3

large numbers of pedestrians. Filling this void are various forms of intermediate transport which have been described as something between the low grade bus and high cost taxi (Thomson, 1978). As a result, approximately 25% of residents in non western cities travel by some form of alternative transport (Table 2.1). The 'other' travel modes of intermediate transport include the jitney, the dolmus, the jeepney, the servis taxis, the rickshaw and the minibus. Though given different names depending upon country location, these modes of transport all operate somewhat similarly.

TABLE 2.1

TRANSPORT IN NON WESTERN CITIES

City	Cars per 1 000	Total Cars	Buses per 1 000	Total Buses	Modal Split (%)		
					car	bus	other
Jakarta (4 300 000)	18,0	77 400	1,1	4 730	29	49	22
Bombay (5 800 000)	13,5	78 300	0,3	1 740	11	41	48
Bangkok (3 100 000)	49,7	154 070	1,2	3 720	29	59	12
Kuala Lumpur (800 000)	51,9	41 520	1,0	800	47	35	18

Source: Fouracre 1977

In Beirut, interwoven within the conventional urban transport network is the jitney which is typically a large European or American sedan automobile carrying up to five passengers on semi-fixed routes (Farmer, 1967). In Istanbul, the dolmus, a sedan automobile, comprises 23,6% of the transportation market and is operated in one of two ways. Either between specific points using predetermined routes or in directions generating around different parts of the city (Orer, M. et al, 1979)

In Surabaya, Indonesia, a city of 2,3 million population, an estimated 38,6% of all trips (other than those by way of individually operated vehicles) are by jitney operations (Fouracre and Maunder, 1978). Services of Amman operate on fixed routes but differ from the scheduled bus services in that they do not have fixed stopping places between terminals (Coombe and Thomson, 1982). The cycle rickshaw in Indonesia is used and operated just like a taxi service. A driver uses one point at an origin from which he waits for potential passengers and the route is determined according to the desired destination of the passenger (Fouracre and Maunder, 1977). In Manila, the jeepney (war surplus jeep) serves as another example of intermediate transport operations. In this case a public conveyance certificate is granted for specific routes, the number of vehicles to be used, fares and the scheduled number of trips (Garva, 1972). Such vehicles are operated in competition with the buses in that they charge passengers a similar fare to that of the buses. However, during the off peak hours the jeepney is used to transport packages and freight (Thomson, 1978). Thus, the jeepney of Manila has a dual function of a conveyer of both people and freight. In 1976 the Malaysian Government introduced minibuses in Kuala Lumpur on the belief that they would reduce urban congestion by inducing private vehicle owners out of automobiles (Walters, 1979). Fares on the minibus were regulated irrespective of distance, whereas bus fares were graduated according to trip length. Minibus patrons in Kuala Lumpur benefit in particular from timesaving, both waiting time and in vehicle time (White, 1981). Quite popular in Chiang Mai, Thailand, minibuses account for over 80% of the daily urban trips made by vehicles other than those individually operated (Fouracre and Maunder, 1977). In general therefore intermediate transport in non

western cities of the developing world are individually controlled vehicles which carry more passengers than a taxi but less than a bus and operate unscheduled services within a basically fixed route between points, stopping on demand (Fouracre and Jacobs, 1976).

The layout of the non western city is particularly conducive to the development of the above alternative means of transport. A varied land use mix gives rise to the high levels of interaction and local concentration of activity. Roads are narrow and crowded, resulting in limited accessibility and vehicular congestion. The mass transport network consists primarily of a poorly developed service. Intermediate transport has evolved to serve as an extension of this service because of its economic efficiency and compactness which is better suited to the intricate, yet unstructured urban layout and activity patterns of the non western city (Bendixson, 1977). The role of intermediate transport in the non western city is thus more supplementary than complementary.

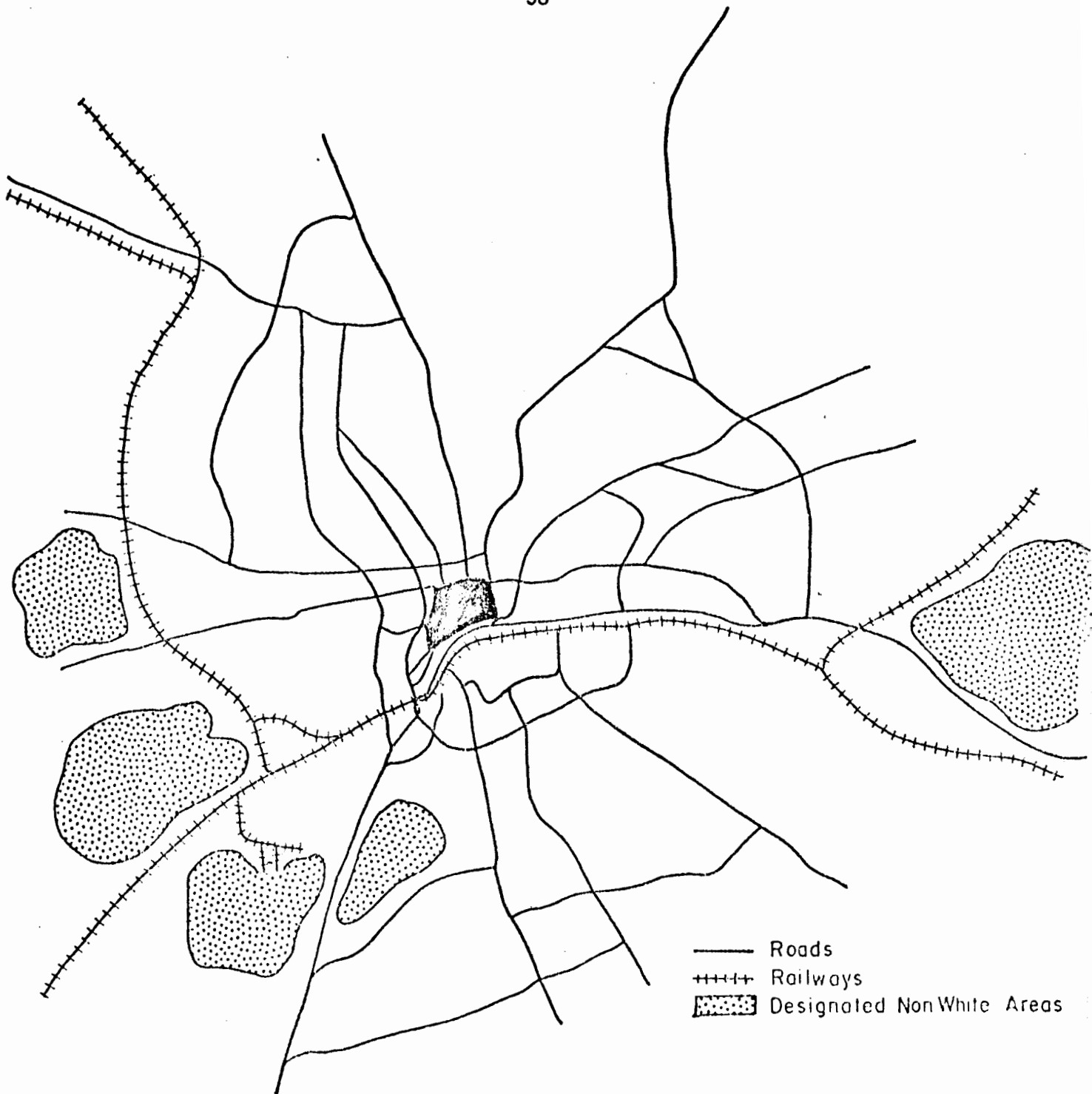
In recent years intermediate transport in developing countries has stimulated the attention of transportation researchers. In general, articles tend to be surveys of the various forms of intermediate transport presently utilized in developing countries rather than analyses of why they occur (Britton, 1974, 1977; Falk, 1979; Farmer, 1967; Fouracre, 1977; Fouracre and Jacobs, 1976, 1974; Fouracre, Jacobs and Maunder, 1982; Fouracre and Maunder, 1978, 1977; Garva, 1972; Orer et al, 1979; Walters, 1979; and White, 1981). All of these studies reach similar conclusions. Firstly, that intermediate transport caters for demands left unsatisfied by poorly developed conventional modes of

mass transport. Demand creating factors are both real (cost and accessibility) and perceived (comfort, convenience and safety). And secondly, intermediate transport provides a fast, comfortable, convenient, flexible and relatively cheap mode of transport particularly suited for those who find individually operated transport outside their realm but within their desire. Clearly then, intermediate transport has a role in the urban mobility network of the non western city.

2.6 The Colonial City

Given its large, unskilled and relatively poor population, the colonial city is related to the non western city of the developing world. Like the post-industrial city however, its basic physical form is capitalist inherited (Figure 2.4). The colonial cities reflect similar spatial distribution patterns throughout Africa in which the dominant group (usually a white power) prescribes where and how the urban population will be distributed (Sommer, 1976). The typical land use pattern includes a white owned central business district, overlooked by a white residential area. When possible, rivers or transportation lines function as buffer strips to separate the different racial and ethnic zones (Western, 1981). The result is that in the colonial city the urban poor live furthest from place of employment. Their residential location makes it necessary for them to rely on some sort of vehicular transport while the employment pattern encourages a high demand for large scale mass transport.

The structure of the colonial economy is such that the urban labour force has no real opportunity for economic advancement within the



TRANSPORT IN THE COLONIAL CITY

SALISBURY — RHODESIA

Figure 2.4

existing system, the colonial power frequently takes the responsibility of providing basic necessities such as housing, education and in particular, transportation (Buchanan, 1975). Transport in the colonial city is heavily subsidized largely because an efficient transportation system is critical to the economic operation of the colonial economy (Buchanan, 1975). Capital for mass transport is thus made available in the colonial city, but is not given financial priority as in the socialist city. Mass transport services therefore may either be state or privately owned and essentially operate for the transportation of the low income labour force. Individually operated transport is particularly a phenomena of the upper income group whose income allows them access to personal modes of transport. Existing transportation lines merge at the central city where commercial activity is concentrated, then disperse to areas of employment location (Brand, 1976). The mass transport network which results forms a mesh of activity that is locally focussed and directed at providing mobility for the low income, predominantly non white labour force.

Given the conditions of a capitalist economy in which wealth is accumulated, a large urban population, lack of employment opportunity and location disadvantage of the urban poor, conditions in the colonial city become appropriate for the development of small scale informal earning activities. Strategies for earning include home based industries and transportation provision and maintenance (Bromley and Gerry, 1979; Hart, 1973). The formal transportation system, unable to satisfy the high mobility demand, alters to include various intermediate modes which develop to fill the gap between individually operated and mass transportation. Even after colonial domination is suspended the

informal transportation network which has developed continues to provide for the population. For example, Dar es Salaam, now in a post-colonial phase of development and with a population of nearly half a million, maintains a very unsatisfactory conventional transportation system. The number of buses per 1 000 population is 0,6 (or approximately 240), hardly enough to satisfy the mobility demand and thus only 40% of the modal use is by bus. The number of cars per 1 000 population is only 33 (or approximately 13 200). Thus, 7% of trips are by car and the remaining 53% are by some intermediate form between car and bus (Fouracre, 1977). Kenya, like many other african countries, is forced to import fuel supplies which alone amount to over 30% of its import bill (Le Fevre, 1981). Thus, the minibus, being more fuel and cost efficient than either the personal automobile or bus, aids in keeping down costs and government promotion of the minibus is a matter of energy conservation.

Little work has been done on aspects of internal transport in colonial cities. Most of the published work dealing with the phenomenon of colonialism looks at socio-economic developments of that system, i.e. rural migration, urban change, housing and modernization (Knight and Newman, 1976). Actual modes of transportation are not an issue so far as they affect urban life style and choice. Rather, the focus of transportation in the colonial city is on the access networks for the labouring population and spatial divisions created by that network (Prothero, 1976). Yet clearly, intermediate transport forms an important subset of the non western city's transportation system. Therefore, the need for further transport related studies with a focus on the nature and role of intermediate transport is required.

An attempt has been made to highlight the forces generating the need for intermediate transport, by presenting an historical overview of various city patterns, their associated activity systems and the responses that have emerged to meet mobility demands. The present form of capitalist, socialist and non western cities is a result of an historical process directly related to economic conditions, political policies and technological changes. The necessary role which transport plays in city function results in the emergence of distinctive transport pattern variations among city types. For example, in the capitalist city mass transport is not given a high priority by the state. Instead, the transport network is structured for mobility to be individually achieved. The metropolitan transport system of the socialist city differs from the capitalist city in that accessibility for all is stressed by means of mass transport through an intricate mesh of nodes and linkages. In the non western city the demand for alternative forms of mobility results from a poorly developed mass transport system and the desire for a more personalized mode of transport than that offered by conventional types. Transportation in the colonial city is concentrated on the provision of mass transport facilities for the urban labouring classes, whereas the middle and upper income members of society are encouraged to provide their own forms of mobility.

Though some form of transport is available to most sectors of the population, there remains a demand for personalized mobility. Given the present state of technology, the limiting factor for the attainment of personal mobility is largely economic. The cost of individually operated transport is relatively expensive when compared to that of mass transport. Individuals who are readily able to afford mass transport nevertheless

may find individually operated transport outside their financial means. This group in particular, who cannot accumulate the initial outlay for individually operated modes of transport, may instead turn to alternative modes. Perceiving the demand for personal mobility are entrepreneurs who, in an effort to meet demand costs effectively, have introduced and developed alternative modes of transport geared to individual mobility aspirations.

Thus, the establishment of intermediate modes as viable forms of transport throughout the world, and in developing countries in particular, has been the result of both a mobility demand gap and political desires to encourage employment and small enterprise (Le Fevre, 1981). It appears that intermediate forms of transport geared to small group transport, like that offered by minibuses or kombi type services, are almost exclusively a phenomenon of the developing world where the gap is largest and the political climate sympathetic to private enterprise (Thomson, 1978).

CHAPTER THREE

INTERMEDIATE TRANSPORT IN SOUTH AFRICAN CITIES

In light of the total population, South Africa may be regarded as a developing country which maintains a high rate of urbanization and an extensive unskilled labour force. The South African city has emerged to encompass a highly segregated land use pattern (Western, 1981). This spatial form stems from the country's colonial origins and results from both the Group Areas Act and the Black (Urban Areas) Consolidation Act. In particular, residential distribution differs from that of the capitalist society in which lower income groups may limit travelling and time costs by settling near the city centre (Swart and Oosthuizen, 1978). Instead, non white racial groups live in consolidated, low cost, high density residential areas located on the periphery of the urban areas (Western, 1981). As a result, members of the non white population maintain a high dependence on the existing mass transportation system as the majority do not have the financial ability for individual vehicular ownership. In Johannesburg for example, white families own 1,32 automobiles, whereas coloured and

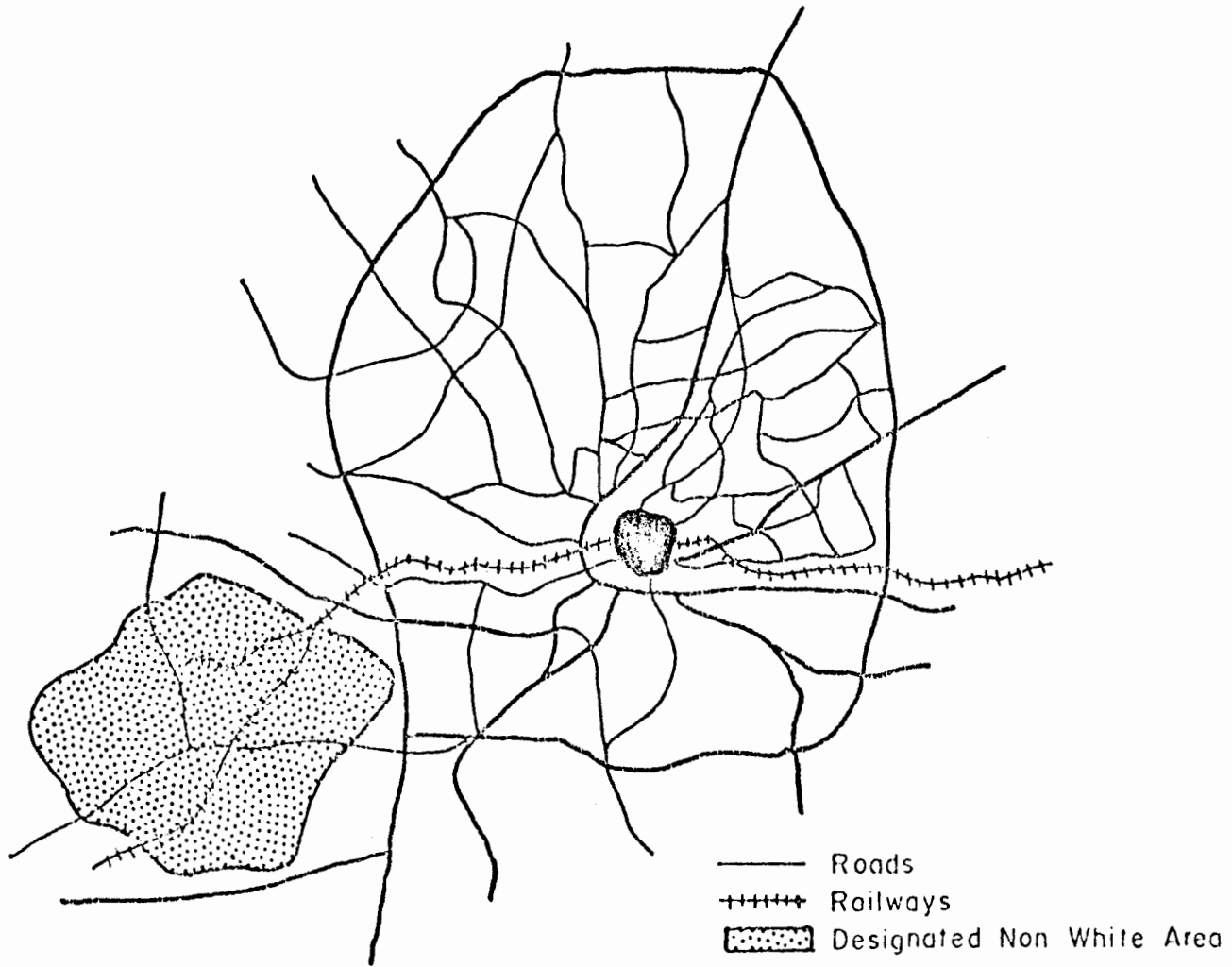
african families own 0,57 and 0,20 automobiles respectively (Human Awareness, 1982, 2). Taking South Africa as a whole the dependence on mass transport is reflected in the fact that only 13% of the non whites use individually operated transport for commuting journeys, whereas among the white population the percentage is eighty (Swart and Oosthuizen, 1978, 38).

The mass transportation of this large sector of the non white population in South African cities is subsidized by both commerce and industry. One justification for transport subsidies suggested by the Welgemoed Commission is that it takes community benefit into account. "Public transport benefits the community as a whole and the costs involved should not be recovered only from the commuter. Subsidisation is a way to ensure that to a certain extent the cost burden is spread more effectively" (Welgemoed, 1983, 4.39). Thus, every commercial and industrial employer pays a levy of R3 per month for each non white employee. The subsidy comprises an employers' levy fund and the tax fund of the Treasury Department and the Department of Co-operation and Development (Human Awareness, 1982). Government then reinvests this money to subsidise mass transport services. Bus companies receive the bulk of these subsidies. In 1981/82 bus subsidy amounted to R250 million and increases by approximately 20% per annum (Crook, Jones and Jones, 1984).

The two largest privately owned companies operating bus services in the country are PUTCO (Public Utility Transport Corporation) and Tollgate Holdings. Though providing a public service, they are profit making ventures. For example, in the financial year of 1983, Tollgate Holdings made an after-tax profit of R4 622 000 (Tollgate Holdings Ltd, 1983) and

yet individual bus companies under its control still received Government subsidy. In fact, the private companies supply only 40% of the investment needed to run a bus service, the rest being supplied by Government in the way of subsidy (Human Awareness, 1982). Technically, the actual subsidy is passed on to commuters in the form of clipcards which are valid for a predetermined number of trips. Per trip, the cost by the clipcard rate is substantially lower than a single trip ticket. For example, in Cape Town the journey from Nyanga to Claremont costs 34 cents with a subsidized clipcard and 55 cents at the unsubsidized, single journey rate. However, even subsidized rates are not enough to ease commuter grievances as high transportation costs are often an aspect of dissatisfaction (Morris, 1982a), especially as it is estimated that african workers spend between 10 % and 20% of their income on transport (South African Institute of Race Relations, 1983, 304).

The South African transport network is typical of the colonial city in which mass transportation essentially operates to convey labourers to and from employment locations in the white cities (Olivier and Booysen, 1983) (Figure 3.1). The upper income group (usually white) retains the capitalist pattern of mobility in having a low demand for mass transport and high accessibility to individually operated transport. The mass transport network of nodes and linkages in South Africa's metropolitan centres focuses on the central business district where activity is concentrated and large bus and rail termini are typically located. Directed from and leading to residential and employment locations, transport lines concentrate at this central business district and other nodal interchange points. These points become areas of intense modal change activity and at peak periods often exceed capacity levels. Non white



TRANSPORT IN THE SOUTH AFRICAN CITY
JOHANNESBURG

Figure 3.1

commuters are seldom able to use a single mode of transport and the number of modal changes involved with mass transport commuting increases cost and stress. In Mdantsane, an individual travelling by conventional mass transport may require at least three changes in the journey to work. The initial modal location being at a first-order nodal point, e.g. a bus stop. The bus terminus within the township, a second-order nodal point, is the next point of modal change. This may take the black commuter directly to work place or may require a further modal change at the central business district or at a third-order nodal point, e.g. a bus and rail link (Matravers, 1980). Clearly there is a need for some form of transport which could bypass these intermediary nodal points and arrive at the required destination with greater expediency.

Like the early industrial city, concentrated employment and non white residential areas result in full loads on one way journeys making mass transport economically and functionally viable. However, given capacity loads and high mobility demand, overcrowding has become a common phenomenon on mass transport in South Africa. Combined with these factors, a recent study on black commuting in Pretoria showed crowding to be largely due to insufficient transport during peak hours (van der Reis, 1983). These problems are reflected in the work done by Oosthuizen (1984) which highlights the problems of bus transport. In a survey of 456 commuters in the Rustenburg area it was found that 13% of those surveyed specifically noted overcrowding as a problem with bus transport. Associated with overcrowding is the shortage of buses (Table 3.1). Overcrowding also leads to other commuter grievances, in particular increased crime and stress due to fear of crime (van der Reis, 1982).

TABLE 3.1

Problems With Bus Transport

Unreliability	50%
Overcrowding	13%
Shortage of buses	8%

Source: Oosthuizen, 1984, 14.

Given these dissatisfactions, along with commuter preferences which seek to alleviate problems, a more personal mode of transportation is needed. This mode should offer an efficient service which caters for the individual and his specific demands at an economic cost. It is clear that the non white commuter will be only too keen to turn to any form of alternative transport that meets these requirements. Particularly successful in this regard is the taxi, in fact it is estimated that in South Africa that up to 500 000 non whites use 82 000 taxis weekly (Financial Mail, 27 Jan 1984b). In fact, the attributes of comfort, safety, speed and convenience of the taxi are the dominant reasons for its preference among commuters over the bus and/or train (Luk, 1980).

The vehicle which comes to mind most when people hear the word 'taxi' is the sedan motor car. Officially in South Africa a taxi is simply regarded as a motor car which is hired (Welgemoed, 1983). However, a motor car, as defined in the Road Traffic Ordinance, 1966, is a 'motor vehicle designed or adapted for the conveyance of not more than nine persons

(including the driver)' which suggests that a taxi could transport up to nine people. In South Africa different types of taxis are recognizable. First, the sedan motor car which, when operating as a taxi, is generally limited to carrying capacity of five, i.e. four passengers plus a driver (Road Traffic Ordinance, 1966, Act 21 of 1966). This sort of taxi is identical to that commonly operating in capitalist cities and is typically used to transport casual passengers on a metered scale. It does not ply for hire, but instead is radio controlled. In Cape Town sedan taxis have a flag fall of one rand. The cost per kilometre travelled is R1.20. A ten kilometre trip in a sedan taxi would thus cost the passenger/s R13,00. The total price may be divided among the total number of passengers. Thus, if there are two independent passengers in the taxi, a ten kilometre journey costing a total of R13,00 would cost each passenger R7.50. The clientele who patronize the stereotypical sedan taxi are therefore determined by ability to pay. Thus, the sedan taxi of this sort usually operates from ranks in the white urban areas, areas of business activity concentration or nodal change points, e.g. suburban stations.

A second type of sedan taxi is found in South African cities. The mode of operation is a response to the demand/cost factor characteristics of the non white population who have limited access to phones and where there is the potential to share fares. Limited to a passenger capacity of five, the shared sedan taxi operates on a line haul or point to point basis. In the cities this type of sedan taxi became especially prevalent in the 1950's after the initial implementation of the Group Areas Act and is still in great demand today. Fare structure is not on a metered basis, but rather a fee is charged per head. In this respect

the taxi is similar to jitney operations of non western cities. The total rate charged is considerably lower than that of the metered sedan taxi. In Cape Town for example, a single journey in the shared sedan taxi costs between 25 and 60 cents depending on route distance and day of week. Weekend rates may be higher than those charged on weekdays. Given an individual single fare of 40 cents, a full load of five passengers brings in R2. This sort of shared taxi maintains low rates as a result of its operating characteristics, i.e. high capacity, line haul, short routes and fare structure. A taxi of this type has become a feature of lower income communities and is colloquially referred to as a 'black taxi' or 'valiant taxi'.

Over the past seven years the sedan taxi has been replaced as the norm for low income commuters by the minibus taxi, capable of carrying more passengers. A minibus is 'a bus designed or adapted for the conveyance of not more than fourteen other persons' (Road Transportation Act, 1977). Clearly then, as a taxi is a car which is hired and a car can convey up to nine persons, once minibuses became available they could be used as taxis. The Volkswagen Kombi, introduced to South Africa in 1959, was the first to operate as a line haul taxi. Since 1978 other similar vehicles, such as the Toyota Hiace and the Datsun E-20, have also been used as kombi taxis. These changes in vehicle technology, the rising cost of petrol and the relaxation of regulations together led to the gradual decline of black sedan taxis and the expansion of the kombi type vehicle as a taxi in South African cities. Kombi taxis have become so popular in fact (an estimated 82 000 operators in 1984 according to Financial Mail, 24 February 1984) that official recognition has been granted this sort of small line haul group transport, most recently in the form of a

government commission of inquiry which stresses the importance of control and regulation over the taxi industry (Welgemoed, 1983).

3.1 Taxi Bylaws and Rules for Operation

Regulation of taxi services in South African urban areas lies primarily with the Local Road Transportation Board which is responsible for the management of supply and the addition of any new taxi ranks or services. Other regulatory bodies various municipal authorities, the City Council Traffic Department, the Divisional Council Traffic Department, local Administration Boards, the Railway Police and the South African Police. Regulations imposed on taxi operators relate to driver and vehicle service standards, as well as entry control into the taxi market.

Bylaws with respect to the operation of taxis vary within the different metropolitan areas. The power to make bylaws is given to the local authorities in the Road Traffic Ordinance, 1966, No 21 of 1966. The taxi bylaws concern licence requirements, rank tokens, taxi meters, driver identification and fares. Municipalities throughout the country vary in terms of required permits and licences and their associated costs.

Required of the taxi driver are a valid driver's licence, a public driving permit, a passenger transport undertaking licence, an identification card and a taxicab driver's licence. To comply with existing regulations, the vehicle itself must be issued with a vehicle roadworthiness certificate, a taxi meter, third party insurance, a certificate of fitness, a public road carrier permit, a taxi registration licence and a rank token.

3.1.1 Taxi Driver Licence and Permit Requirements

From the driver's point of view the following licences and permits are required (Figure 3.2):

1. Driver's Licence

A driver's licence is granted to any individual, eighteen years or older, who has passed the required written and practical driving examination and is accepted by the relevant traffic department. The licence costs R5.00 and is valid indefinitely.

2. Public Driving Permit

Any person who wished to convey people for reward must apply for a public driving permit. A public driving permit is issued only after the applicant has received clearance from the local police and a clean bill of health from a medical officer. He must be of good character and competent to drive the intended vehicle. The main purpose of this permit is to ensure that the driver is both mentally and physically fit to operate the taxi. The permit is valid for one year and may be obtained for a fee of R10.00 from the relevant traffic department.

3. Passenger Transport Undertaking Licence

A passenger transport undertaking licence is required for taxi operation. This licence is issued by the local authority in whose area of jurisdiction the business operates. The name of the vehicle owner, the make of vehicle, the vehicle registration number, where the vehicle will operate and how many passengers the

OPERATOR

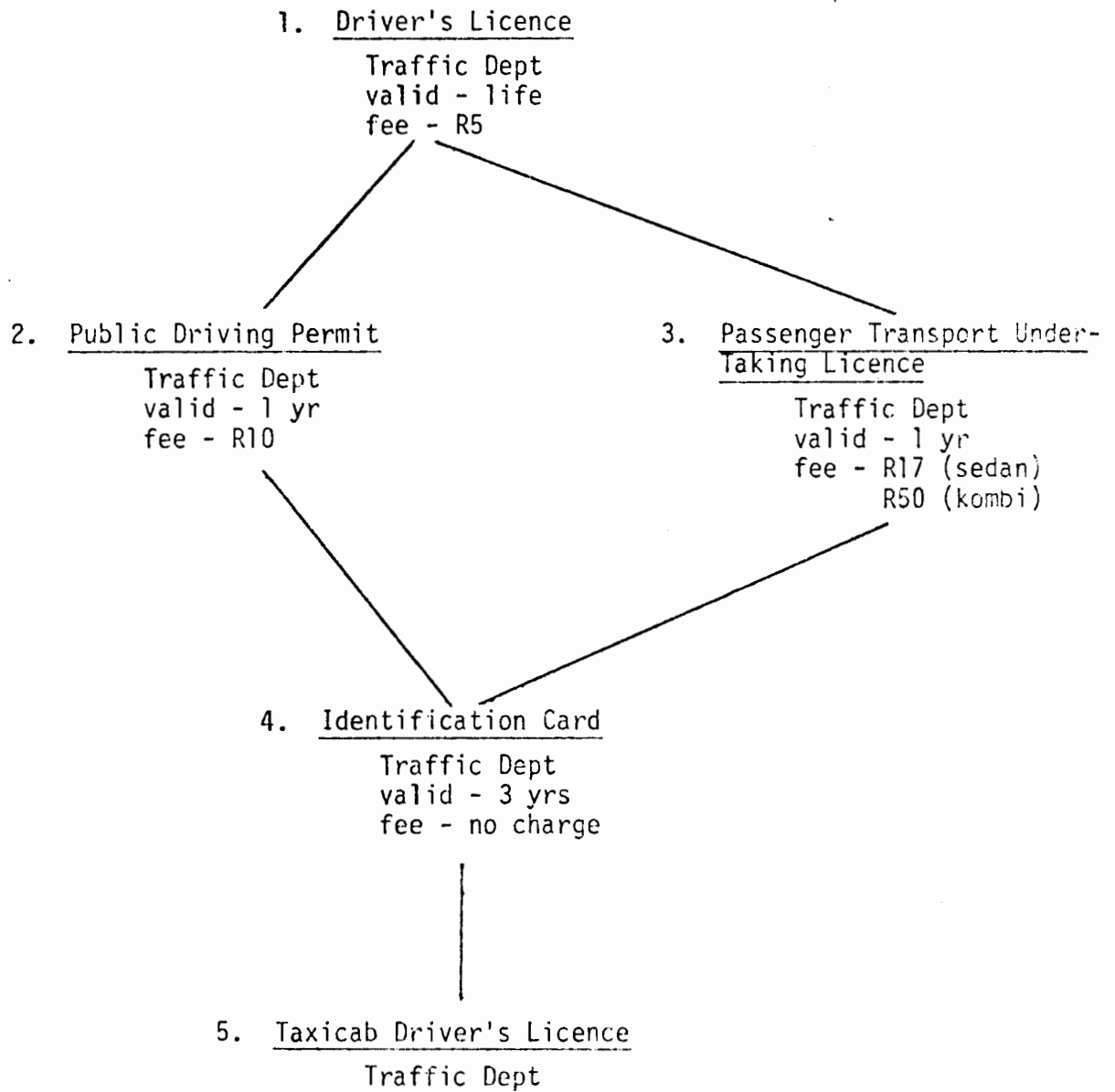


Figure 3.2 Licence and Permit Requirements for Taxi Operation - Operator

vehicle will convey are all required information. The cost of obtaining a passenger transport undertaking licence is R50 per annum for a kombi and R17 per annum for a sedan taxi.

4. Identification Card

This merely identifies the taxi operator and must be displayed in the taxi so that it is visible to all passengers. An identification card is issued for a three year period with no fee attached.

5. Taxicab Driver's Licence

This licence certifies that the driver knows the geographical details of the area in which he operates. Among taxi drivers it is known as a 'topo test'. Taxi drivers in Johannesburg and Durban are required to have this special taxicab driver's licence, whereas drivers in other metropolitan areas, such as Cape Town, require no such licence.

3.1.2 Taxi Vehicle Licence and Permit Requirements

Once a vehicle is acquired, the taxi operator must be in possession of the following items (Figure 3.3):

1. Vehicle Roadworthiness Certificate

This certificate is issued by the traffic department for second-hand vehicles upon initial purchase by an individual or group. It establishes that, upon purchase, the vehicle is in a 'roadworthy' condition. The certificate is valid for the duration of ownership

VEHICLE

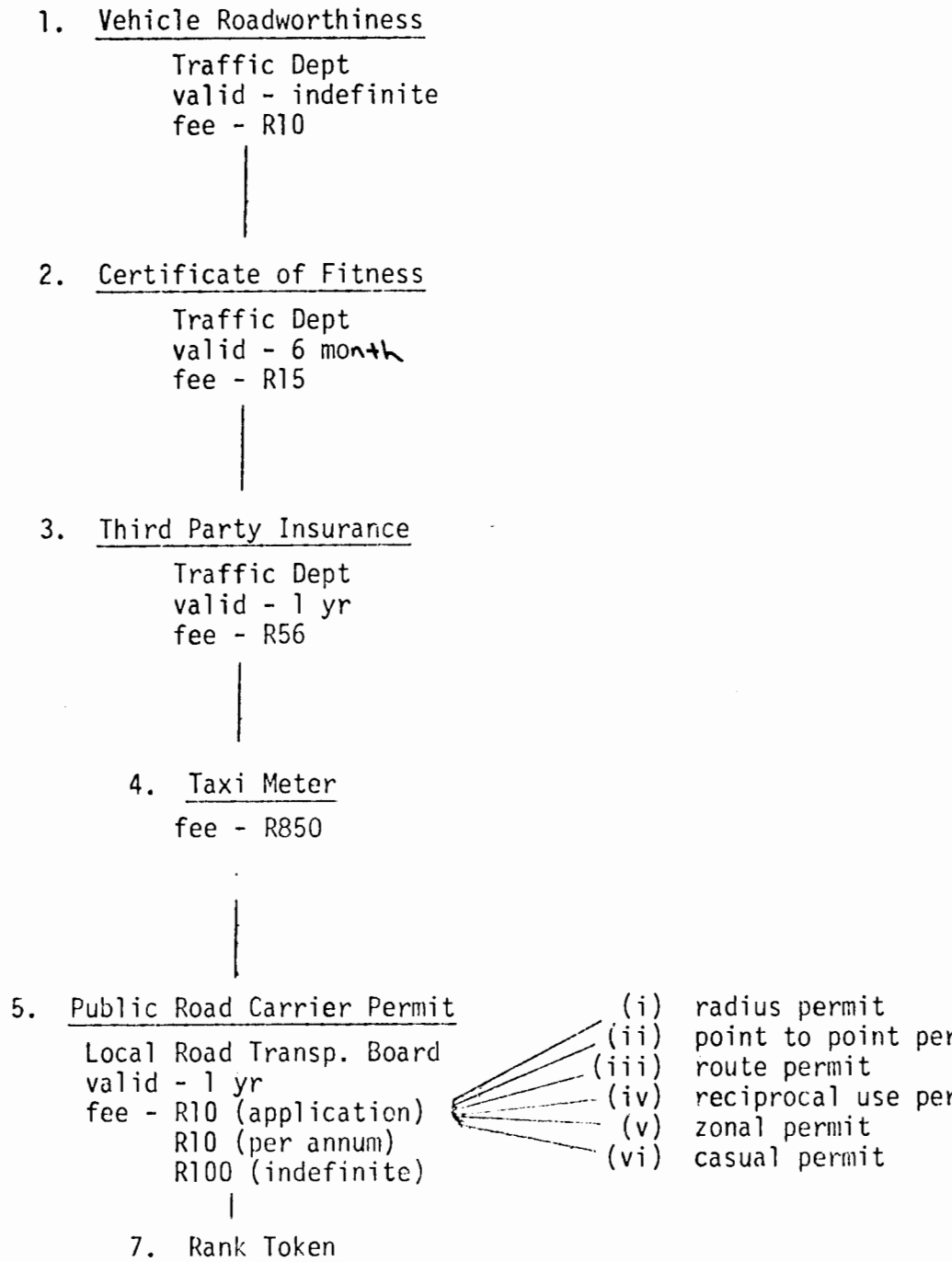


Figure 3.3 Licence and Permit Requirements for Taxi Operation - Vehicle

by the purchaser and may be obtained for a fee of R10.

2. Certificate of Fitness

A certificate of fitness is granted from the traffic department to certify that the vehicle is in good and operational condition. This certificate is issued after a thorough physical examination of the vehicle in question. The cost of the certificate is R15 and is valid for six months. It can be renewed at six month intervals, but only after a complete re-examination of the vehicle.

3. Third Party Insurance

Special third party insurance is required of each operator in order to operate a public service vehicle. It is valid for a period of twelve months at a cost of R56.

4. Taxi Meter

A taxi meter is required of most city authorities. The cost is approximately R850 for a new meter. The meter is checked by-annually when the vehicle is brought to the traffic department for the Certificate of Fitness renewal.

5. Public Road Carrier Permit

Any person who wishes to undertake the operation of a taxi must apply to the Local Road Transportation Board for a public road carrier permit authorizing him to do so (Road Transportation Act, 1977, No 74 of 1977, Section 12). The public road carrier permit is the only document issued by the Local Road Transportation Board.

The purpose of this permit is five-fold. It registers (i) the owner and (ii) the vehicle, (iii) identifies the purpose of the permit, (iv) the area of operation and (v) gives the justification for the provision of the proposed service. The application is submitted to the Local Road Transportation Board with a non-refundable fee of R10.

A public road carrier permit may be issued if the regulations in Section 15 of the Road Transportation Act of 1977 are satisfied. There is no set numerical limit to taxi operations which may exist in any area. However, matters taken into consideration when a public permit application is submitted have certain value judgments attached which may influence the decision of whether or not to issue a permit. For example, Section 15 (2) of the Road Transportation Act uses such phrases as 'not satisfactory', 'in the public interest', 'to provide in a manner satisfactory to the public'. If the applicant applies for a permit in an area already served by transportation facilities, the burden rests on him to prove that existing services are lacking and/or unsatisfactory and that by operating his own taxi, the current problems may be ameliorated.

The Local Road Transportation Board has the final say about entry into the taxi market. However, in order to make others aware that an application for a permit has been made, details are published in the Government Gazette where objections or support for the application may be voiced to the Local Road Transportation Board. As a result the decision of the Local Road Transportation Board may be influenced by the opinions of others, in particular the local bus

operators. For example, since January 1983 City Tramways has opposed 297 permit applications in the Cape Town area alone (City Tramways, 1983, 2). Individually taxi operators who already possess public road carrier permits may step in to limit the number of licences issued. In force, when operators join together to form associations such as South African Black Taxi Association (SABTA) and in the Western Cape, Western Cape Passenger Transport Services (WCPTS) and Lagunya, they may act as a powerful lobby and could block the issue of permits to other operators. Once the applicant gets the permit, it is valid for a twelve month period from June through May and may be renewed annually for a fee of R10. Occasionally a permit is issued for an indefinite period at a cost of R100. It is this permit which also states that the maximum passenger capacity of eight may be carried by the kombi taxi. In addition, the public road carrier permit defines the limits of operation and type of trip which may be undertaken. The conditions attached to the public road carrier permit vary between metropolitan areas as different types of distance controls are specified by the Local Road Transportation Board.

The six distance controls regulating taxi operation in South Africa include:

(i) Radius Permit

The radius permit allows a taxi to wait for passengers at one designated rank only and to operate within a specific radius of that rank. Most radius permits are issued for a radius of five to ten kilometres. The radius permit is the most commonly issued distance control and does not allow for two ended pick up or drop off operation.

(ii) Point to Point Permit

Issued a point to point permit, the taxi is permitted to operate between two specific locations. In addition distance radius is stipulated within which the taxi must remain. Usually this distance is between five and ten kilometres.

(iii) Route Permit

With a route permit the operator is allowed to operate along a specific route only and may not deviate from that route. This permit is not issued with a designated distance condition but rather with a designated route to be followed. The route permit is line haul in nature and allows for two ended pick up and drop off. This permit is also referred to as a dual permit.

(iv) Reciprocal Use Permit

Given the reciprocal use permit the operator is given authority to use more than one specified taxi rank. He need not follow a specific route.

(v) Zonal Permit

The zonal permit overcomes many of the problems of the radius and other above-mentioned permits. Zonal control allows a taxi to operate within a designated zone and permits it to use any of the official ranks within that zone. Such a permit has better operational attributes than the radius control, point to point or route permits in that different ranks may be used and the zone of coverage is greater than that area stipulated by the other existing permits. Zonal permits are only issued in

Johannesburg and Pretoria at present.

(vi) Casual Permit

A casual permit may be given in combination with other of the above mentioned permits. A casual permit is usually issued for a radius of thirty-five kilometres and may be used in occasional situations. The driver merely displays this permit in his vehicle and conducts the intended journey.

The public road carrier permit, once issued, is solely for the use of the taxi owner and/or drivers which he employs. It may not be hired out to other owners or drivers.

6. Taxi Registration Licence

Upon being issued a public road carrier permit, the operator must register the vehicle as a taxi. This may be done at the traffic department for a one-time registration fee of R20.

7. Rank Token

After an operator has obtained a public road carrier permit, a rank token is issued. This designates the rank from which he may operate. Throughout most parts of the country the rank token varies in price from R100 for a prime location, to a nominal fee of R6.

Upon receipt of a public road carrier permit and being in possession of all the other necessary documents, the taxi operator is entitled to use a given rank and operate the vehicle according to permit regulations.

Legally, unless taxi operators have a zonal or reciprocal use permit, they are not allowed to pick up random passengers from other ranks even though they may be within the given radius as stated on their public road carrier permit. This ruling cannot be enforced given the small traffic department resources and most taxi operators, having dropped off passengers at a taxi rank other than their own will pick up any waiting passengers from that rank and deposit them at a given location.

3.1.3 Controlling Bodies for Taxi operation

Local traffic departments function as the major controlling bodies for taxi operations. The work force of most local traffic departments involved in taxi supervision is minute. In the major metropolitan areas of the country for example, only 1% to 5% of any traffic department's total manpower resources are allocated to controlling taxis (Hawkins, Hawkins and Osborne, 1982, 64). In Cape Town, the City Council Traffic Department has a taxi division which includes one inspector and five officers. These six individuals are responsible for the supervision of the 390 taxis under the jurisdiction of the City Council.

Because of the lack of manpower available to regulate and control taxi operations, authorities tend to monitor only the most obvious infringements of the law. The 1983 breakdown of the 3 210 charges made against taxi operators by the Cape Town City Council Traffic Department shows the most common offence (36% of the total) with which taxi operators were charged is overloading (Visser, 14 March, 1984). Details for the first six months of 1984 reveal a similar pattern of offences when by far the

highest proportion of taxi violations were for overloading (44.4%). In general the surveillance of taxi operations reflects the very low ratio between enforcement officers to operating taxis and therefore is usually carried out by means of road blocks. At road blocks checks are made for outstanding warrants and pirate operators are noted and fined. Most traffic departments periodically conduct a blitz against specific offences. Each taxi is carefully checked and fines are issued for the non-possession of a valid public driving permit and/or identification card (the second most common offence), failure to display a rank token, operation of a dirty taxi and vehicle unroadworthiness. Traffic departments also periodically conduct a blitz against specific offences and an unusually high number of offences of a particular type are noted in that month, e.g. plying for hire in February and rank tokens in April (Table 3.2).

A taxi which enters the market and operates without the necessary public road carrier permit operates illegally and is commonly referred to as a 'pirate taxi'. Such taxis exist on an increasing scale in South Africa. At present there are an estimated 60 000 illegal, or unlicensed taxi operators (Financial Mail, 27 January 1984a). The extremely high number of illegal operators is due to three factors. Firstly, given the locational disadvantage and high reliance on mass transport of many individuals, there is a large demand for a mode of transport which alleviates the overload on buses and trains. Secondly, given the extent of required licences and permits, legal entry into the taxi market is strictly limited despite the obvious demand for taxis. And finally, given the shortage of enforcement officials, the probability of operating a pirate taxi and not getting fined is in the favour of the

TABLE 3.2

TRAFFIC OFFENCES (JAN - JUNE 1984)

Cape Town City Council

	Jan	Feb	Mar	Apr	May	Jun	Avg	Per cent of Total Offences
Obvious								
Overloading	103	133	107	78	136	111	111,3	44,4%
Plying for Hire	6	26	10	12	3	15	12,0	4,8%
Warrant and Licence Violations								
Licences (Public Driving Permit, Identification Card)	14	45	39	61	49	35	40,5	16,1%
Arrests/Warrants	12	26	41	11	81	65	39,3	15,7%
Certificate of Fitness	5	5	7	13	17	12	9,8	3,9%
Rank Token	3	-	1	17	3	3	4,5	1,8%
Vehicle Standards								
Unroadworthiness	16	12	14	15	21	29	17,8	7,1%
Dirty Taxi	2	2	12	8	2	6	5,3	2,1%
Taxi Meter	3	5	3	4	-	2	2,8	1,1%
Pirate Taxi	8	8	10	4	10	5	7,5	3,0%
TOTAL	172	262	244	223	322	283	250,8	100,0%

Source: Cape Town City Council Traffic Department

operator, e.g. an average figure of only 7,5 pirate taxi prosecutions per month is stated by the Cape Town City Council Traffic Department.

A method recently introduced to control pirate taxi operations has been by way of a deterrent. In 1983, the Road Transportation Act (No. 8 of 1983) was amended so as to allow for stricter action against pirate taxis. The penalty for operating a pirate taxi was increased from a fine of R500 for the first four convictions and vehicle confiscation upon the fifth conviction. Under present legislation the first three offences for pirate operation, i.e. having no public road carrier permit, brings a maximum penalty of R10 000 or two years in prison. In addition, the magistrate has the authority to confiscate the vehicle. Upon the third conviction for pirate taxi operation, the court is obliged to order the confiscation of the motor vehicle. With such drastic penalties for pirate operation now on the statute books high stakes are involved in the pirate taxi gamble. Yet, adequate supervision and regulation is hardly possible given the traffic department's lack of manpower compared with the number of taxi operators. In the Cape Town City Council Area the ratio of traffic officer to registered taxis is 1 to 65.

The role of the taxi is so important a component of the transportation system in South Africa, especially the black taxi with regard to its role in the lives of commuters, that operators have grouped together to form associations. Established in 1981 and having numerous locally based affiliates, the Southern African Black Taxi Association is the largest taxi organization functioning in South Africa. Its membership being primarily african, SABTA is the national platform for taxi

operators to voice their opinions regarding issues relating to taxis and taxi service. Two primary requests SABTA has put forward to the Government, regard an authorized passenger capacity increase to ten for kombi vehicles and demand for subsidy as received by other public serving transportation modes.

It becomes clear from the above that the taxi forms an important part of the transportation modal structure, its importance being recognized with respect to various bylaws and rules for operation, yet not appreciated by many researchers in the field.

3.2 Studies of Intermediate Transport in South Africa

Transport studies in South Africa have largely been the preserve of engineers. The South African Institute of Civil Engineers publishes a monthly journal, The Civil Engineer in South Africa, which includes transport articles specifically in the context of engineering practice. Articles of this nature tend to concentrate on highway design, construction and maintenance. The official publication of the Chartered Institute of Transport, in their journal Transport and Traffic covers topics of transport, transport economics, traffic control and administration. South African Transport includes all aspects of transport in South Africa and overseas, namely road, rail, sea and air transport.

The National Institute for Transport and Road Research is the major research unit in the country which deals specifically with transport related issues. Under its authority are published a variety of technical

reports and research bulletins including Technical Recommendations for Highways (TRH), Technical Methods for Highways (TMH) and Transport and Road Digest (TRD). The Institute's research is applied and is directed at solving practical problems by providing improved techniques and methods (NITRR,1980). The primary concern has been with issues of road design, construction, maintenance and safety. However, in the mid-1970's the NITRR recognized the urban transport problem as a 'people problem'. This recognition in fact, led to the appointment of a government commission of inquiry into urban transport, i.e. the Driessen Commission (Burton and Kuhn, 1977). Since that time NITRR research has also been directed at issues of transport service problems (congestion and cost of service provision), activities directly or indirectly affecting transport (urbanization, increased car ownership, urban sprawl, peak traffic periods) and the general impact of transport on society and the environment.

Recently, a study by Falk (1979) under the auspices of the NITRR has provided a brief summary of jitney type operations outside South Africa, then concentrated on existing legislation affecting such services within this country. His particular emphasis is on intermediate transport implemented for the benefit of white people, i.e. car pools, park-and-ride and lift clubs. This has been followed by a series of reports regarding black commuter attitudes in Pretoria (Morris, 1983, 1982a, 1982b; van der Reis, 1983, 1982). However, apart from an introductory report by Oosthuizen (1984) on transportation in Rustenburg, none of these latter projects have dealt specifically with intermediate transport or with the taxi in particular. In Oosthuizen's study 456 randomly selected kombi taxi and bus users are compared with regard to socio-economic characteristics, modal split and modal preference. Oosthuizen provides a brief overview

of passenger characteristics and finds that kombi taxis are preferred mainly because of their speed and quality of service and concludes that support for kombi taxis is part of an increasing trend towards private transport among black commuters and shoppers. Nevertheless, three major transportation studies have been conducted and they specifically focus on the taxi as a mode of transport in metropolitan areas.

Kay on Luk (1980) produced the first comprehensive study of black taxi service. The work is essentially a descriptive analysis of Soweto and its related transportation network and includes taxi service characteristics, taxi regulation, entry control, operating costs, private taxis and passenger characteristics. Luk, providing insight into the black taxi business, includes a policy framework consisting of recommendations and innovations to alleviate existing shortcomings of the taxi system. As it is primarily a case study, little national or international perspective is provided.

An unpublished report by Stroud (1981) to the Cape Town City Council focuses on kombi taxis and covers a range of themes related to intermediate transport. As Stroud's primary concern is with the international experience of intermediate modes of transport, especially its prevalence in developing countries, he does not expand upon the analysis of the local taxi operations. In his conclusions Stroud suggests the incorporation of the idea for co-ordination of transport services on a metropolitan basis.

A third report by Hawkins, Hawkins and Osborne (1982) on taxi operation in South Africa was prepared especially for the Southern African Black

Taxi Association (SABTA). This report is most comprehensive and provides insight into fundamental aspects of black taxi operation in the five major metropolitan areas of South Africa. The report has also given rise to two other papers on the shared taxi as a means of appropriate transport for developing nations (Crook, Jones and Jones, 1984; Crook and Jones, 1983). The primary goal of the original study was to propose measures that would improve the operation and control of black taxi services in South Africa. Unique to this report is its national scope of coverage and the fact that the necessity for more research is highlighted if a better understanding of the demand for black taxis is to be obtained and more effective planning for that demand is to be achieved. Problems and issues presented in the report are similar to those addressed by Luk and Stroud, i.e. black taxi service characteristics and the regulation of black taxis, but they are able to conclude that the current role of the black taxi in the South African urban transport scene is one which provides a higher level of service with a proportionally higher fare structure than the bus or train.

The recognition of black taxis in the South African transportation system and the role they play in the functioning of that system has only recently been realized by the State. In particular, three Government Reports have given attention to the expanding use of the taxi as a mode of accessibility and thus the necessity for its regulation and control.

In 1969 the Marais Report was completed (Marais, 1969). The purpose of this inquiry was to investigate and report upon the role and co-ordination of the different forms of transportation present in the Republic. Given the date of publication before the wave of the kombi taxi phenomenon in

South Africa, no specific reference was made to the kombi as a taxi. Instead, discussion of the taxi industry concentrated on sedan taxis. The review of black taxi service concludes with a recommendation to relax the restrictions regarding authorized number of taxis in particular areas. The condition of this recommendation however, was that the taxi cater only for the causal, not routine passenger. Such a recommendation severely restricts and limits the commuter's modal choice. Another Government inquiry, the Driessen Report, was published in 1975 (Driessen, 1975). The intention of this report was to investigate urban transport in the Republic. One section in particular, Chapter Five, made reference to existing taxi services in South Africa. The different operating characteristics of both white owned and non white owned sedan taxis were recognized. Recommendations of the report included explicit recognition to taxi services in the formulation of urban transport plans and regarded the expansion of taxi services as a necessary supplement to the development of a more adequate mass transport system. In June, 1983, with the publication of a Government commission report into bus passenger transport, public attention was again brought to the issue of taxi service, in particular the kombi taxi (Welgemoed, 1983). Recommended by the Welgemoed Commission was a plan to gradually phase out the 'present legalized eight passenger vehicles', i.e. kombi taxis, over a four year period. (Welgemoed, 1983, 45, R36). This recommendation created an uproar, and extensive debates between supporters and opponents of the kombi taxi resulted.

In the fifteen years which have passed since the publication of the Marais Report it becomes apparent that the Government's view toward the black taxi as a form of intermediate transport has altered from one

which seeks to co-ordinate transport services constructively, i.e. bus rail and taxi, to one which views the taxi industry with hostility and threat of competition. Thus, as a taxi, the kombi has emerged to a degree of prominence among non white commuters so as to intimidate the national policies of transportation groups. These issues have been picked up in the Financial Mail which published a spate of articles between January 1984 and March 1984 dealing with the kombi taxi and focusing on the small business venture aspects of taxi operation (Financial Mail, 20 January, 1984). Particular attention was paid to comments and criticisms posed from black taxi leaders (Financial Mail, 27 January, 1984a) and business (Financial Mail, 10 February 1984).

From the research which has been conducted it can be concluded that relatively little analysis has been done on the role of intermediate transport and of the kombi as a taxi in South Africa. The work which has been carried out has been almost exclusively descriptive in nature. Lacking in all of the studies is a thorough examination and identification of the underlying forces generating the need for the kombi as a mode of intermediate transport. Also lacking is a geographical perspective of spatial relationships in terms of distance and proximity. Spatial associations are of prime importance in any type of mobility system since it is these relationships which ultimately produce the demand for mobility.

In order to analyze the role of the taxi and the service provided to a particular segment of the community, attention will focus on the kombi taxi in particular and its functioning in the Greater Cape Town area,

i.e. Cape Town Metropolitan Transport Area. Having already presented background information on both the particular spatial characteristics of the South African city pattern and the need for intermediate transport to alleviate unsatisfied mobility demands, the following chapter will deal with the transport network and organization and control of taxi services in Cape Town before considering aspects of kombi taxi operation from the perspective of both the operator and the passenger.

CHAPTER FOUR

THE TAXI IN THE CAPE TOWN METROPOLITAN TRANSPORT AREA

To better understand the role of taxis (especially the kombi taxi) in the Cape Town Metropolitan Transport Area, the taxi service must be seen in light of the existing transportation system which is based on train, bus and automobile as dominant modes. The Cape Town Metropolitan Transport Area is the major focus of economic interaction in the Cape and the role transportation plays in supporting that economic base through commuting activity is of great importance. Commuting activity is structured around three premises: poverty, housing and employment. Firstly is the premise of poverty. Given that 67% of the population are non white and therefore low earners, combined with the economic difficulties which the country is currently undergoing, a situation is revealed in which a great number of the population find it outside their financial means to own and operate a private motor vehicle. In fact, only 21% of the coloured population and 2% of the african population residing in the Cape Town Metropolitan Transport

Area own cars because the initial capital outlay is just too great (Cape Town City Council, 1982b, Diagram 12). The second premise which structures transportation activity is housing and location of residential areas. Approximately 188 500 of the lowest income individuals live in sub-economic housing schemes which tend to be located furthest from centres of economic activity (Figure 1.2). This dispersed residential pattern of non whites on the Cape Flats gives rise to a dependence on some form of transportation for journey to work. Thus, in the study area designated^{wf} the Cape Flats Commuter Study 61% of the population commute by public transport (Cape Town City Council, 1983b, 3). As a third premise, employment centres are scattered throughout the metropolitan area with some local concentrations in Paarden Island and Bellville South (Figure 1.2). The location of these industrial areas is not sufficient to stabilize transportation demands and warrant the development of a large scale, highly specialized commuter service. Instead, the established transportation network is of a conventional sort and the many individuals who travel to work by mass transport in the Cape Town Metropolitan Transport Area are faced every day with problems of overcrowding, modal changes and unreliable service typically associated with overloaded transport systems.

4.1 Mass Transport Services

Train, bus, private transport, the sedan and kombi taxi make up the Cape Town metropolitan transportation network (Cape Town City Council, 1983a). The taxi, as an intermediate form of transport, falls between mass transport and individually owned and operated modes and fills a

clear demand for mobility. Yet, the significance of the taxi is not measurable simply in terms of speed, efficiency, time and cost. Rather, its significance may be realized by the necessity of the service it provides both to the commuter and to the proper functioning of the transportation system.

The commuter rail service which has developed along a spinal pattern is owned and operated by the South African Railways (Figure 4.1). The main lines serving the Cape Town Metropolitan Transport Area merge at the Salt River Junction where commuters may change trains, thus avoiding the central railway station in town. One rail line passes through the white residential areas and operates along the base of the mountain serving the Southern Suburbs. The Cape Flats Line forms an offshoot of the Southern Suburbs Line and today separates coloured from white residential areas. The three radial lines which extend outward include the Mitchells Plain Line (passing through coloured and african residential areas), the Strand Line (passing through white and coloured residential areas) and the Stellenbosch Line (passing predominantly through white residential areas and industrial areas). The Strand and Stellenbosch Lines merge at the Bellville Junction. A sixth line, stretching northward towards Atlantis, is not yet in full commuter serving operation. Along these rail lines are the stations, some of which serve as modal interchange points where bus terminals, parking facilities and taxi ranks are located.

Trains are segregated in that they have both white and non white coaches. The non white coaches are divided between first and third class, the price gap between these two classes being quite substantial.

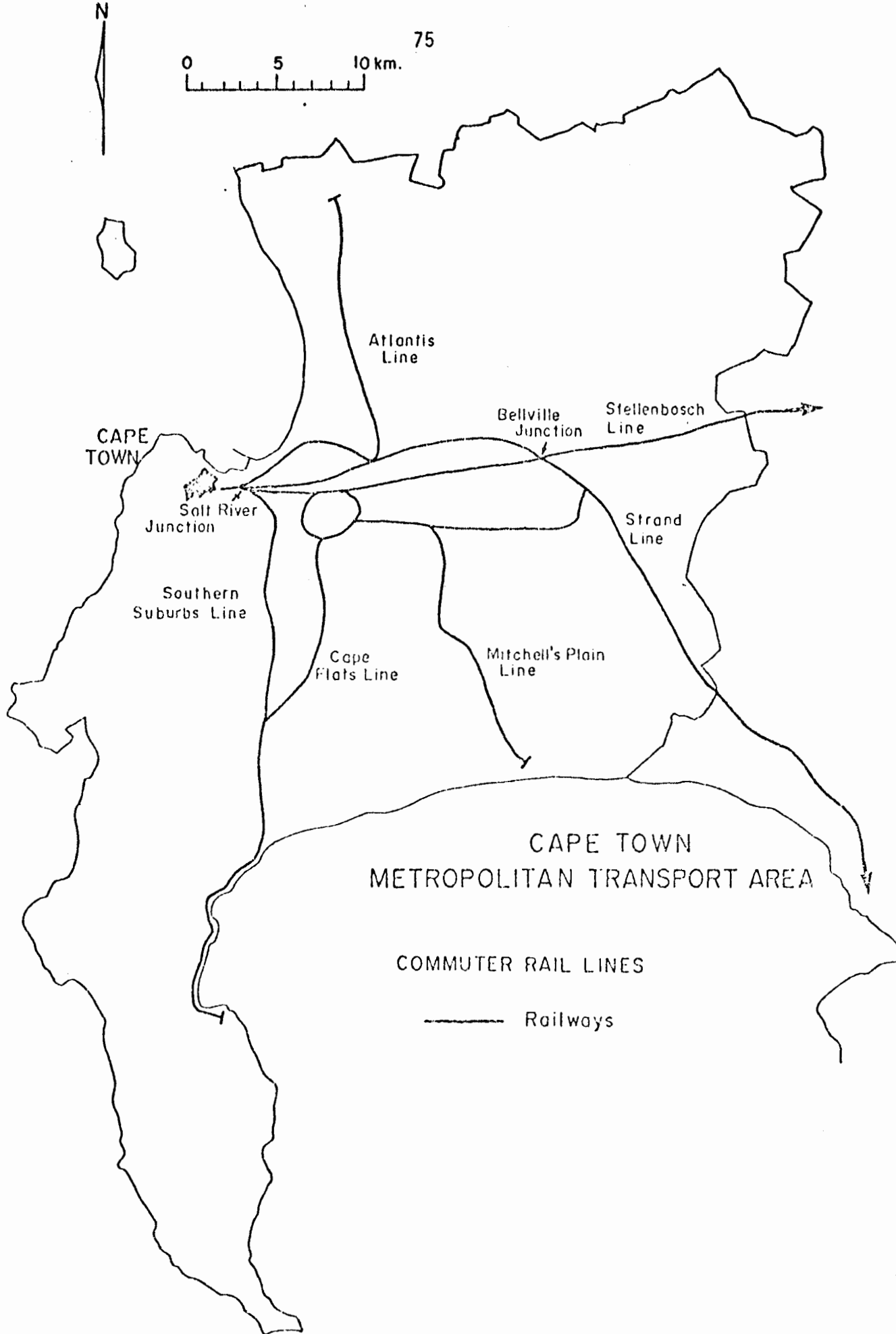


Figure 4.1

For example, a non white first class weekly between Claremont and Retreat costs R4,20, whereas the same journey when travelling third class costs R1,50. The high fares associated with first class journeys result in the majority of commuters purchasing third class tickets and therefore coaches become extremely overcrowded, especially at peak travelling times, thus leading to an unsafe commuting environment, with the most common crimes being assaults and robberies (Ludski, 1984).

In terms of available conventional mass transportation, people travelling by road have no mobility choice other than the diesel buses. City Tramways, the bus company based in Cape Town, originates its service from one of four depots, Woodstock (250 vehicles), Diep River (90 vehicles), Maitland (100 vehicles) and Klipfontein (100 vehicles). However, the Maitland and Klipfontein depots are to be phased out upon completion of the airport depot sometime in 1984 (Krause, 17 Nov 1983) (Figure 4.2). As a monopoly bus service City Tramways virtually controls public road transport in Cape Town since, according to the Road Transportation Act of 1977, no other bus company may open up a route on a route already served. Such legislation virtually guarantees monopoly service. The network is such that most bus services link residential and employment locations or residential areas with rail lines. Major bus terminals like those at Mowbray, Claremont and Wynberg, are therefore situated in close proximity to rail stations.

Unlike the train service, the bus service does not operate on a system of coach classes. Instead, all passengers pay the same rate. The exception in fares is the multiple journey clipcard. This is a sub-

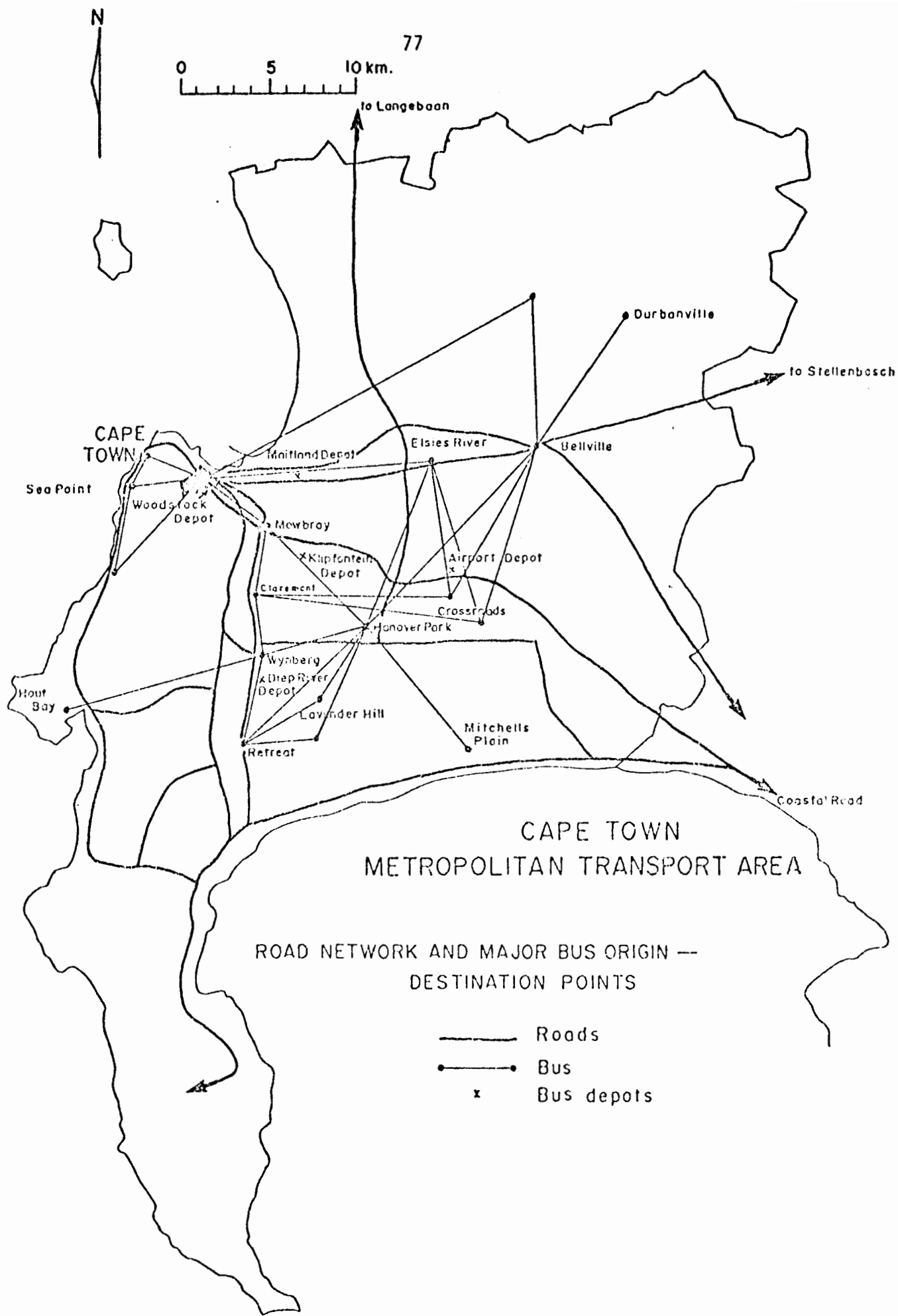


Figure 4.2

sidized card which commuters may utilize within a given time period for a given number of trips, over a specific route at a rate reduction. Thus, a ten journey clipcard purchased for R3 means that each of ten journeys costs the bus commuter 30 cents. The price difference between the subsidized and single journey rates is quite substantial (Table 4.1). For example, a bus commuter travelling from Mowbray to Langa pays 30 cents at the subsidized rate and 47 cents at the unsubsidized single journey rate. Clipcards are advantageous to the individual who has a regular routine of commuting to and from the same location daily. Commuting by bus, therefore, is not so much associated with overcrowding and crime as with the high cost of bus travel. Also related to bus transport are the perceived dissatisfactions of infrequent and unreliable service often a result of timetable irregularities associated with road congestion. In addition, if scarce demand becomes associated with a specific route, the bus schedule may alter so that on any given day certain trips on that route are omitted. The bus will again operate trips on the original route once sufficient demand calls for reinstatement (Human Awareness, 1982).

Comprised of two interlocking networks, the mass transport system in the Cape Town Metropolitan Transport Area is heavily used and the commuting experience is fraught with both actual and perceived problems, e.g. overcrowding, crime, high cost, congestion and infrequent and unreliable service (Western, 1981). Given the interdependent relationship of bus and rail services, modal changes are built into the system. The necessity for modal change highlights the interchange points and places stress upon commuters as they attempt to match schedules and

TABLE 4.1

BUS AND KOMBI TAXI FARES

<u>ROUTE</u>	<u>BUS</u>		<u>KOMBI</u>
	Single Journey (cents)	Clipcard Rate (cents)	(cents)
Mowbray-Langa	47	30 (3,00)	40
Guguletu-Langa	40	34 (3,40)	50
Nyanga-Langa	40	34 (3,40)	50
Wynberg-Grassy Pk/Lotus River	50	30 (3,00)	40
Wynberg-Parkwood	50	30 (3,00)	30
Retreat-Blue Route Centre	63	22 (2,20)	60
Guguletu-Claremont	55	34 (3,40)	60
Nyanga-Claremont	55	34 (3,40)	60
Claremont-Crossroads	58	33 (3,30)	60
Parow-Uitsig	55	30 (3,00)	25

move between modes. This in turn gives rise to a strong latent demand for some sort of alternative form of transport. Further compounding the difficulties associated with high transport demand levels and modal changes are the poverty and location disadvantages of the majority of commuters which together make private automobile ownership virtually beyond their means. These factors have created the opportunity for the emergence of an intermediate form of transport - the taxi. Given the high demand it is not surprising that the kombi taxi should emerge as the dominant alternative mode in which transport costs can be shared and relative comfort and convenience.

4.2 Taxi Services

Individually, kombi taxi service operates within a smaller range than white taxi services since kombi taxis are spatially restricted by radial distance permits of normally five kilometres. Given the total non white population of the Cape Town Metropolitan Transport Area as 1 011 354 and the total registered kombi taxis as 428, there are approximately 0,4 kombi taxis per 1 000 population. A further breakdown by colour reveals a ratio of 0,44 kombi taxis per 1 000 coloured population and 0,35 kombi taxis per 1 000 african population. In addition to the kombi taxi, there are also four major white taxi companies, all operating sedan type vehicles. Given the total white population of the Cape Town Metropolitan Transport Area as 500 386 and the total white registered sedan taxis as 173, there are 0,33 taxis per 1 000 population.

Through the years the taxi service in Cape Town has expanded, developed and evolved from an early concentration on the sedan type vehicle into the current service overwhelmingly dominated by the popular kombi vehicle. The sedan taxi service is generally radio controlled and fares are charged according to a metered rate, whereas kombi taxi service is more commonly a short distance (two to eight kilometres) line haul type operation with a set fare charged per passenger for the particular route. All such taxis are obliged to be fitted with a meter. The only model available, the Tinzell-12 Argo, is imported from Germany and costs R852. Used meters may be purchased for a lower price but, as one taxi driver put it, "They are like crawfish they are so rare." The irony of this expensive gadget lies in its disuse as far as kombi taxis are concerned. Black taxi drivers refer to these meters as 'dummy meters' since they exist as a formality of legal regulation and are seldom actually used. Nevertheless, taxi meters must be checked for accuracy every six months. The City Council Traffic Department has measured a one kilometre distance which the taxi meter must accurately register in terms of cost/distance ratio before a renewed certificate of fitness is issued. If the vehicle passes the test, a seal is attached to the meter. A valid seal is crucial since it serves as proof that the meter is in proper working order. If a traffic officer discovers an unsealed meter, the driver is fined and thereafter operates illegally until he acquires a new meter seal.

4.2.1 Control

Taxis in the Cape Town Metropolitan Transport Area fall under the jurisdiction of fourteen different municipal authorities, viz. Milnerton, Bellville, Parow, Kraaifontein, Brackenfell, Durbanvill, Kuils River, Goodwood, Pinelands, Fish Hoek, Simonstown, Cape Town City Council, Cape Divisional Council and the Western Cape Administration Board (Figure 1). The two authorities which control the largest geographic areas are the Cape Town City and Divisional Council Traffic Departments, though the latter includes some areas that are not yet densely settled or built-up. Most of the 805 757 coloured people live in residential areas situated within the jurisdiction of either the City Council, the Divisional Council or Kuilsriver. The authority of the Western Cape Administration Board is confined to the townships of Langa, Nyanga, Guguletu, Crossroads, New Crossroads and Khayelitsha where approximately 205 600 africans live. Within each municipal authority the taxis operate from specific ranks, permission for the use of which is issued by the relevant municipalities upon receipt of a public road carrier permit from the Local Road Transportation Board. The number of authorized rank permits in the Cape Town Metropolitan Transport Area reflects the number of legal taxis serving the area (with the exception of the 43 intertownship taxis which operate without a fixed rank location).

As available rank permits define legal taxi operation, only a set number of taxis, 94% of which are based at designated ranks, officially serve the Cape Town Metropolitan Transport Area (Appendix 1). The City

Council issues 389 rank permits, the Divisional Council 123 and the Western Cape Administration Board 32, plus 43 intertownship permits for taxis which have no fixed rank. Combined, the remaining eleven Municipal authorities issue a total of 92 rank permits. Thus, 679 rank permits are issued for a total of 81 available ranks in the Cape Town Metropolitan Transport Area, an average of 8,4 rank permits per rank. Kombi taxis are located at 66 of these ranks. Of total ranks 36% provide parking space for between one and four kombi vehicles and 21% for between five and eight kombi vehicles. The actual rank situation reveals that some ranks are allocated substantially more taxis than other ranks (Figure 4.3). For example, one of the smallest ranks which maintains kombi taxis is in Mitchells Plain, officially only allowed one kombi taxi, while one of the largest ranks is that at Retreat Station where 30 kombis are based. Given the distribution of taxi ranks and the five kilometre distance permits issued to kombi taxis, the potential area covered by taxi operations encompasses a large proportion of the Cape Town Metropolitan Transport Area, with all of the coloured and african residential areas lying within the taxi service area (Figure 4.4).

The acquisition of a permit to use a rank, no matter its location, serves as a ticket of entry into the taxi trade. As one owner put it, "Once you have a permit, you's got it. It's gold." National regulations pertaining to race however affect the area where ranks may be obtained and therefore those racial groups served by the taxis. Of the rank permits assigned to whites, all are in designated white areas, the majority being situated in the Central Business District where 57% of those operating in the Cape Town Metropolitan Transport Area have

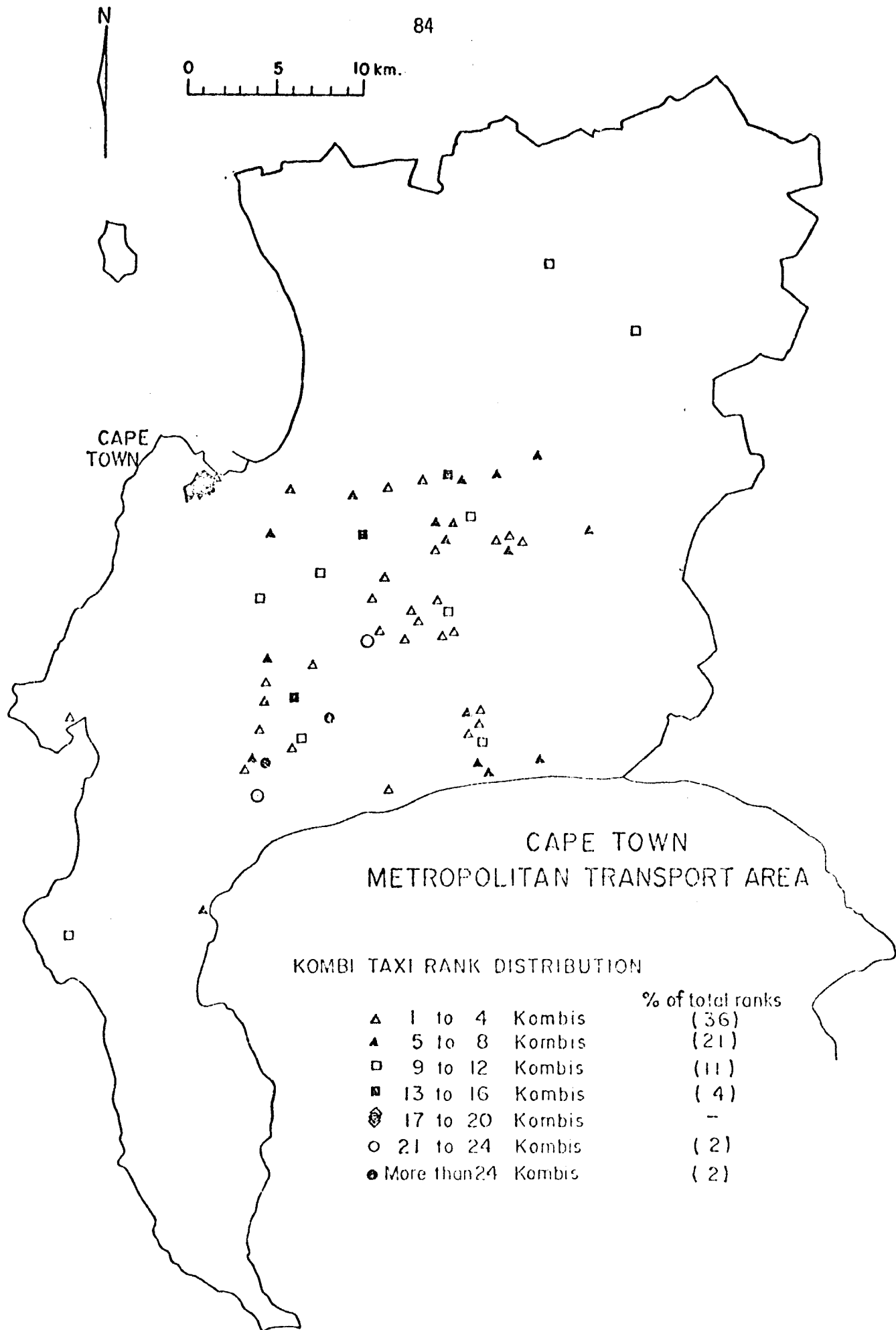


Figure 4.3

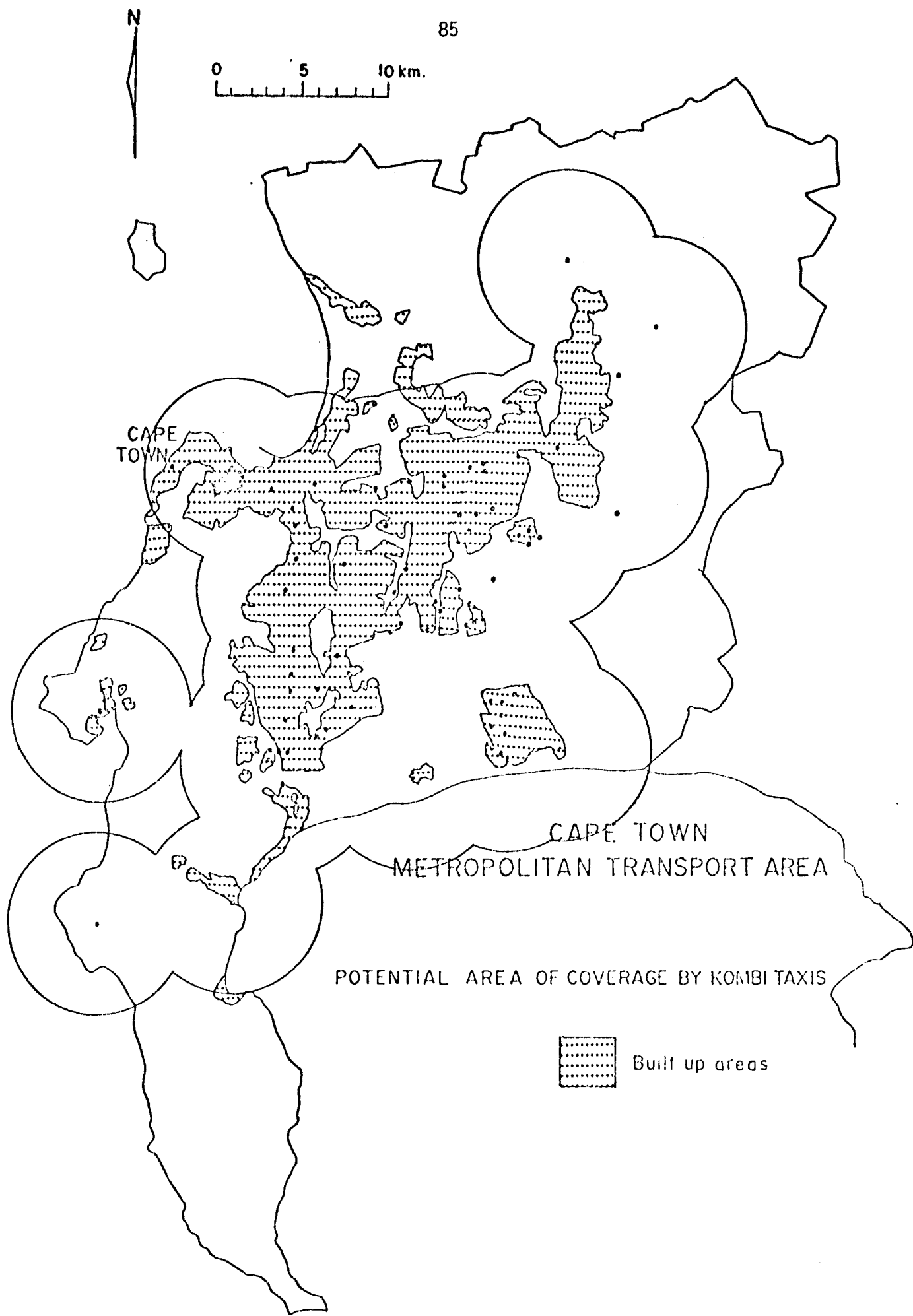


Figure 4.4

their base. The few permits issued to white owners of kombi taxis are nevertheless operated by coloured drivers and do not serve the white community. In fact, most of the taxis issued permits in the Cape Town Metropolitan Transport Area serve the black residential areas to the east of the Cape Flats Line and to the south of the Stellenbosch/Strand Line. The significance of the taxi service to the black commuters who rely essentially on the kombi taxi as a means of alternative transport is reflected by the fact that 84% (423) of all taxi permits issued to blacks are for kombi vehicles.

Although permits to operate from ranks in white areas may be issued to and used by coloured people this is not the case in the african areas. All Western Cape Administration Board permits for ranks located in the townships may only be utilized by african taxi drivers. Legally, an african cannot be issued a permit to operate from a rank in a white area, nor a coloured or white to operate a taxi in an african area. However, 2% (9) permits issued to coloured kombi owners are used to transport clients specifically to and from african areas. For example, at Mowbray Station all the rank permits are issued to coloured kombi taxi owners but all seven of the kombi taxis using the rank have african drivers since the taxis originating from Mowbray Station operate to and from Langa and only africans are allowed into the townships without an admission permit.

The scale of permit application can be used to illustrate the strength of the response to the perceived large demand for intermediate transport. Between June 1983 and May 1984 over six hundred public road carrier permit applications were made to the Local Road Transportation

Board with fewer than a dozen actually being granted (Mathee, 21 June 1984). Taxi operators claim that "they (Local Road Transportation Board) don't want to give us permits. We are fighting to get permits. The population is growing. We need more permits" and tend to blame the bus company for blocking application requests. The problem could be overcome by issuing additional permits, yet new permits have become scarce. In fact, resulting from the recommendations of the Welgemoed Commission, no new ranks are to be issued in the Cape Town Metropolitan Transport Area from 1984. However, at least one driver claims that the motivation for such a ruling comes from City Tramways, "City Tramways is jealous. They always complain to the traffic department to chase us".

4.2.2 Organization

The organization of taxi service in the Cape Town Metropolitan Transport Area exists at an official level and an unofficial level. Officially, taxis operate from specified ranks issued by the relevant local municipality. However, because of their limited number, public road carrier permits (colloquially referred to as 'ranks') have a value attached. Any rank shifting is unofficial since a permit issued to an individual is only to be used by that individual and/or his drivers at a specified rank location. However, contrary to the law, 'ranks' are hired out by individuals to whom the permit is legally issued. The cost of hiring a taxi 'rank' is, on average, R115 per week. On the other hand, a 'rank' may be sold on the black market to potential taxi operators. Black market 'rank' sales exemplify demand concentration since there is a direct relationship between increasing demand for

taxi services and black market sale price. The amount paid for a 'rank' has steadily increased. For example, one taxi owner purchased two 'ranks' in a township for R5 500 in 1975, in 1984 these two 'ranks' were sold for R10 000. A 'rank' in Elsies River recently sold for R8 000. Even at this price the owner claims that in less than a year he has broken even with his purchase.

Today a 'rank' generally sells for between R3 000 and R10 000, depending on its location which is a determining factor in the asking price for ranks. For example, an operator in Grassy Park has recently put one of his nine ranks on the market. Because of the high commuter demand, his asking price of R18 000 is not regarded as unreasonable. In contrast, in 1983 one prominent coloured taxi owner was offered five 'ranks' in the black townships at R5 000 per rank. He turned the offer down due to the difficulties of obtaining 'trustworthy african drivers' and his having little first hand knowledge of the township areas. In addition, as a non african he would not be allowed entry into the townships to monitor his african drivers at the ranks without the necessary admission permit from the Western Cape Administration Board. This illustrates the selectivity involved in both the buying and selling of taxi ranks.

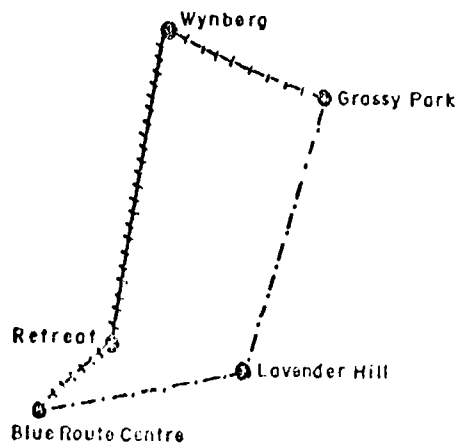
Apart from the hiring and selling of permits, rank trade offs in the form of rank exchange and rank creation occur in accordance with demand patterns. For example, some areas of population concentration and commuter demand are not served by taxi ranks to the extent that demand is satisfied. Illustrating this point is the rank at Ottery Station where three kombi taxis are officially based and which is a rank

'in name only'. Because of low demand, the kombis assigned this rank operate from alternative locations. A second example of rank trade off is at Mowbray Station on the Southern Suburbs Line. Officially there are seven taxis, however, during the peak evening periods Mowbray accommodates two to three times that number (Cape Town City Council, 1982a). During the morning peak, when commuters journey from residential locations to employment locations, the rank serves as a drop off point while during the evening peak the rank serves as a pick up point back to residential locations. Thus, the demand at taxi ranks varies according to time of day.

Sometimes taxi operators create their own rank in a location differing from any officially allocated one. This is the case at Wynberg Station where the official taxi rank is located on the west side of the line, yet the commuter demand is to the east of the line. Though no rank officially exists on the east side, approximately 40 taxis operate there. Thus, parking on this side of the line at Wynberg is illegal since no official rank exists. Therefore the operation of taxi services in the Cape Town Metropolitan Transport Area reflects demand patterns and is not completely hampered by regulatory constraints.

In the Cape Town Metropolitan Transport Area 38% (31) of the taxi ranks are located at transportation interchange points, such as alongside train stations and adjacent to bus terminals, signifying the important role of the taxi at modal interchange points. These interchange points reflect the fact that, through interaction with the conventional mass transit system, taxi services attempt to capitalize on the demand of the black commuter for greater personal mobility by meeting desires

left unsatisfied by bus and train. In fact, although 45% of the kombi taxis are based at such ranks located in white areas they serve the black residential areas. As a form of small group transport, the kombi taxi, in an attempt to improve upon the transportation network, provides a set of linkages intermediate between the two extremes of mass and individually operated transit. In fact, as one taxi operator put it, "If we didn't operate, they wouldn't worry nothing about the people..... Other than the bus company, what is your alternative to public transport?" The kombi taxi therefore fill the transportation void by either complementing the existing train and bus mass transport modes or supplementing the service mismatch functioning a line haul shuttle. As a supplementary service, the kombi taxi conveys commuters directly to destinations. As drivers stress, "Taxis take mostly the shortest route. Taxis can stop anywhere. On the bus people must wait for the stop. People must be mobile. They can't idle in their place. They must work". An individual living in Grassy Park, for example, may desire to travel to the Blue Route Centre for shopping purposes (Figure 4.5). As there are no direct mass transport links, such a journey could require as many as three modal changes before eventually reaching the destination point. The journey would involve taking a bus to Wynberg Station, then boarding a train to Retreat Station and finally taking another bus to the Blue Route Centre. The cost of such a journey would be R3.06 return. Instead of this rather indirect route, that same individual could take a kombi taxi from Grassy Park to Lavender Hill, then another kombi taxi from Lavender Hill to the Blue Route Centre. The cost of the return journey being R1,80. In this case, the kombi taxi operates as a supplementary service to more conventional modes of transport and cuts out at least one modal change.



+---+---+ Train
 -|-|- Bus
 -·-·- Kombi Taxi

ALTERNATIVE ONE

Bus (50 cents) Grassy Park -- Wynberg
 Train (40 cents) Wynberg -- Retreat
 Bus (63 cents) Retreat -- Blue RI C

Total Fare R1, 53
 Return Fare R3, 06

ALTERNATIVE TWO

Kombi Taxi (30 cents) Grassy Pk-L.H.
 Kombi Taxi (60 cents) L.H - B.R.Cn

Total Fare R0, 90
 Return Fare R1, 80

SUPPLEMENTARY ROLE OF THE KOMBI TAXI

Figure 4.5

As a complementary service the kombi taxi operates in conjunction with existing mass transport facilities. For example, a kombi taxi may provide the initial transport for an individual who lives in an area inadequately served by bus service, thus making for long walking distances, i.e. Nyanga township. Perhaps the commuter must be at his employment destination before bus service commences operation. Given infrequent bus service in the early and late hours and the availability of kombi taxis, the individual takes a kombi taxi as his initial modal choice. The kombi taxi then transports him to the train station. From there the commuter begins his journey on conventional mass transport. In such a situation the kombi taxi complements the bus service by filling a gap in the network.

Taxis in the Cape Town Metropolitan Transport Area thus form an important component of the transportation system. The taxi operates as an enterprise which attempts to satisfy mobility demands better than more conventional modes of transport.

4.3. Taxi Operation Survey

4.3.1 Justification for Survey Location

Control and organization of taxi services have been shown to be carried out in a similar manner throughout the fourteen authorities of the Cape Town Metropolitan Transport Area. Thus, isolation of a localized region for intensive study would provide details of the role and function of the kombi taxi and could be considered as representative of the whole area. A survey, therefore, was conducted with the

intention to carry out an in depth investigation of that segment of the population most involved in the operation of kombi taxis. The survey of taxi drivers and their passengers followed the lines suggested by Babbie (1973) and had three general objectives viz. the description, explanation and exploration of the details of kombi taxi operation in the Cape Town Metropolitan Transport Area. Description of the population interviewed is fundamental in determining the role of the kombi taxi in society. Certain traits and attributes are analyzed in terms of kombi taxi demand, user characteristics and operator features. Through this first hand knowledge, insight has been gained into the nature of kombi taxi service. From such knowledge, explanatory assertions may be made as to the function of the kombi taxi and the nature of the total population involved in kombi taxi operations, either as operators or as passengers. The exploration of new information has arisen out of survey results and their proceeding analysis.

To designate an area for in depth study of kombi taxis therefore, characteristics of daily commuter flows, modal interchange points, taxi demand foci and taxi service area were analyzed for the whole Cape Town Metropolitan Transport Area. The taxi ranks at Mowbray and Wynberg Stations emerged as major focal points (Figure 4.6). Specifically, these stations were chosen for intense analysis because of their particular characteristics:

1. as third-order nodes Mowbray and Wynberg offer a range of available transportation modes, i.e. car, bus, rail and taxi (Cape Town City Council, 1983c);

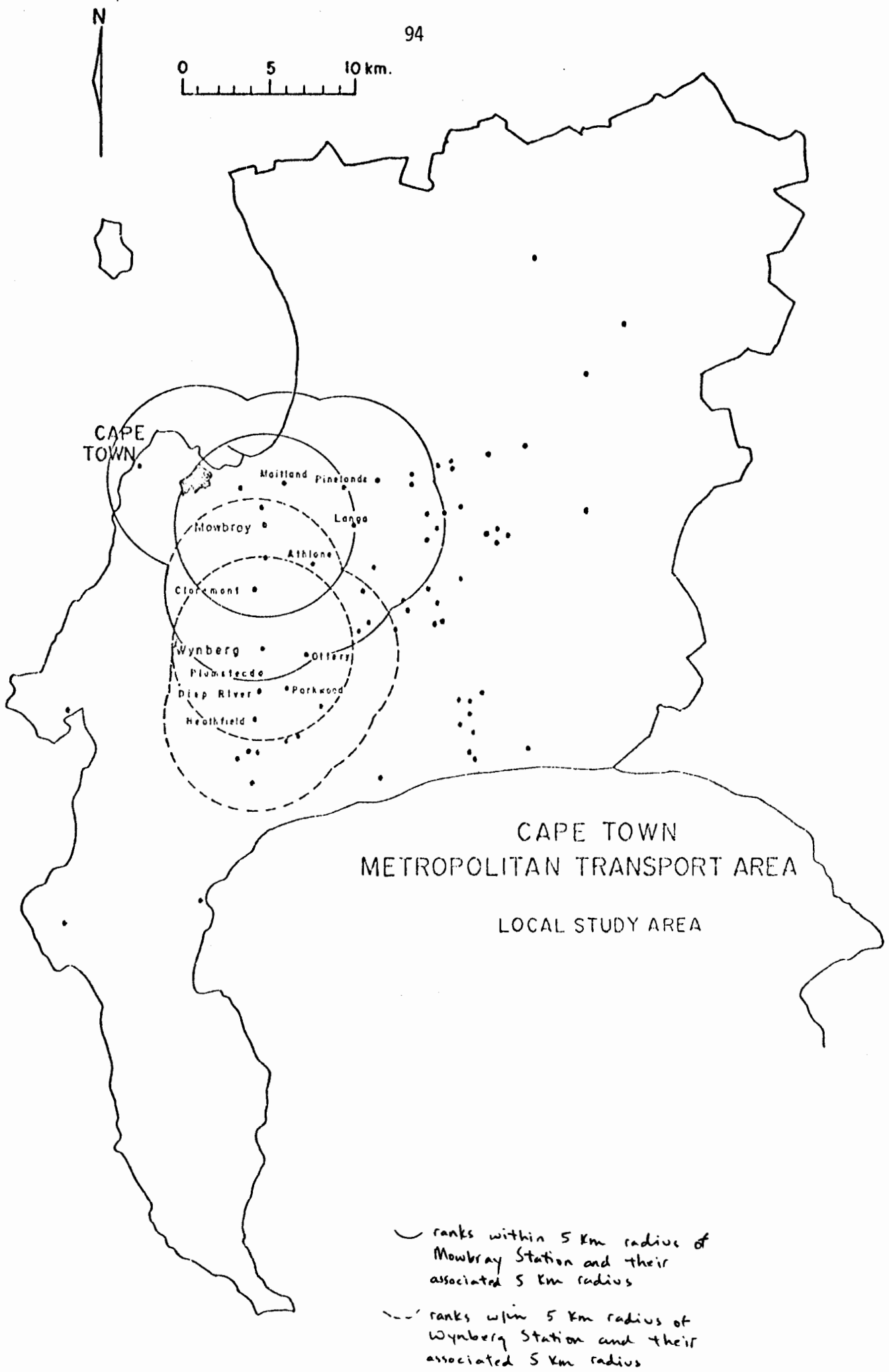


Figure 4.6

2. Mowbray bus terminus is the most heavily utilized transport interchange in the Cape Town Metropolitan Area serving 25 000 bus commuters daily and it has been recommended that Wynberg Station, which serves 6 100 bus commuters daily, be accepted as the major modal interchange point for the area (Cape Town Municipality, 1983, 6; Cape Town City Council, 1983b, 4-6);
3. taxi ranks at Mowbray and Wynberg are among the most intensely utilized in Cape Town Metropolitan Transport Area, Mowbray being served by an average of approximately 20 kombis daily and Wynberg by approximately 35 kombis daily (Cape Town City Council, 1982a).
Kombis operating to and from Mowbray Station convey passengers to african residential areas, i.e. Langa, and kombis operating from Wynberg Station convey passengers to coloured residential areas, i.e. Parkwood, Grassy Park/Lotus River; and
4. as nodal interchange points Mowbray and Wynberg Stations serve a spatial spread of residents from various socio-economic groups. Thus, a survey conducted at Mowbray and Wynberg taxi ranks can sample a wide area of influence of the kombi taxi and an assortment of travel behaviour can be measured through observation at these locations.

4.3.2 Survey Design

The actual survey was designed and administered according to the schedule method. Differing from a questionnaire in which the respondent fills in his own answers, a schedule consists of a set of questions

which are asked and filled in by the interviewer in a face to face situation with the respondent (Goode and Hatt, 1952). The schedule consisted primarily of structured items with questions having few alternative answers, though some unstructured and open ended questions were also employed (Appendix 2). Every item in the schedule is defensible on the grounds that its answer is significant to understanding those aspects of taxi operation under investigation. Problems did arise in question design. For example, notice had to be taken of particular traits of the respondents. In the survey of kombi taxi drivers the respondents could be assumed to have low education levels. Also, for many respondents English, the language of the researcher and therefore interview, is not the home language. As many of the taxi drivers normally spoke Xhosa or Afrikaans, they could be expected to experience difficulty in understanding the content and context of the survey questions. Therefore, the questions were designed to be suitable in content and nature so that those being interviewed could clearly understand what was being asked of them. Questions were checked for biases, ambiguities and duplication and incorporated into a preliminary schedule (Isaac and Michael, 1977).

The pilot study took the form of a flexible interview with taxi drivers in which ideas and criticisms were generated about the actual schedule content and structure. Sample interviews were conducted on the Southern Suburbs Line at Mowbray and Wynberg Stations and on the Cape Flats at Langa, Nyanga, Guguletu, Grassy Park/Lotus River and Parkwood. As a result of the preliminary work it was decided that two different schedules should be used. The majority of interviewees would be required to answer a set of 20 straight forward, highly structured key questions.

This schedule took approximately seven minutes to complete. However, a long form with 89 questions and requiring approximately twenty minutes to administer was also included with the intention of acquiring further details of kombi taxi operation in the Cape Town Metropolitan Transport Area. Though precision was attempted in questionnaire design and format not all questions received an adequate response, with some being omitted in the final data tabulation.

The schedule was arranged in seven sections, each comprising a number of related questions with at least two questions in each category. Every interviewee was asked the key questions, with a full set asked to those interviewed in more depth. The first section was subdivided into two, depending on whether those interviewed were owners or owner/drivers or drivers only. Questions asked specifically to owners or owner/drivers included the number of vehicles in pool, the number of drivers employed in pool, previous field of employment and taxi association membership. The questions reserved for drivers included previous field of employment, wage structure and taxi association membership. The second group of questions referred to official details regarding ranks and permits, while the third and fourth sections included questions relating to route and daily journey activities. Passenger characteristics and fare structure comprised the fifth and sixth sets of questions, with the seventh section dealing with service and maintenance of the kombi vehicle. A section was left at the end of the questionnaire for any additional comments or aspects of operation which may have arisen throughout the interview. Thus, in combination the completed questions it aided in establishing a better understanding of the particular facets of kombi taxi operation.

4.3.3 Survey Administration

The survey was confined to legitimate taxi service and therefore concentrated at ranks when taxi operators were at the rank waiting for passengers. Surveys were conducted at off peak periods when taxi operators were at the rank waiting for passengers. Thus, the interviews took place on weekdays between the hours of 9:30 a.m. and 3:00 p.m. either at the ranks or enroute in the kombi. In order to obtain a more complete understanding of taxi operation, additional interviews and contacts were made with operators from other ranks located within the study area and with owners at their place of residence. A total of 36 coloured and 16 african operators were surveyed between 2 May and 6 June 1984, with 92% of the coloured operators surveyed being interviewed at Wynberg Station and 56% of the african operators surveyed being interviewed at Mowbray Station. All 52 kombi taxi operators surveyed answered the basic 20 questions, while 23% of the respondents were questioned in greater depth. Thus, 12% of all the kombi taxis operating in the Cape Town Metropolitan Transport Area were interviewed in the study. Problems arising in the administration of the questionnaire were easily overcome once a basic understanding of kombi taxi operation was established. Explanations were then given on such aspects as rank allocation, peak demand periods and patterns of spatial coverage. A second obstacle was to gain general acceptance on the part of the operators of the researcher's presence. After the first few visits to the taxi ranks the operators sensed the genuineness of the study and the surveys then proceeded smoothly through to completion.

Initially the schedule itself served as an introduction to the taxi operators and passengers and facilitated dialogue between the administrator of the survey and the respondent. For the taxi operator in particular, the schedule acted as a justification of intent and from the administrators point of view it gave direction for ensuing discussion. Although some operators answered only the survey questions, others expanded on the questions with personal remarks and opinions. Many strayed from the central theme of taxi operation to include urban transportation in general and issues of social justice in South African society.

After the first few interviews those operators already interviewed introduced others who had not yet been interviewed. Thus, the process of questioning was facilitated. However, a group of operators (more than three) were usually present when questioning occurred. This created a problem in that the operators would 'help each other out' with answering. This was especially the case with, for example, the questions regarding busiest day and peak periods. The operator being surveyed might be asked survey question number fifty (What day of the week is the busiest taxi driving day?) and answer matter of factly that Friday is his busiest day. Another operator might interject and say that Saturday is the busiest day. The other operators present may agree that Saturday is in fact the busiest day. The operator being interviewed would then change his original answer of Friday to Saturday. In these instances only the initial response was recorded.

In order to check responses and gain the confidence of operators already surveyed, it was considered important to continue frequenting

the ranks. As a result the kombi taxi operators eventually came to discuss issues more freely. This was particularly true in the case of questions relating to income and vehicle ownership. For example, it became apparent that various statements contradicted information gathered during the initial interview. On the survey sheet it might be recorded that the operator collected R75 per day in total fares and was a driver, not an owner of the vehicle. During subsequent casual discussions it might emerge that this same operator normally collects R100 per day in fares and is an owner/driver. Thus, a double check occurred throughout the survey.

To establish a more holistic view of kombi taxi operation, case study interviews were carried out to augment the survey data (Appendix 3). The importance of a case study in this type of social research is that it checks particular information gathered throughout the survey with individual traits in a cohesive manner, thus joining information in bulk. This social data may then be organized in a way that preserves the individual character under study, while at the same time reflect the general aspects of the role and function of the kombi taxi. A total of five operators were interviewed in terms of their individual life style characteristics. Three of the five were prominent owners having five or more vehicles, one was a small scale owner having one vehicle and one was a driver who had ambitions of owning a vehicle one day.

Details of kombi taxi operation are thus based on the results taken from interviews and discussions with taxi operators and their passengers. Data gathered from other sources, i.e. reports, journals and

public officials, was checked with the responses of taxi operators and passengers for both validity and significance. Together this information served to highlight the specific aspects of the role and daily functioning of the kombi taxi in Cape Town.

CHAPTER FIVE

ASPECTS OF KOMBI TAXI OPERATION

The nature, role and function of the kombi taxi in the Cape Town Metropolitan Transport Area may be better understood once aspects of its operation are recognized. Thus, the perspective of Chapter Four in which the taxi in Cape Town is discussed, is narrowed in focus to specifically analyze the kombi taxi service as it exists within a localized study area in Cape Town. The insight gained from this scale of analysis may then be used to describe and interpret aspects of kombi taxi operation throughout the Cape Town Metropolitan Area.

An overview of kombi taxi operation, as well as specific details of operation, were facilitated through personal contact with kombi taxi operators by means of a survey (Appendix 4). Of the total interviews, 17% were completed at Mowbray taxi rank and 63% at Wynberg taxi rank. Ten interviews were conducted at either the operator's place of residence (6%) or at taxi ranks in the african townships (14%). Given the total 52 respondents, 69% were coloured people and 31% were african kombi operators, the former operating from Wynberg and the latter from either

Mowbray or Langa. In the Cape Town Metropolitan Transport Area 84% of all kombi permits are registered in the names of coloured people, 15% to africans and 1% to white owners. Clearly then, as they occur in the Cape Town Metropolitan Transport Area, a larger proportion of africans were interviewed than would be expected. This is a result of the fact that the survey covered both owners and drivers and, given that Mowbray was chosen as one of the base ranks, kombi taxis which operate from this rank had to be african as these taxis primarily travel in and out of Langa township. A fairly even split in the makes of vehicles used occurred as can be expected in this competitive market with 30% Volkswagon, 30% Datsun and 40% Toyota minibuses.

5.1 Kombi Taxi Ranks

Taxi ranks located in the study area include those ranks from which kombi permits are issued and which fall within a five kilometre radius of either the Mowbray or Wynberg ranks (Figure 4.6). Within this localized study area, 75% of the kombi permits are issued to coloured people and 23% to africans. Thus a representative survey sample was taken in which 69% of the respondents were coloured and 31% were african. The 12 ranks vary in the number of kombi permits assigned from 2 to 15 vehicles. (Appendix 1). All of the kombi taxis based at ranks within a five kilometre radius of the Wynberg rank operate for coloureds compared to only 46% of those within a five kilometre radius of the Mowbray rank. The remaining 54% in the Mowbray five kilometre radius operate for africans.

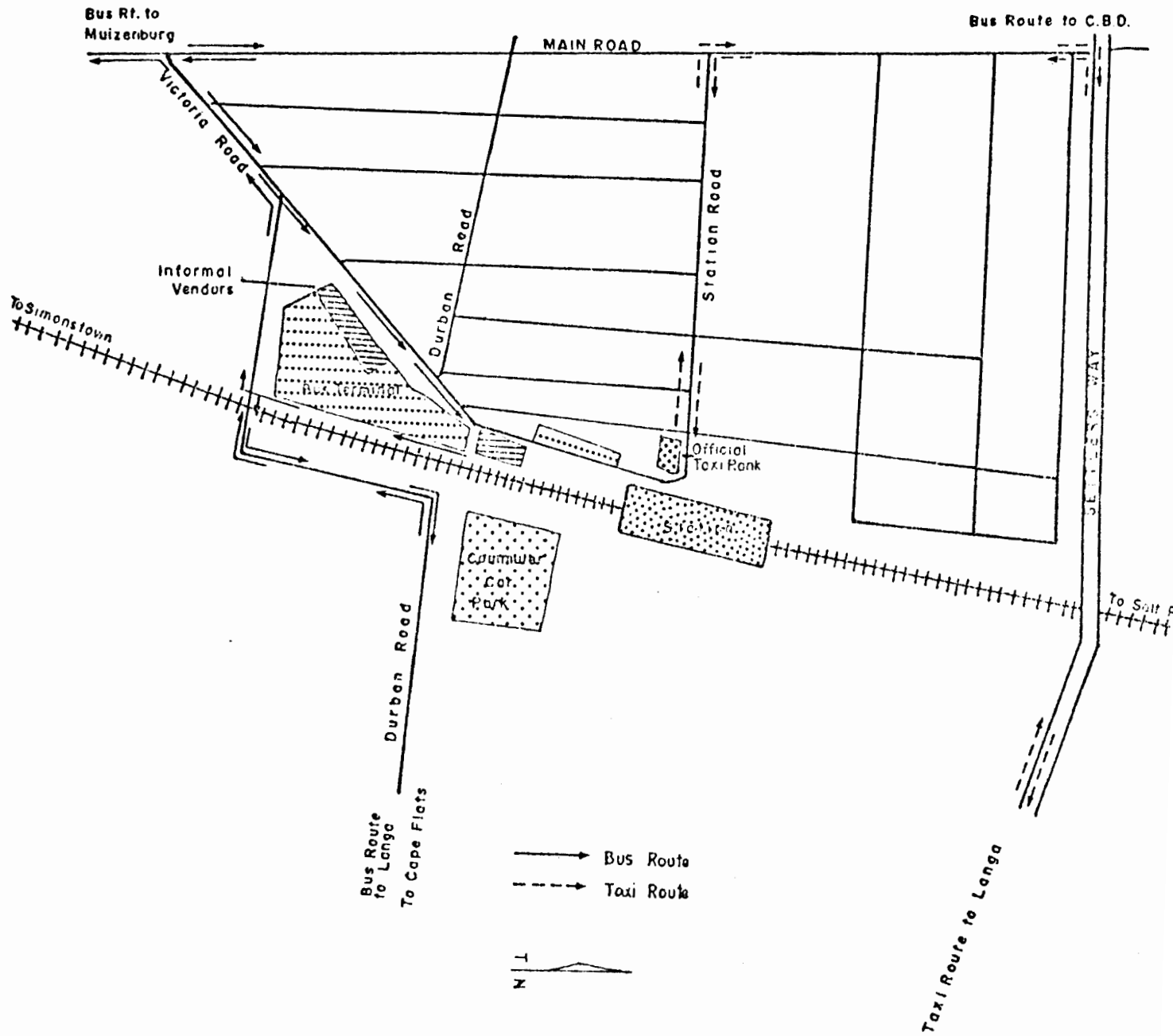
Most taxi ranks at which kombis operate have a buzz of activity surrounding them, particularly at peak periods. This is especially the case for those

that are located at third-order nodal interchange points along the rail line and in this regard Mowbray and Wynberg are no exceptions.

During the off peak, midday period kombi ranks are quiet and the operators usually wait at the rank for passengers, chat to each other, wash and service the vehicle or may occasionally leave the rank in search of potential passengers.

5.1.1 Mowbray Rank

Mowbray Station, situated on the Southern Suburbs Line approximately five kilometres from central Cape Town and two stations down the line from Salt River Junction, is a third-order nodal interchange point where there is an official commuter car park and bus, train and taxi services merge (Figure 5.1). As a transportation interchange point, Mowbray provides for the mobility needs of a large segment of the community. The bus terminal dominates the scene. Located just south of the rail station on the west side of the line, buses feed in both directions along the Main Road and to locations on the Cape Flats (Figure 5.2). Buses arriving at Mowbray come from similar locations. From the Mowbray bus terminal approximately 1 000 buses are scheduled to arrive and then depart each day, thus transporting an estimated 26 310 bus boarding and 22 729 bus alighting passengers daily (Cape Town City Council, 1983c, 33). Approximately 180 trains stop per day at Mowbray Station, half in the direction of town with the remaining half going down the line toward Simonstown. A variety of shops line the bounds of the Mowbray interchange and extend in the direction of the Main Road along which buses ply, serving the white residential areas on the slopes of the mountain. The outlets include clothing, food and general suppliers. Situated on the island where buses



MOWBRAY RANK AND SURROUNDING AREA

Figure 5.1

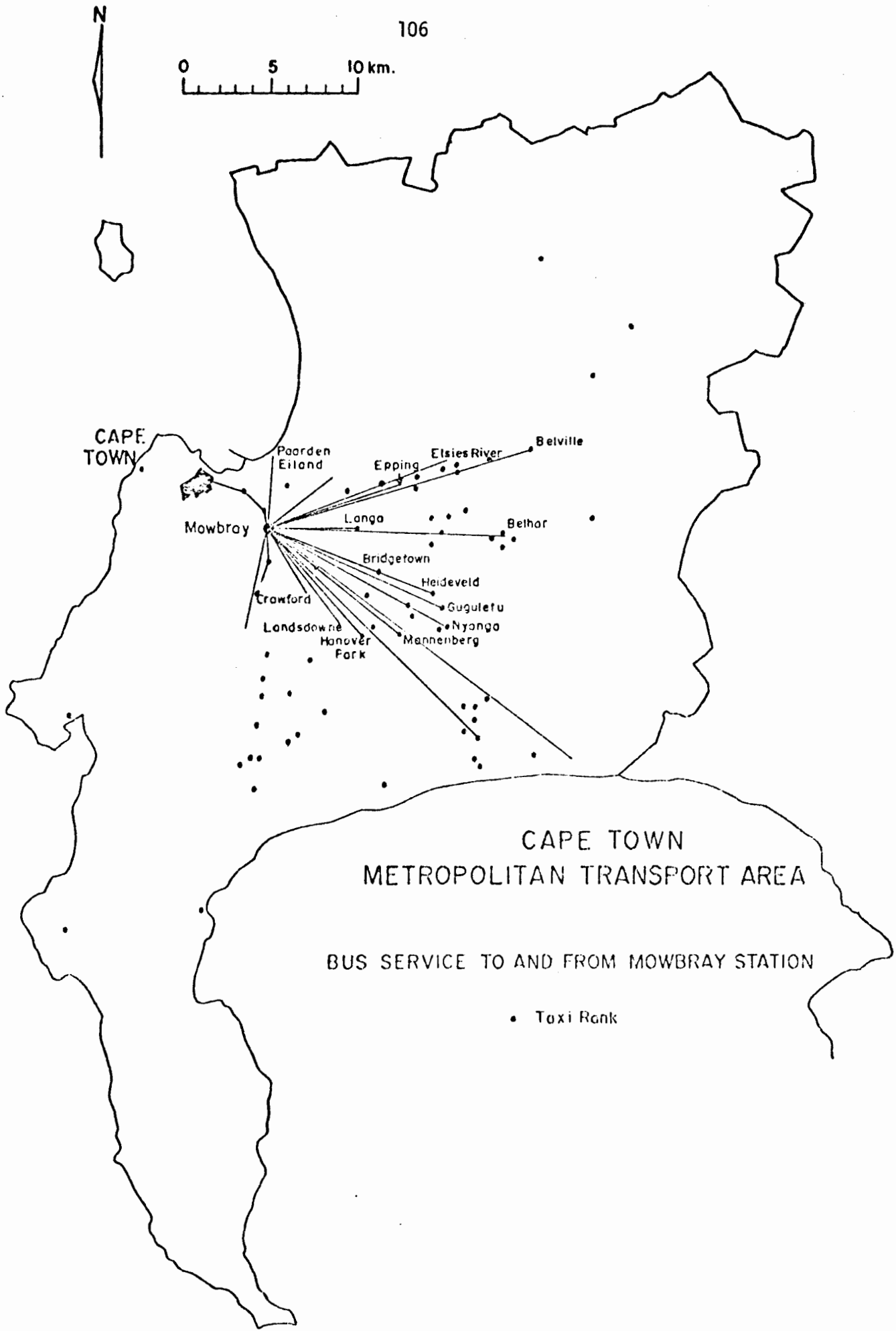


Figure 5.2

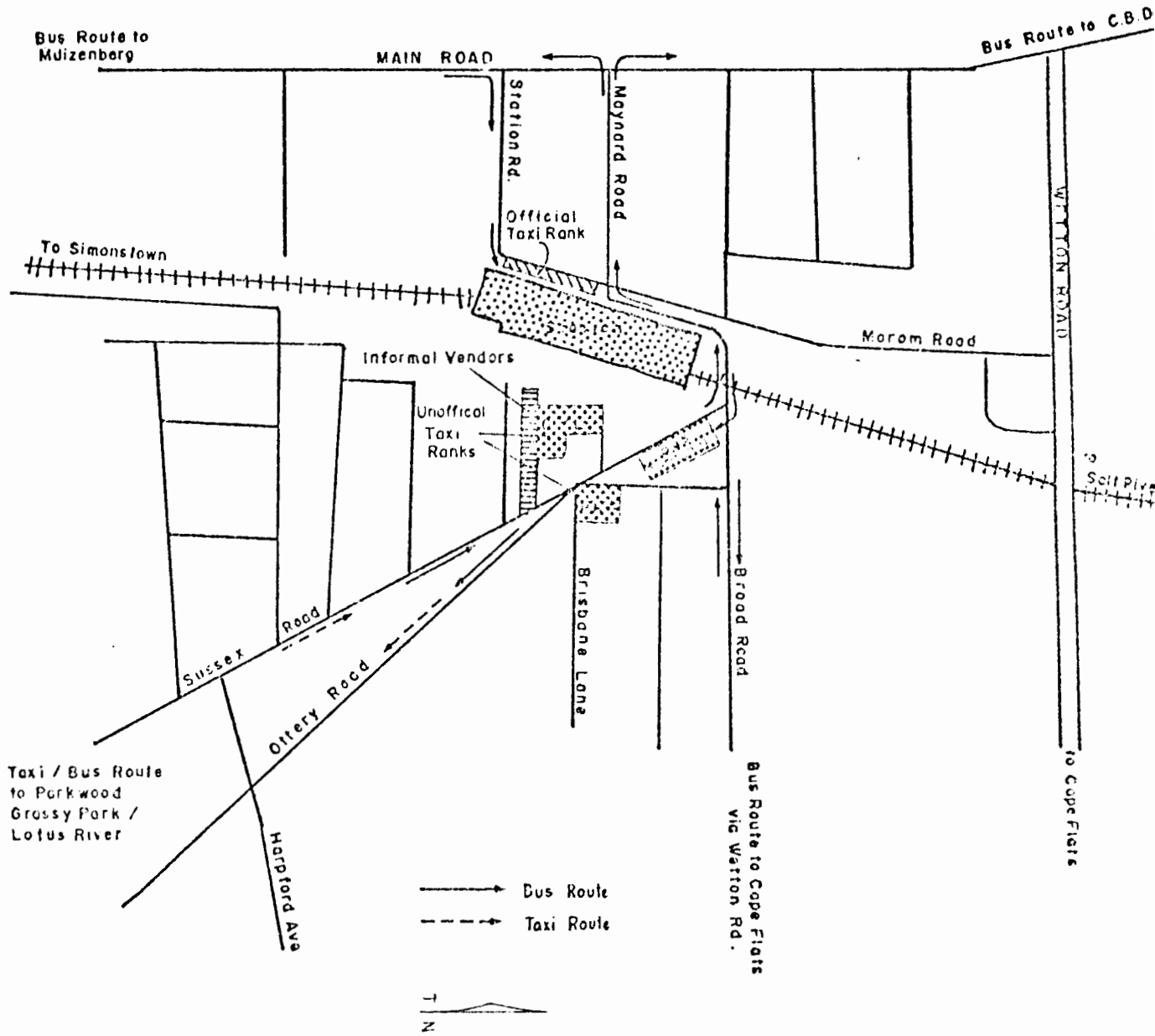
arrive and depart, informal sector shopping has developed as fruit vendors are present from Monday to Sunday, setting up stalls in the morning and staying until late in the afternoon.

The Mowbray taxi rank, accommodating vehicles which primarily serve Langa township, is located adjacent to the railway station on the west side of the line and only a short walk from the bus terminal. In relation to the greater spatial extent of bus to taxi coverage by route and given that taxis frequenting Mowbray only ply between Mowbray and Langa, it may be concluded that the bus operates as the primary mode of transport for the majority of commuters who frequent Mowbray. The seven permits available at the rank are all issued to coloured kombi owners. However, the line haul route between Mowbray and Langa via Settlers Way is operated by african drivers and therefore can compete directly with Langa based taxis as well as buses which serve that area. Fewer than seven kombi taxis remain at the rank at any given time during the midday slump. During the morning peak demand periods however, approximately 35 african operated kombis are found frequenting the Mowbray rank, most having started their journey in one of the township locations. In the evening, taxi queues are long, and, although kombis keep arriving at the rank, there is an average waiting time of between 13 to 18 minutes before a passenger is able to board a taxi.

5.1.2 Wynberg Rank

Wynberg Station is seven kilometres further down the Southern Suburbs Line from Mowbray (Figure 5.3). Like Mowbray, Wynberg is a third-order nodal interchange. The bus terminal, situated on the east side of the rail station, feeds buses along the Southern Suburbs and to residential areas within coloured group areas in the Cape Flats (Figure 5.4). From the Wynberg bus terminal approximately 100 buses are scheduled to arrive and depart each day, transporting an estimated 980 bus boarding and 640 bus alighting passengers daily (Cape Town City Council, 1983c, 41). Approximately 195 trains are scheduled to stop per day at Wynberg Station, half travelling up and half travelling down the line. Located near the Main Road, shops and service facilities are easily accessible from the station and unlike Mowbray, the fruit vendors located themselves next to the taxi rank to sell their wares.

Three taxi ranks are located at Wynberg only one of which is officially recognized. The official taxi rank is on the west side of the line immediately outside the station entrance. The 15 permit holders who have obtained permission to use this rank from the Cape Town City Council include both coloured and white operators primarily using sedan type vehicles. However, the six kombis registered at the official rank actually operate from one of the two unofficial taxi ranks located only a few hundred metres away on the other side of the line. Approximately 50 taxis operate from two vacant plots of land on the east side of the station. That side of the line maintains a higher passenger demand than the west side and is situated between the station and the coloured



WYNBERG RANK AND SURROUNDING AREA

Figure 5.3

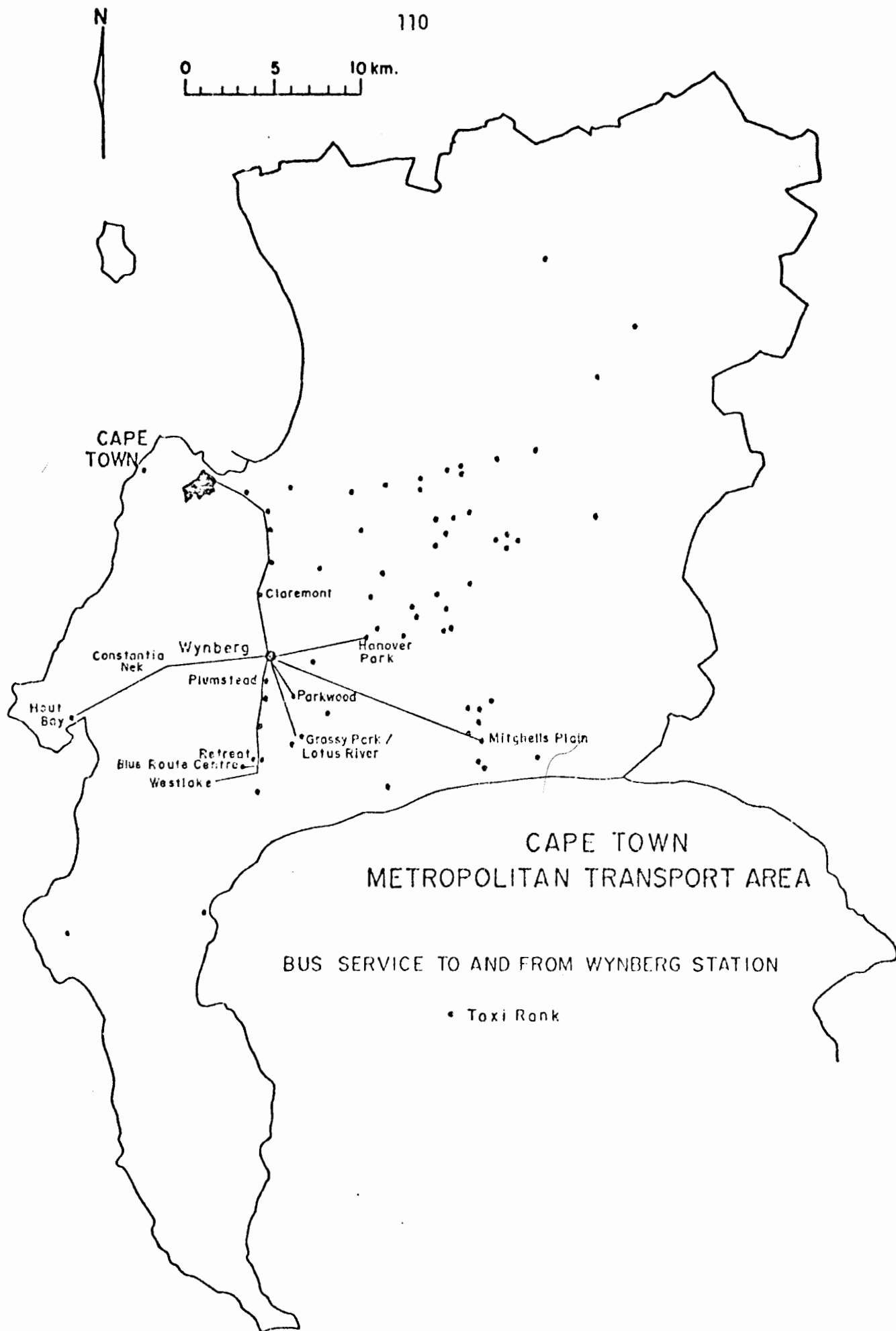


Figure 5.4

residential areas. Operators use these unofficial ranks as base ranks during the day as they wait for potential passengers alighting from either bus or train. The between peak, though a period of lower demand, is a more active period than that experienced at Mowbray rank. All of the taxis which utilize the unofficial rank are kombi type vehicles with the exception of one sedan vehicle which received its public road carrier permit after the decision in 1983 to issue only four passenger sedan permits. The land used for these two unofficial ranks is leased from a prominent taxi owner, and thus taxi operators pay him a monthly rent for rank privilege. The official ranks for kombis using the unofficial pick up points are either in Grassy Park/Lotus River (3 ranks with 39 kombis) or Parkwood (1 rank with 15 kombis). Taxis registered at the three ranks in Grassy Park/Lotus River, but frequenting Wynberg Station, fall under the Divisional Council authority and those taxis whose official rank is in Parkwood fall under the City Council Authority. Thus Wynberg node is actually served by 60 kombi taxis, plying to and from coloured residential areas, in particular to Grassy Park/Lotus River and Parkwood. Thus taxis compete directly with buses to these areas.

5.2 Kombi Taxi Operators

Kombi taxi operators fall into three categories, i.e. those employed by a kombi owner to drive his/her vehicle, those individuals who both own and drive their own vehicle and those who own vehicles but do not drive regularly. Given their different degrees of commitment, these three categories of operators may be separated into two broad groups, kombi taxi owners and kombi taxi drivers.

5.2.1 Owners

Of the total survey population, 13% were owners who drove their own vehicle, with each owner/driver maintaining, on average, 2 kombi taxis. Thus, it can be assumed that there are 55 owner/drivers in the Cape Town Metropolitan Transport Area who maintain approximately 110 kombi taxis. The remaining 318 kombi taxis would then belong to owners who employ drivers to operate their vehicles. Given that each fleet owner has an average of six kombi taxis, it can be assumed that there are approximately 53 fleet owners. Therefore, the kombi taxi business in the Cape Town Metropolitan Transport Area is in the hands of just over 100 individuals.

The operators interviewed who both owned and drove their own vehicle had fewer than four vehicles each. Three owned the vehicle they drove, a further three owner/drivers had expanded their business and owned two vehicles. Only one of the interviewees owned four vehicles. The vehicles which the owner did not drive himself had permits at ranks other than that rank where the owner operated. A trend toward increased vehicle ownership may result in an owner giving up the driving side of his business. The sample suggested that once an owner acquires more than four vehicles he retires from driving and devotes his time to managing the business.

Names of owners who no longer drove taxis were obtained from discussions with interviewees and sources at the relevant traffic authorities. Three owners were prepared to grant interviews at their homes and these continued while touring various ranks from which their drivers operated.

Two of the owners interviewed are coloured people and the other african. Together these three own a total of seventeen taxis (sixteen of which are kombi type vehicles) which comprise 2,5% of the total taxis in the Cape Town Metropolitan Transport Area. The african owner has five kombis which operate from the rank at the bus terminal in Nyanga and travel within Nyanga, Guguletu and Langa. He received two rank permits upon application to the Local Road Transportation Board and 'purchased' the other three in the black market (Appendix 3, Owner A). The two coloured owners have six taxis each. The one owns five kombis and a sedan vehicle and ranks his taxis along the Southern Suburbs Line at Wynberg (2 taxis), Retreat (2 taxis) and Steenberg (2 taxis) (Appendix 3, Owner B). The other coloured owner operates from the ranks at Bishop Lavis (2 taxis), Hanover Park (1 taxi), Mitchells Plain (1 taxi) and Uitsig (2 taxis) (Appendix 3, Owner C). Both of these owners employ coloured drivers. This range of rank locations suggests that fleet owners make an effort to tap the taxi commuter market by covering a wide spatial area of operation (Figure 5.5).

Of the thirteen kombis owned by the seven owner/drivers, six are Volkswagen, four are Datsun and three are Toyota. All three non driving operators have been in the taxi business for approximately ten years. Initially operating sedan type vehicles, these three owners adapted their business when regulations were eased and now control a fleet of kombi type vehicles. Two fleet owners had previously been employed as taxi drivers and so gained experience of the business before expanding into an entrepreneurial role. Prior to that, together with the owner/drivers, they had been primarily engaged in semi-skilled occupations, in particular building (72%),

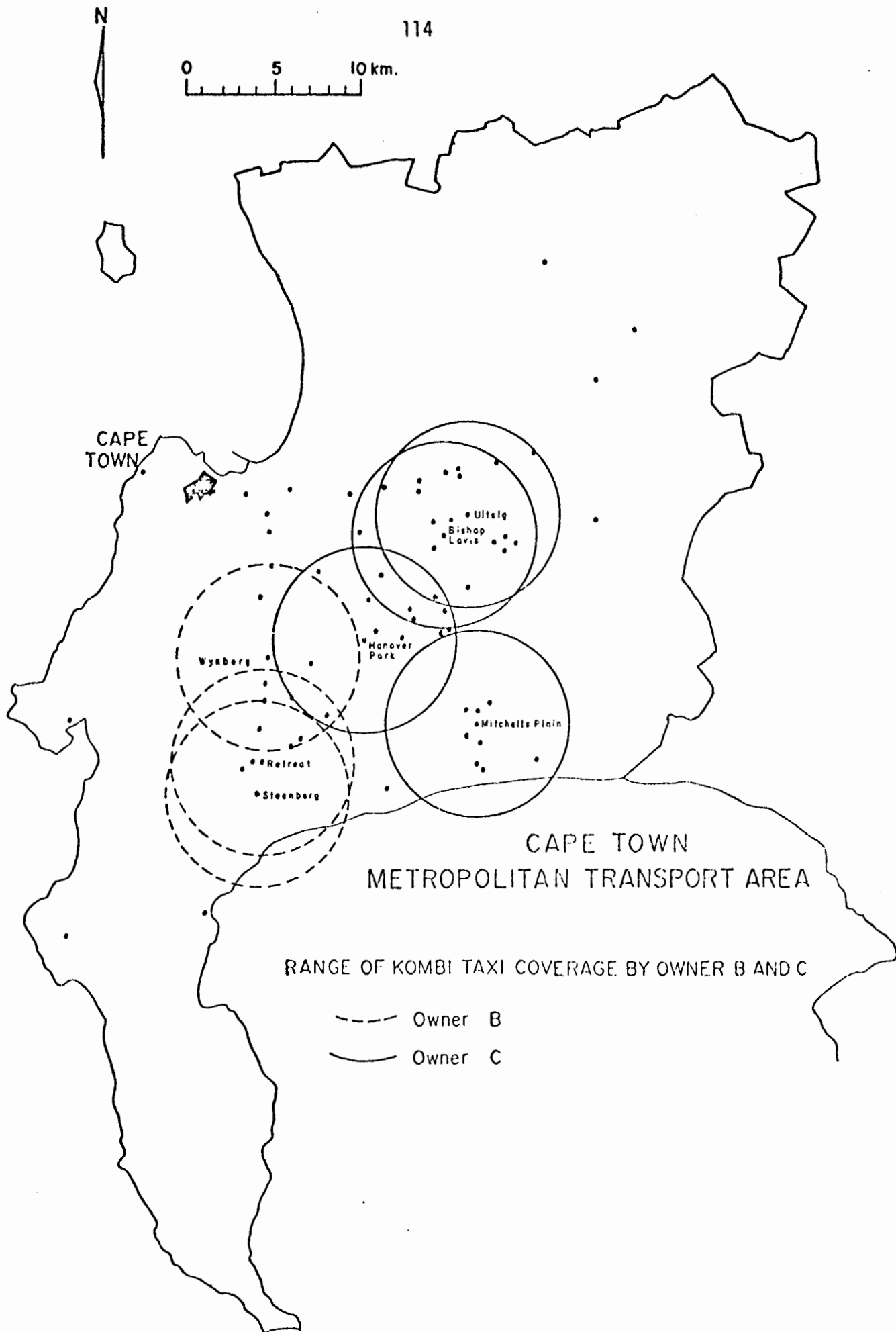


Figure 5.5

or had been previously employed in commerce (14%) and civil service (14%). Concerned to operate as a business and to keep control over vehicles, these operators regularly get report backs from drivers as well as go out and check the ranks.

Owners concerned about the future position of the taxi belong to taxi associations, one being Lagunya and the other the Western Cape Passenger Transport Services. Lagunya, the local affiliate of SABTA, has a membership made up of african operators from Langa, Nyanga and Guguletu. The recently formed Western Cape Passenger Transport Services was initiated in August 1983 after the Welgemoed Commission of Inquiry became public. Like SABTA it aims to be a voice for taxi operators, but according to one owner, the general attitude regarding taxi organizations and associations is that "everybody wants to benefit, but let somebody else do the work". In general, local taxi associations which exist tend to meet infrequently and irregularly and receive only a narrow base of support. However, owners are concerned to overcome the lack of organization on the part of the associations and the lack of foresight on the part of potential members.

5.2.2 Drivers

Approximately 373 drivers are employed to operate the 428 kombi taxis in the Cape Town Metropolitan Transport Area, with the remaining 55 kombi taxis operated by owners who drive the vehicles themselves, i.e. owner/drivers. Of these 373 employed drivers, 318 drive vehicles for the 53 owners and 55 drive vehicles for the 55 owner/drivers. Thus, in terms of actual numbers, the drivers dominate the kombi taxi operation at a ratio

of nearly three drivers to every one owner or owner/driver. Kombi taxi drivers see themselves as the most important component of the business. As one driver asserted, "If we don't drive, how will people get to work?"

Of the 42 kombi taxi drivers who completed the survey, 67% were coloured operators and 33% were african. Drivers tend to be younger than owners, with over 70% of those interviewed being under thirty years of age. Of those interviewed, twelve years was the longest period of actual involvement in taxi operation. Among drivers, occupation held previous to kombi taxi operation varied, but 30% had experience of driving (bus 15%, delivery 10% and sedan taxi 5%) and a further 5% had been employed as automobile mechanics. The remainder came from the building industry (30%), commerce (25%), machine works (2%) and the civil service (8%). Most kombi taxi drivers have chosen the occupation because of the salary potential and the apparent freedoms associated with the profession, i.e. flexible hours and unsupervised work environment. As one of the drivers said, "I love this business. You meet people everyday if you take it in. You mix with vulgar and decent chaps and all sorts. Everyday it's different faces, different places in this job."

Drivers are usually paid on a commission basis in which they receive a percentage of the daily fares collected. Of the 42 drivers surveyed, 88% were paid in this manner, with the remaining 12% being paid a fixed wage. In Cape Town, commission percentages vary between 25% and 35%, with the driver paid either weekly or biweekly. Most coloured drivers received slightly higher commissions (between 30% and 35%) than the

african drivers who receive between 25% and 35%. The commission wage is structured in one of two ways. The percentage either includes the cost of petrol from the total fares collected or the cost of petrol is first subtracted from the total fares collected and the percentage payment is then based on the remaining total. In the first instance, when petrol is included in payment, drivers receive a slightly lower percentage than had petrol been subtracted from the total fares. Thus, a driver may receive 25% of total fares collected or 30% of total fares collected minus the cost of petrol. For example, one driver collects an average of R80 in total fares per day and spends approximately R22 per day on petrol. His daily salary at 25% total fares collected is R20. However, if petrol were first subtracted from his total fares and he would receive 30% of that total, his daily salary would be R17,40, a wage difference of 13%.

Kombi taxi drivers experience long hours despite the relatively relaxed period in the middle of the day. A driver's day starts from the time he collects the taxi in the morning (usually by 5:30 a.m.) until he returns it that evening (usually by 9:00 p.m.). Thus, the average driver works a fifteen hour day. Depending on demand for service, drivers operate before the morning peak and after the evening peak. In fact, 67% pick up their last passenger of the day by 9:00 p.m. and only 11% stop work before 6:00 p.m.

5.3 Kombi Taxi Passengers

A survey administered to kombi taxi passengers was conducted to find out from the passengers themselves about aspects of kombi taxi operation and the extent to which their impressions supported the responses received from the taxi operators. This questionnaire consisted of five categories dealing with daily journey and route characteristics, fare structure, frequency of use and a section reserved for general comment (Appendix 2).

Difficulties which arose in the actual administration of the questionnaire were four-fold. Firstly, interviews that took place at the taxi rank were frequently interrupted as passengers boarded taxis for departure. Secondly, those interviews conducted during the actual taxi journey were cut short when the passenger being interviewed departed the taxi at his intended stop. Thirdly, a language problem was again encountered, though partially avoided as a result of the simple and basic question structure employed in the schedule. And fourthly, responses received during the taxi journey came from the group rather than from the individual passenger being questioned. Thus, overall response from passengers was taken to be an impression of basic aspects of kombi taxi operation as perceived by the passengers and is used to extend the description of operating characteristics and clientele as received from the operators.

With regard to the total response received from taxi operators, they indicate that they transport passengers of all age groups, not specifically young or elderly. In addition, 76% claim that the ratio of female

to male passengers is approximately equal. This differs from the findings of Luk (1980) in his Soweto taxi study in which observation showed that significantly more males commute by taxi than females (63% vs 37%). He explains this finding by stating that there are more economically active males than females among the Soweto population. However, in the Cape Town study area, 22% of the operators actually claim to convey primarily female passengers and only 2% of the operators convey primarily male passengers. The higher rate of female passengers in the Cape Town Metropolitan Transport Area would seem to result from two factors. Firstly, many of the journeys undertaken by female passengers tend to be irregular in nature, i.e. shopping and employment as a char. In both of these cases use of a kombi taxi is a better economic proposition than the bus. Secondly, there is a high proportion of economically active females in Cape Town, particularly among the coloured community. Observation of passengers supported the contentions with respect to both age and sex of kombi taxi users at the rank locations.

The survey showed clearly that high demand for the kombi taxi occurs both at morning and evening peaks. This was supported by three-fifths of the kombi passengers. Fridays rate as the day in which kombi taxi lines are the longest. Nearly half of the passengers took a kombi taxi on both weekdays and weekends, half took it on weekdays only with the remaining passengers taking it weekends only. Clearly then, the kombi taxi plays a significant role in the lives of passengers and is used for a variety of different trips at different times. Importantly a third of the passengers were found to rely on the kombi taxi as a transportation mode five days per week and a further fifth to rely

on it six days per week. Thus, over half of the individuals who use the kombi as a mode of transportation do so on a regular basis, presumably for journey to work trips. Of those interviewed, only one-seventh are not regular kombi taxi commuters who normally travel by bus, using a clipcard when they do so. This aspect, of passengers using alternating modes, supports the notion that the kombi taxi maintains a supplementary role to conventional transport by providing increased commuter mobility.

If the kombi taxi were not available, one-third of the respondents said they would utilize the bus, one-fourth would take the train and one-third would utilize a private vehicle as alternative modes. The kombi taxi forms half a modal split for two-thirds of its passengers, linking train commuters from place of residence to the rail line. All of the morning passengers board the kombi from the nearest taxi rank in their residential area. In the evening all of those passengers surveyed claim to board the kombi taxi at a nodal point which is usually the bus/train interchange where there is also a taxi rank. The function of the kombi taxi as a feeder service to the commuter rail line thus becomes apparent.

The most significant reason for commuters choosing the kombi taxi as a mode of transportation is its time saving factor according to approximately two-fifths of the passengers. Kombi taxi operators agree that the commuting time saving aspect of the kombi taxi is the main reason for their passengers choosing the kombi as an alternative mode do so (46%). The second and third most common reason given by operators for kombi taxi patronage are convenience (18%) and cost (18%). This breakdown is similar

to that of the passengers of whom one-sixth chose the kombi for its low cost, in relation to bus travel and one-sixth for the associated convenience factor. However, the remaining third of passengers say they travel in a taxi as a result of perceived characteristics of comfort, reliability and efficiency. This supports the evidence acquired by Luk (1980) in which nearly one-third of the Soweto taxi commuters chose the taxi as a mode of transportation because of the convenience factor, one-fifth for speed and one-fifth for comfort (Luk, 1980, 75). The positive perceived and real traits associated with the kombi taxi reflect its significance in the life of the urban commuter in Cape Town.

5.4 Kombi Taxi Functioning

On the basis of the responses received from the 52 operators it was possible to obtain a picture of the functioning of the kombi taxi as a part of the transportation system in Cape Town. This includes such aspects as regulatory permits, journey characteristics, service frequency and fare structure.

All respondents operated ten-seater vehicles. However, because the kombis are operated as taxis, drivers are authorized to convey a maximum of only eight passengers and each time they exceed that number are liable to fines. Nearly all kombi operators are issued with a daily five kilometre distance permit and an occasional thirty-five kilometre permit (Visser, 14 March 1984). However, 20% of the drivers claim to have a thirty-five kilometre permit rather than a five kilometre permit, but may have been referring to their occasional permit only.

5.4.1 The Journey

Kombi taxis generally follow a route or set of routes which have evolved in response to demand and rank location and to which variations are only occasionally made. The journey is commonly line haul in nature with few stops being made along the way, though 91% of operators pick up or drop off passengers during the actual kombi taxi journey. A return journey is relatively short, between four and sixteen kilometres and takes less than twenty-five minutes to complete. Thus, 50% of the operators make between fifteen and twenty-five full return trips per day (Figure 5.6). During the peak periods only the one way journey is a full load, with the return journey quite often being done in an empty kombi. On average, an operator may make between nineteen and twenty-one fully loaded trips per day.

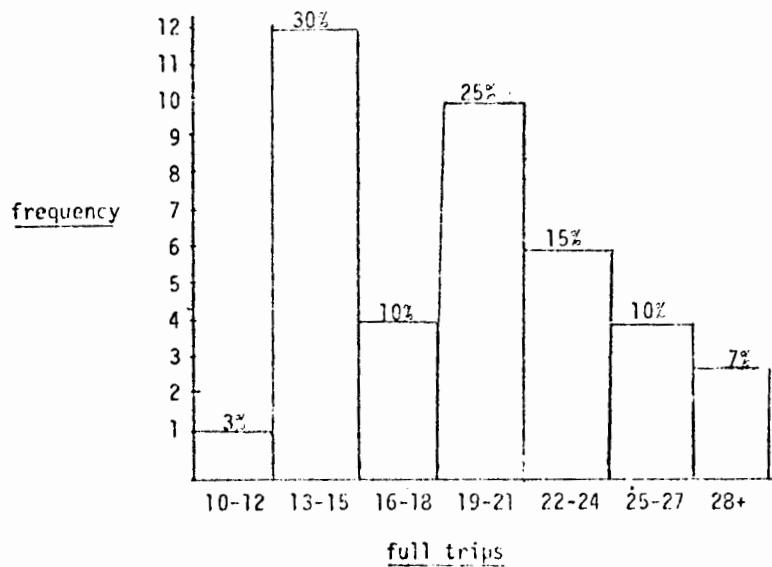


Figure 5.6 Daily Trip Frequency of Kombi Taxis

Frequency of service also varies according to time of day. Because kombi taxis cater for commuter demand they experience peak and off peak periods of operation. The morning peak generally begins at 6:00 a.m. and finishes by 8:30 a.m. In the evening, business picks

up from the midday slump at 4:00 p.m., with the peak period beginning by 5:00 p.m. The evening peak lasts for approximately two hours and is complete by 7:00 p.m.

Daily and weekly service frequency variation is accompanied by seasonal variation of demand. Somewhat unexpectedly kombi taxi use decreases during the rainy winter months and picks up again during the warmer months of the year. The explanation for such seasonal business fluctuation is that during the damp winter months people make only the most necessary trips. As one operator said, "Only the musts go on trips". In the warm months people travel more frequently, going on the odd errand and taking social/recreational journeys. A second aspect of the damp weather which hinders kombi taxi business is waiting location since people waiting for mass transport wait in places which are protected from the elements, i.e. against buildings and inside shops. Thus, a cruising taxi may pass by potential passengers.

Kombi taxis often remain at the rank during the midday slump, though some are known to cruise round residential areas in search of potential passengers, especially during the weekend when bus services are reduced. Kombi taxis often cruise high income residential suburbs over weekends, collecting and depositing individuals who work in private residences, e.g. domestic workers and gardeners. The strategy employed by some kombi taxi operators is to follow the routine scheduled bus route, but arranging that the taxi arrives just minutes before the bus. Therefore, for the potential passenger, mode used is not so much a case of preference, but rather of timing. If a bus

arrives first, then the individual travels by bus and likewise, if a kombi taxi is the first to arrive, the individual takes the kombi taxi.

5.4.2 Fare Structure

Of the operators surveyed, 98% have a fixed fare which passengers are required to pay according to the route being taken. However, all kombi taxis which fall under the authority of the Cape Town City Council must be equipped with taxi meters. These meters merely provide the standard for rates actually charged by kombi taxi operators. For example, excluding flag fall, the metered rate for a single journey from Wynberg to Parkwood is R1,95. Working on an average load of 6,5 passengers to break even, the kombi taxi operator establishes a fare structure of 30 cents per passenger. Thus, a full load at 30 cents will bring in R2,40 - a 23% profit. On the other hand, with only 4 passengers he makes a 38% loss.

Kombi taxi fares lie within a range of 25 and 60 cents and half fares may be paid for small children while larger sized parcels often require an additional 10 to 25 cents attached to the initial passenger fare. From Friday afternoon some fares are increased by approximately 20% to 30%. Such weekend rates remain in effect through Sunday evening. A standard fare increase of between 60 cents and R1,10 is charged for door to door service. Frequent customers of door to door service include pensioners, late night travellers and parcel-laden shoppers. A daily breakdown of fare collection on the Wynberg-Grassy Park/Lotus River route is shown in Table 5.1.

Table 5.1 DAILY BREAKDOWN OF FARE COLLECTION
Wynberg - Grassy Park/Lotus River

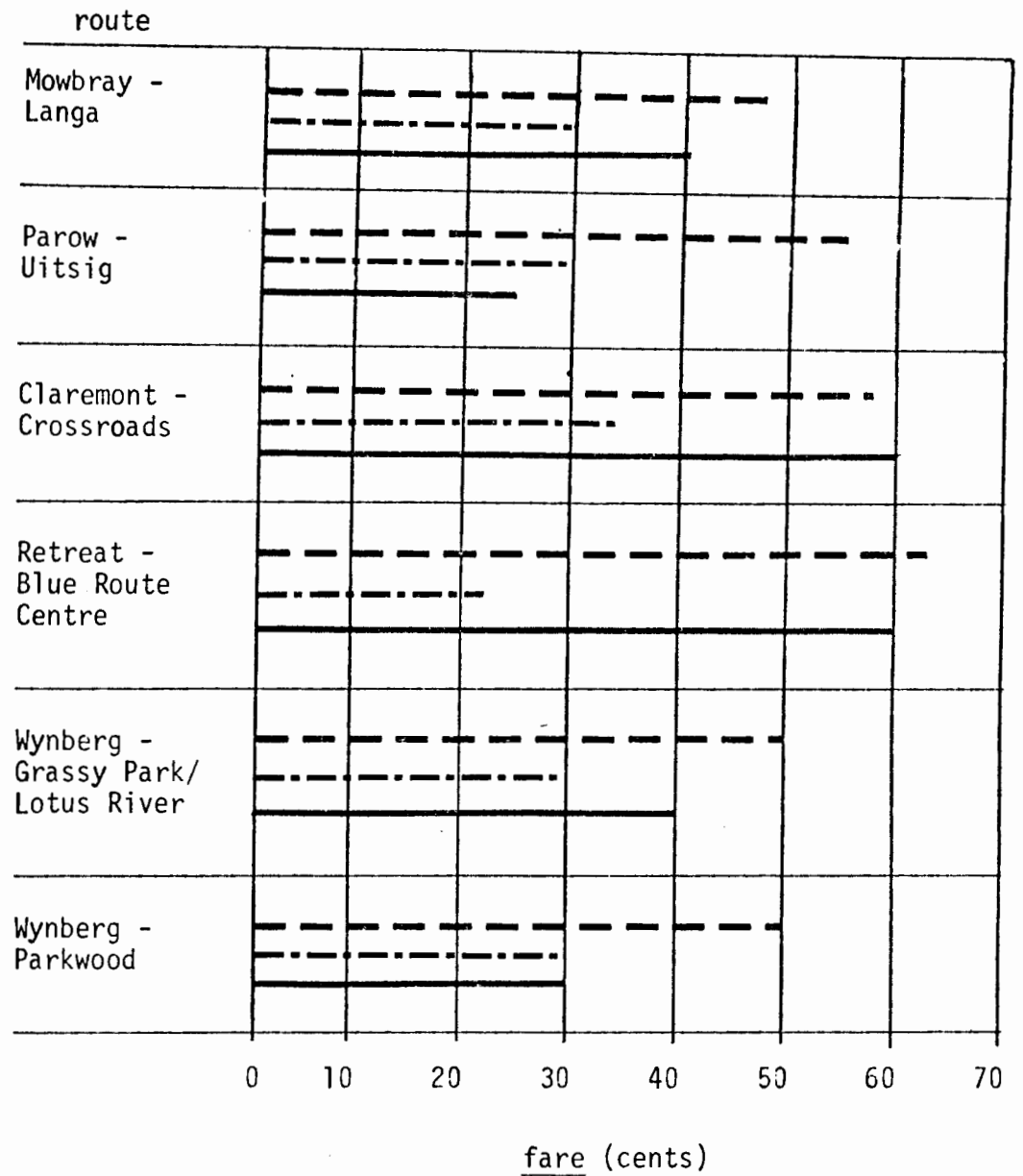
Fare charged per journey	0,40	
Total fares collected per full load	R3,20	
Total fares collected a.m. peak at ten full journeys		R32,00
Total fares collected p.m. peak at six full journeys		R19,20
Total fares collected off peak at eight full journeys		R25,60
Total fares collected per day		<u>R76,80</u>
Less petrol at 25% total	R19,20	<u>R57,60</u>
Total fares collected per week (Mon - Sat)		R460,80
Less petrol at 25% total	R115,20	
Less wage to driver at 30% total fares	R138,24	
Total received by owner		<u>R207,36</u>
Less wage to driver at 30% total fares minus petrol	R103,68	
Total received by owner		<u>R241,92</u>
Less wage to driver at 25% total fares	R115,20	
Total received by owner		<u>R230,40</u>
Less wage to driver at 25% total fares minus petrol	R86,40	
Total received by owner		<u>R259,20</u>

The fares charged by kombi taxi operators in the Cape Town Metropolitan Transport Area are lower than those charged in other major urban centres of the country (Hawkins, Hawkins and Osborne, 1982). A kombi taxi journey in the CTMTA generally costs less than a single journey bus fare (Figure 5.7). For example, the single journey bus fare from Claremont Station to Crossroads is 60 cents, whereas the corresponding kombi taxi fare is 58 cents. Subsidized bus rates however are less than that rate charged by the kombi taxi.

Given the system of subsidized and single journey bus fares and the rates charged by kombi operators being similar to those charged on single journey bus trips, use of the kombi taxi is beneficial to the commuter who does not have the same daily travel pattern. For example, a char living in Grassy Park and working two days per week in Wynberg would not profit from clipcard utilization. Given that she only travels to and from work at the same location two days per week, a ten journey clipcard would be of little use since six of the journeys would be left unused. She would save travel fare if, instead of purchasing individual bus tickets, she commuted by kombi taxi. From Grassy Park to Wynberg a single journey fare is 50 cents whereas the kombi taxi fare is 40 cents.

Grassy Park - Wynberg

50 cents	-	bus, single journey
30 cents	-	bus, clipcard journey
40 cents	-	taxi, single journey



bus (single journey) - - - - -
 bus (clipcard) - . - - - -
 kombi taxi - ————

Figure 5.7 Bus and Kombi Taxi Fare Comparison

A system of fare collection has been established among taxi operators. The passenger in the front seat collects the fares from the other passengers while the taxi is enroute. He sorts change and gives the driver the total sum for the taxi journey. For example, if eight people are being conveyed in a kombi taxi at 40 cents per head, the passenger collecting fares gives the driver R3.20, having already sorted change. This proves to be a more expedient and safe method than if the driver himself were to collect and sort change from the individual fares.

5.4.3 Service and Maintenance of the Kombi Taxi

A kombi taxi will travel between 900 and 1 050 kilometres per week conveying passengers at an average cost of 100 kilometres to 25 litres petrol. Operators invariably use cash for petrol purchases and 36% spend between R26 and R30 per day, 33% spend between R21 and R25 per day and 28% spend less than R21 per day on petrol. The kombi taxi operator generally fills his vehicle tank once a day at whichever petrol station is most convenient at the time, making a point of refueling each evening. By refueling in the evening the driver has a full tank to begin the morning peak and does not have to wait for petrol stations to open. In an effort to encourage a regular clientele, a few stations give discounts offering free oil changes to regular taxi customers while some give discounts on petrol, e.g. one cent per litre. Oil companies and station owners thus benefit from taxis in the form of increased petrol and oil sales. For example, the former owner of a Heideveld service station heavily patronized by taxis recently sold his business to retire early and feels it is because of taxi support that his business proved so profitable.

Operators vary in the amount, extent and frequency of vehicle maintenance. Approximately 20% of the operators choose to do the maintenance work themselves, while the remaining 80% take the vehicle to neighbourhood or garage mechanics. Drivers are generally responsible for maintaining the appearance of the kombi and washing and cleaning is done daily either at the rank during off peak periods (63%) or at the home of the owner or the driver (37%). As taxi operators may be fined for driving a dirty taxi. Either the driver cleans the kombi himself at the rank or employs a 'young skolly' (as the youths are colloquially called) to do the job. These youths are commonly found at taxi ranks and are given a minimum wage for performing various chores, including washing the exterior of the kombi, cleaning the interior, collecting and sorting fares, opening and closing the taxi door for passengers and fetching sundry items such as cigarettes, coke and candy for the drivers. Typical is Peiltjies who has been working at the Wynberg rank for four years and is well liked and respected by the drivers. He is paid R1.50 for washing the kombi inside and out. Some drivers allow him to drive the kombis into line when at the waiting rank. Peiltjies seems to enjoy his work and his aspiration is to become a taxi driver one day.

Maintenance of the kombi involves a regular oil change every 5 000 kilometres or four to five weeks. While the vehicle is off the road at this time it is usually checked for other defects. A common mechanical defect involves the kombi's sliding door. Taxi drivers often have

trouble with the vehicle door as passengers, unfamiliar with its workings, tend to damage it upon closing. To avoid the consequence of such damage, some owners have attached a rope to the door which may then be used to pull the door closed from the driver's seat. The two biggest maintenance expenses involve the gearbox on the Toyota and the engine on the Volkswagen. Replacement parts are generally purchased second hand. A rebuilt gearbox sells for approximately R300 and a rebuilt engine for approximately R750. Another maintenance problem affecting the taxi is defective vehicle suspension. Operators admit that suspension problems are invariably associated with overloading. Tyre replacement is a heavy burden of expense for the kombi taxi owner. Tyres may be purchased new or used, as retreads. The cost of new and retread tyres differ greatly as four new tyres sell for approximately R340, whereas a set of retreads sell for approximately R224. However, a set of new tyres is needed every seven to eight months while retread tyres should be replaced every five months. In three years then, approximately R1 700 might be spent on new tyres and R1 568 on retreads, a saving of less than R4 per month. Rather than spend additional money to maintain and repair kombis, one fleet owner of six taxis simply replaces any vehicle after eighteen months of ownership for "after that time it becomes too costly to maintain".

5.5 Kombi Taxi Business Operation

Taxi owners who have more than one vehicle operate according to business principles. Each night owners collect daily cash earnings which are brought to their homes by the drivers. For the owner this time with the driver can serve as a report back of the day's kombi operation. Daily log books kept by the owners for each vehicle include space for recording total cash collected and total amount spent on petrol. One owner actually has a worksheet which his drivers fill in each evening. Included in this worksheet are driving start and finish times, a daily kilometre record, total fares collected, amount spent on petrol per day and a section for driver remarks.

The assumption on the part of most owners is that by paying drivers some percentage of fares (either of total fares or with petrol costs excluded) the incentive for making more journeys increases, thus more fares are collected and more money is received by both the owner and the driver. However, the temptation to exceed the official limit of eight passengers increases since additional passengers bring in additional fares. One owner surveyed pays his drivers a wage of 60 cents per kilometre travelled. Such a system takes account of low demand days when vehicles are not filled to capacity and the driver would otherwise receive a lower return. In addition, mileages can be checked and this, the owner feels, inhibits drivers from keeping fares for themselves.

Although individual fares are low, the magnitude of kombi taxi operation suggests that a great deal of money is brought in circulation each day. Given a return fare of 40 cents, a full load of eight passengers brings in R3,20 per journey. If twenty-four full loads are averaged per day (a figure that seems realistic on the basis of the evidence obtained in the survey), a total of R76,80 in daily fares may be collected. Petrol comprises 25% of the total (R19,20), leaving R57,60 from which the driver is paid and the vehicle is serviced and maintained before any profits are accrued (Table 5.1). Given that R76,80 is one day's takings, it can be expected that each kombi taxi generates approximately R24 038 per annum in total fares given a six day work week. Considering there are 82 kombi taxis in the study area, approximately R37 786 per week changes hands. Twenty-five per cent or R9 446 of which goes directly toward petrol and approximately R11 336 is paid to drivers.

A new ten-seater kombi costs an average price of R15 000. Some dealers do offer discounts on kombi purchases. For example, one supplier in Cape Town has three types of purchase discounts available for kombi customers. The discount type is dependent on the number of vehicles purchased. A 'private' discount, for the purchase of one vehicle, may be as much as R1 000. A 'fleet' discount of R2 000 per vehicle is qualified by the purchase of five to six kombis. 'Super fleet' discounts are granted for purchases of more than six kombis and

vary according to the total number of vehicles purchased. When bought on a hire purchase plan, interest for vehicle repayment is compounded monthly at an average rate of 25%, therefore owners who do purchase new vehicles have to meet monthly installment of \pm R500 out of the fares received (Table 5.2). Approximately 30% of the total monthly installment is made up of comprehensive insurance which is mandatory with a vehicle bought on the hire purchase plan. Over a three and a half year period this amounts to insurance payments of over R6 000. In recent years the price of comprehensive insurance has skyrocketed from approximately R400 per annum in 1981 to somewhere in the range of R1 800 per annum today, a 450% increase.

At least one of the kombi taxi owners surveyed prefers to purchase used vehicles rather than new ones because of the high monthly installment rates associated with new vehicle purchases. The transaction for ownership of a used vehicle tends to be in cash so as to avoid the extra cost of interest and comprehensive insurance covering the repayment period. Used kombi resale prices vary greatly. The selling price is in direct relation to vehicle condition and current demand. In July 1984 five year old Toyota kombis could be bought for between R4 000 and R7 000. Volkswagen kombis were roughly the same price at \pm R6 000. Most two year old Volkswagen, Datsun and Toyota kombis cost \pm R10 000. This low rate of depreciation is a response to the demand for good used vehicles suitable for use as taxis and means that owners who sell their kombis after 18 months are able to maximize returns on their capital outlay.

TABLE 5.2

COST OF NEW TEN-SEATER KOMBI BY HIRE PURCHASE

Showroom price		<u>R15 000</u>
Less deposit at 22%	R3 300	
		R11 700
Hire Purchase Repayment on R11 700:		
Insurance repayment (monthly rate)	R 150	
Vehicle repayment (monthly rate)	R 353	
Total monthly repayment	<u>R 503</u>	
Total annual repayment	R6 036	
Total annual repayment over 3,5 year hire purchase plan	R21 126	
Actual cost: (including deposit, insurance and finance charges; excluding sales tax)		<u>R24 426</u>
Percent difference (showroom price vs actual cost)		39%

The role of the kombi taxi is three-fold, i.e. that of a transporter of people, a developer of entrepreneurial skills and an income generator. Firstly, as a transporter of people the kombi taxi offers speedy, comfortable and safe service to a high daily flow of urban commuters. In fact, approximately 82 176 passengers are conveyed each day by the 428 kombi taxis registered in the Cape Town Metropolitan Transport Area. The role of the kombi taxi as a transporter of people is particularly significant as most residents who travel by kombi taxi originate their daily journeys from some location out on the Cape Flats and are therefore dependent on some mode of mass or group transport. In transporting passengers along routes that cut across mass transport networks, the kombi taxi reduces the frequency of modal change and acts as a supplementary service to existing transport modes. Journey details in the study area clearly illustrate this point by showing how modal changes associated with a particular journey are reduced by one-third when the kombi taxi is utilized. Not only does the kombi taxi reduce total commuting time by decreasing the number of modal changes associated with journeys, it also provides a speedier service than the bus as a result of its compact size and manoeuvrability. Given that nearly all kombis used as taxis have a seating capacity of ten, yet by law are authorized to convey only eight passengers, overcrowding is avoided and comfort may be achieved by the commuter through kombi taxi travel. The kombi taxi also offers a safer service for the urban commuter than that provided by either the bus or train service because of its more personalized nature. For example, door to door service is frequently used by pensioners and parcel-laden shoppers. In this regard it is important to note that Fridays have been shown as the highest kombi

taxi demand days and as Fridays are generally pay days, commuters can be assumed to be selecting the safer and more reliable mode of transport - the kombi taxi.

The second role of the kombi taxi is that of a developer of entrepreneurial skills. The range of skill development begins at the level of the young 'skolly' who frequents the ranks to do odd jobs for the drivers, all the way up to the fleet owner who controls a number of taxis. Drivers learn to deal with money through fare collection, allocation of change, petrol purchases and commission wages. In addition, they learn the art of profit maximization by noting the demand periods when full loads occur more often and thus, more in total fares may be collected per journey. For the kombi driver, operating during peaks is to his advantage given the high frequency of full trips associated with this demand period. On average, sixteen of the twenty-four full trips recorded each day occur during the peak period. Thus, during the off peak midday period, given the cost of petrol and low commuting demand, it often pays the driver to wait at the rank for potential passengers rather than cruise in search of them. This sort of profit maximization increases time and cost utility and is acquired by the kombi taxi driver after time in the business. These skills which the driver acquires may aid him as he aspires to individual taxi ownership. Owner/drivers and fleet owners maintain an even greater range of entrepreneurial skills than drivers. Most owners keep log books of daily fares collected, petrol costs, kilometres travelled and wages paid. Owners also must keep check of their business operation at the rank to ensure its proper and efficient functioning. Thus, the kombi taxi plays a useful role in the

The primary function of the kombi taxi is to provide a service as a necessary component of the metropolitan transportation system. The transportation system of Cape Town incorporates aspects of capitalist, socialist, non western and colonial cities. Based on a capitalist system, yet reflecting aspects of colonial inheritance, the mass transportation system of Cape Town is primarily geared to providing access between work place and the residences of that working force. This phenomenon is reflected in higher bus and train service frequency to areas on the Cape Flats as compared with those serving the white residential areas.

A high proportion of the population in these areas are unable to provide their own means of transport, leading to stress on the existing transportation system as it attempts to cater for increasing demands. However, at the same time, increased profits accrue to the group and mass transport operators as the frequency of capacity loads is increased. The local bus company in Cape Town, for example, generates an annual after-tax profit reaching seven figures. The transportation system is similar in one respect to the socialist city in that workers are heavy users of the system and realize reduced transportation costs by way of subsidized mass transport fares. In South Africa, worker fares are subsidized as a large proportion of the labour force have been moved to concentrated outlying areas as a result of Government policy.

Given the characteristics of the transportation system it is not surprising that a combination of market forces and strong demands have

the urban activity system. Officially recognized as an important mode of transport, municipalities have attempted to provide an established and well organized base from which the taxi service is able to operate. Taxis are issued designated rank locations, subject to regulations and policed by local traffic departments in a manner that ensures maintenance of the quality of service. In fact, the demand for the kombi taxi as a form of alternative transport is so great that since 1978, when they received official recognition, their numbers have grown steadily.

Research in Cape Town has shown that, more than just a demand, there is an absolute need for the kombi taxi in the transportation hierarchy. This need is demonstrated by the prevalence of kombi taxis throughout the Cape Town Metropolitan Transport Area, many of which are unlicensed. If the Welgemoed Commission's recommendation to phase out the kombi as a taxi is implemented, the number of legal taxis will be reduced and therefore an even greater strain will occur on the existing transportation system.

Given alternative travel modes, individuals choose the level of available service which best fits their needs and income capabilities. As an alternative mode of transport, the kombi's popularity is associated with the speedier and more convenient service it provides, as well as the lower cost of that service. A low cost to the commuter in terms of fares is maintained by fully loaded journeys associated with high demand. By offering a personalized, speedy and efficient service to the urban commuter, the kombi taxi is able to fill that need which has previously been left unsatisfied and therefore it should continue to function as part of the metropolitan transport system.

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APPENDIX 1

TAXI RANK LOCATION, SIZE AND PERMITS

CAPE TOWN CITY COUNCIL

<u>RANK LOCATION</u>	<u>RANK SIZE</u>	<u>PERMITS ISSUED</u> *
<u>Athlone</u>		
Old Klipfontein @ Cornhill	12 taxis	12 coloured kombis
<u>Blue Route Centre</u>		
Parking Area, Blue Route Centre	2 taxis	2 coloured kombis
<u>Central (five locations)</u>		
Adderley @ Church and Longmkt		
Herengracht @ Fountain and Riebeeck		
Lower Plain @ Darling and Castle	91 taxis	21 coloured sedans
St Georges @ Hout and Castle		70 white sedans
Long Mkt @ Longs and Berg		
<u>Claremont</u>		
Claremont Station	10 taxis	9 coloured kombis 1 white sedan
<u>Gatesville</u>		
Heinz @ Gatesville	2 taxis	2 coloured kombis
<u>Hanover Park</u>		
Surana @ Hanover Park	21 taxis	21 coloured kombis
<u>Heideveld</u>		
Heideveld @ 5th	2 taxis	2 coloured kombis
<u>Maitland</u>		
Koeberg @ Coronation and Vortrekker	3 taxis	2 coloured kombis 1 white kombi (for coloured)

Mitchells Plain (ten locations)

Simonsig @ Silverhurst and Boschenda1	9 taxis	
Cedars @ Weltevrede	7 taxis	
Silversand @ Cypress	2 taxis	
Anandel @ Avacado	5 taxis	
Juno @ Mitchells	6 taxis	40 coloured kombis
Mitchells @ Orpheus	1 taxi	5 coloured sedans
Spine @ Weltevrede	7 taxis	
Huguenot @ Franschoek	3 taxis	
Spine @ Dennegeur	2 taxis	
Morning Glory @ Lentegeur	3 taxis	

Netreg

Netreg Station	4 taxis	4 coloured kombis
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Parkwood

Blackbird @ Accasia	15 taxis	15 coloured kombis
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Plumstead

Cecil @ Station	2 taxis	2 coloured kombis
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Retreat

Retreat @ 12th	8 taxis	8 coloured kombis
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Sea Point

Beach @ St Johns	6 taxis	6 white sedans
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Surwell

Surwell	1 taxi	1 coloured kombi
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Steenberg

Henley @ Station	22 taxis	22 coloured kombis
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Wynberg

Maynard @ Station	15 taxis	5 coloured kombis 1 white kombi 9 white sedans
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Vanguard-Newfield

Vanguard @ Newfield	2 taxis	2 coloured kombis
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Cape Town Station (two locations)

Station Deck	32 taxis	1 coloured kombi
Street Level		31 white sedans

Cape Town Docks

Docks	33 taxis	2 white kombis 31 white sedans
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Diep River

Station	2 taxis	2 coloured kombis
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Heathfield

Station	2 taxis	2 coloured kombis
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Mowbray

Station	7 taxis	7 coloured kombis
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Observatory

Station	6 taxis	4 coloured sedans 2 white sedans
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Ottery

Station	3 taxis	3 coloured kombis
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Retreat

Station	30 taxis	29 coloured kombis 1 white kombi
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Rondebosch

Station	3 taxis	1 coloured sedan 2 white sedans
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Salt River

Station	8 taxis	5 coloured sedans 3 white sedans
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* Permits issued to white, coloured or african owners of taxis

TOTAL TAXIS
CAPE TOWN CITY COUNCIL

<u>RACE</u>	<u>TOTAL</u>	<u>KOMBI</u>	<u>SEDAN</u>	<u>% KOMBI</u>
Coloured	229	193	36	84
African	-	-	-	-
White	160	5	155	3
Total	389	198	191	51

CAPE DIVISIONAL COUNCIL

<u>RANK LOCATION</u>	<u>RANK SIZE</u>	<u>PERMITS ISSUED</u> *
<u>Atlantis</u> (three locations)		
Atlantis Service	7 taxis	7 coloured kombis
Grovenor		
Saxon Sea		
<u>Belhar</u> (four locations)		
Acordian Way		
DeMist	17 taxis	17 coloured kombis
Chestnut Way		
Werkgenot		
<u>Bishop Lavis</u>		
Lavis	7 taxis	6 coloured kombis 1 coloured sedan
<u>D.F. Malan</u>		
Airport	8 taxis	8 white sedans
<u>Eureka Estate</u>		
Old Stellenbosch	7 taxis	7 coloured kombis
<u>Grassy Park</u> (three locations)		
Buck @ Fifth	26 taxis	39 coloured kombis
Italian @ Fifth	5 taxis	2 coloured sedan
Victoria @ Busy Corner	10 taxis	
<u>Hout Bay</u>		
Harbour	2 taxis	1 coloured kombi 1 coloured sedan
<u>Mamre</u>		
Mamre	3 taxis	2 coloured kombis 1 coloured sedan
<u>Matroosfontein</u>		
Civic	5 taxis	3 coloured kombis 2 african kombis

<u>Ocean View</u>		
Gemini Way	9 taxis	9 coloured kombis
<u>Pella</u>		
Pella	1 taxi	1 coloured kombi
<u>Range</u>		
Forest	3 taxis	2 coloured kombis 1 coloured sedan
<u>Ruiterwacht</u>		
Settlers	1 taxi	1 white sedan
<u>Uitsig</u>		
Connaught	12 taxis	12 coloured kombis

* Permits issued to white, coloured or african owners of taxis

TOTAL TAXIS
CAPE DIVISIONAL COUNCIL

<u>RACE</u>	<u>TOTAL</u>	<u>KOMBI</u>	<u>SEDAN</u>	<u>% KOMBI</u>
Coloured	112	106	6	95
African	2	2	-	100
White	9	-	9	-
Total	123	108	15	88

OTHER MUNICIPAL AUTHORITIES

<u>RANK LOCATION</u>	<u>RANK SIZE</u>	<u>PERMITS ISSUED</u> *
<u>Bellville</u>		
Bellville Station	14 taxis	5 coloured kombis 1 coloured sedan 2 african kombis 6 white sedans
<u>Brackenfell</u>		
Brackenfell Station	2 taxis	2 coloured sedans
<u>Durbanville</u>		
Plein @ Wellington	11 taxis	8 coloured kombis 1 coloured sedan 2 african kombis
<u>Fish Hoek</u>		
Fish Hoek Station	8 taxis	6 coloured kombis 2 white sedans
<u>Goodwood (three locations)</u>		
Vasco Station	2 taxis	16 coloured kombis
Goodwood Station	1 taxi	2 coloured sedans
Elsies River Station	15 taxis	
<u>Kraaifontein</u>		
Scottsdean Station	12 taxis	6 coloured kombis 6 coloured sedans
<u>Kuils River</u>		
Kuils River Station	8 taxis	8 coloured kombis
<u>Milnerton</u>	-	-
<u>Parow (three locations)</u>		
Parow Station (north)	1 taxi	11 coloured kombis
Parow Station (south)	5 taxis	1 white sedan
Tygerburg Station	6 taxis	

Pinelands

Mutual Station	7 taxis	2 coloured kombis 5 african kombis
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Simonstown

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Western Cape Administration Board
(five locations)

NY 50 @ NY 36	9 taxis	
NY 38	3 taxis	
Heideveld Station	3 taxis	32 african kombis
Nyanga Station	3 taxis	
Washington @ Circle	14 taxis	
Intertownship	43 taxis	19 african kombis 24 african sedans

* Permits issued to white, coloured or african owners of taxis

TOTAL TAXIS
OTHER MUNICIPAL AUTHORITIES

<u>RACE</u>	<u>TOTAL</u>	<u>KOMBI</u>	<u>SEDAN</u>	<u>% KOMBI</u>
Coloured	74	62	12	84
African	84	60	24	71
White	9	-	9	-
Total	167	122	45	73

TOTAL TAXIS
CAPE TOWN METROPOLITAN TRANSPORT AREA

<u>RACE</u>	<u>TOTAL</u>	<u>KOMBI</u>	<u>SEDAN</u>	<u>% KOMBI</u>
Coloured	415	361	54	87
African	86	62	24	72
White	178	5	173	3
Total	679	428	251	63

LOCAL STUDY AREA

Taxi Ranks within a Five Kilometre Radius of
Mowbray and Wynberg Ranks ▲

<u>Mowbray</u>		
Maitland	3 taxis	2 coloured kombis 1 white kombi (for coloured)
Pinelands	7 taxis	2 coloured kombis (for africans) 5 african kombis
Mowbray	7 taxis	7 coloured kombis (for africans)
Claremont	10 taxis	9 coloured kombis 1 white sedan
Athlone	12 taxis	12 coloured kombis
Western Cape Administration Board	14 taxis	14 african kombis
	<hr/>	<hr/>
Total	53 taxis	32 coloured kombis* 19 african kombis 1 white kombi** 1 white sedan

*9 coloured kombis operate for africans

**1 white kombi operates for coloureds

▲ Permits issued to white, coloured or african owners of taxis

Wynberg

Claremont	10 taxis	9 coloured kombis 1 white sedan
Ottery	3 taxis	3 coloured kombis
Plumstead	2 taxis	2 coloured kombis
Diep River	2 taxis	2 coloured kombis
Heathfield	2 taxis	2 coloured kombis
Parkwood	15 taxis	15 coloured kombis
Wynberg	15 taxis	5 coloured kombis 1 white kombi (for coloureds) 9 white sedans
<hr/>		
Total	49 taxis	38 coloured kombis 1 white kombi ** 10 white sedans

**1 white kombi operates for coloureds

APPENDIX 2

SURVEY SCHEDULE FORMS

TAXI TRIP RECORD
(Short Form)

1. Date: _____
3. Location: _____

A₁. Owner/Driver

8. Number of drivers employed:

0	1	2	3	4	5	6	7	more

9. Number of vehicles in pool:

0	1	2	3	4	5	6	7	more

17. Did you drive a taxi for someone else before you had this business?

Yes	No

18. Before you drove or owned a taxi, what sort of work did you do?

clerk	delivery	bldg/industry

City Tramways	Other

A₂. Driver

23. Before you started driving taxis, what sort of work did you do?

clerk	delivery	bldg/industry

City Tramways	Other

26. Wages, do you have a fixed wage, or receive a percentage of the fares?

fixed wage	percentage of fares

other

27. Are you a member of any taxi driver's association?

Yes	No

28. If yes, which association/s?

SABTA

B. Rank and Permit

34. From what rank is your permit issued? _____

35. What kind of permit do you have?

5 km	10 km	route	other

C. Route Characteristics

48. How many trips do you do in a day?

0-5	6-10	11-15	16-20	21-25

26-30	31-35	36-40	41-45	46-50

more than 50

D. Daily Journey Activities

49. When is the busiest taxi driving time of the day?

a.m. peak	p.m. peak	both	other

(time: _____)

50. What day of the week is the busiest taxi driving day?

Mon	Tue	Wed	Thur	Fri	Sat	Sun

E. Passenger Characteristics

62. Are your passengers mostly men or women?

men	women	approx equal

F. Fare Structure

65. Do you have a fixed fare charge for the passengers?

Yes	No

G. Service and Maintenance

78. What do you do with the combi at night?

79. How do you keep the combi safe at night?

86. How do you pay for your petrol?

cash	charge	other

TAXI TRIP RECORD
(Long Form)

1. Date: _____
 2. Time: _____
 3. Location: _____
 4. Name of Business: _____

5. Vehicle type (the one operated at time of interview):

Toyota	VW	Datsun	Other
--------	----	--------	-------

6. Year make of this vehicle:

'77	'78	'79	'80	'81	'82	'83
'84	Other					

7. Are you the owner or driver?

owner/driver	driver	owner
--------------	--------	-------

A₁ Owner/Driver

8. Number of drivers employed:

0	1	2	3	4	5	6	7	more
---	---	---	---	---	---	---	---	------

9. Number of vehicles in pool:

0	1	2	3	4	5	6	7	more
---	---	---	---	---	---	---	---	------

10. Do you have any partners in this business or are you the only owner?

partners	no partners
----------	-------------

11. Number of partners in the business:

0	1	2	3	4	5	6	7	more
---	---	---	---	---	---	---	---	------

12. In what year did you start this taxi business?

'77	'78	'79	'80	'81	'82	'83
'84	Other					

13. How did you raise enough money to start a taxi business?

self-earned	borrowed from friends
pool of resources	
loan from lending institution	
other	

14. Have you always had _____ (no. of vehicles) vehicles?

Yes	No
-----	----

15. If no, what year/s did you get other vehicles? i.e. what year did you expand the business?

'77	'78	'79	'80	'81	'82	'83
'84	Other					

16. What made you decide to start a taxi business?

17. Did you drive a taxi for someone else before you had this business?

Yes	No
-----	----

18. Before you drove or owned a taxi, what sort of work did you do?

clerk	delivery	bldg./industry
City Transp.	Other	

A₂ Driver

19. Where can I contact the owner?

Yes	No
-----	----

20. Did you drive a taxi for a different owner before you worked for this owner?

21. In what year did you start working for this owner?

'77	'78	'79	'80	'81	'82	'83
'84	Other					

22. In what year did you start driving taxis?

'77	'78	'79	'80	'81	'82	'83
'84	Other					

23. Before you started driving taxis, what sort of work did you do?

clerk	delivery	bldg./industry
City Transp.	Other	

24. Why did you change jobs to start driving taxis?

salary	hours	independence	other
--------	-------	--------------	-------

25. When do you get paid for driving the taxi?

daily	weekly	bi-weekly	monthly
other			

26. Wages, do you have a fixed wage or receive a percentage of the fares?

fixed wage	percentage of fares
other	

27. Are you a member of any taxi driver's association?

Yes	No
-----	----

28. If yes, which association/s?

SABTA	
-------	--

29. How long have you been a member?

30. If a member, have you heard that the gov't may phase-out combi taxis?

Yes	No
-----	----

31. If yes, what do you think about this?

B. Rank and Permit

32. How many passenger seats does this combi have?

10-seater	12-seater	other
-----------	-----------	-------

33. How many passengers are you allowed to carry?

less than 8	eight	more than 8
-------------	-------	-------------

34. From what rank is your permit issued?

5 km	10km	route	other
------	------	-------	-------

35. What kind of permit do you have?

good	bad
------	-----

36. Is it a good or a bad thing to be forced to have a permit?

Yes	No
-----	----

37. Do you know any taxi drivers who drive without permits from the Traffic Dept. or Local Road Transportation Board?

Yes	No
-----	----

38. Have you ever been hassled by the traffic police for not having a permit?

Yes	No
-----	----

39. Have you ever been hassled by the traffic police for any other reason/s?

40. If yes, what reason/s?

C. Route Characteristics

41. Where do you start your route?

42. Where do you end your route?

43. What roads do you use?

44. Do you use different roads or the same roads in heavy traffic?

different	same
-----------	------

45. How much time is a taxi journey on this route in the a.m.?

less 10 min	11-15 min	16-20 min	more
-------------	-----------	-----------	------

46. How much time is a taxi journey on this route in the middle of the day?

less 10 min	11-15 min	16-20 min	more
-------------	-----------	-----------	------

47. How much time is a taxi journey on this route in the p.m.?

less 10 min	11-15 min	16-20 min	more
-------------	-----------	-----------	------

48. How many trips do you do in a day?

0-5	6-10	11-15	16-20	21-25	26-30
-----	------	-------	-------	-------	-------

D. Daily Journey Activities

49. When is the busiest taxi driving time of the day?

a.m. peak	p.m. peak	both	other
-----------	-----------	------	-------

(time: _____)

50. What day of the week is the busiest taxi driving day?

Mon	Tue	Wed	Thur	Fri	Sat	Sun
-----	-----	-----	------	-----	-----	-----

51. Do you have a time in the day when you do not drive a taxi?

Yes	No
-----	----

52. If yes, when is that time of day?

53. When do you leave home to start work?

54. When do you pick up your first passengers?

55. Where do you pick up your first passengers?

56. Where do you drop them off?

57. When do you pick up your last passengers of the day?

58. Where do you pick up your last passengers?

59. Where do you drop them off?

60. Do you pick up or drop off passengers along the way (along the route)?

Yes	No
-----	----

E. Passenger Characteristics

61. How many passengers do you normally carry?

less than 8	eight	more than 8	other
-------------	-------	-------------	-------

62. Are your passengers mostly men or women?

men	women	approx equal
-----	-------	--------------

63. Do you carry the same passengers on different days?

Yes	No
-----	----

64. Why do you think people use your taxi?

safety	comfort	convenience
time saver	caters for indiv. pref.	
costs less than other public transp.		
other		

F. Fare Structure

- 65 Do you have a fixed fare charge for the passengers?

Yes	No
-----	----
- 66 If yes, what is the fixed fare? _____
- 67 If the passengers pay extra on weekends, how much do they pay? _____
- 68 Do passengers pay extra for packages they carry on with them?

Yes	No
-----	----
- 69 If yes, how much extra do they pay? _____
- 70 Any other times when a passenger must pay more than the normal fare?

Yes	No
-----	----
- 71 If yes, when must they pay more? _____
- 72 Do you ever give passengers cheaper fares, or are the fares always the same?

cheaper	same
---------	------
- 73 If so, for what reasons do you give cheaper fares? _____
- 74 What do you do with the money you are paid during the day? _____
- 75 When do you deposit this money? _____
- 76 Where do you deposit this money? _____

G. Service and Maintenance

- 77 Where do you take the combi when you have finished work?

my house	owner's home	other
----------	--------------	-------
- 78 What do you do with the combi at night? _____
- 79 How do you keep the combi safe at night? _____
- 80 Who keeps the combi washed and cleaned?

driver	owner	other
--------	-------	-------
- 81 When does the combi get washed and cleaned? _____
- 82 Where does the combi get washed and cleaned? _____
- 83 Where do you buy petrol for the combi? _____
- 84 How often do you buy petrol there?

always	occasionally
--------	--------------
- 85 If you go to the same station, why?

discount	other
----------	-------
- 86 How do you pay for your petrol?

cash	charge	other
------	--------	-------
- 87 How often do you take the combi in to be serviced?

regularly	occasionally	never
only when something wrong		
- 88 What do you do while it is in for servicing? _____
- 89 Where do you get the servicing done on the combi? _____

PASSENGER TRIP RECORD

M F

1. Date: _____

2. Time: _____

3. Location: _____

A. Daily Journey

- 5. Do you ride the taxi often?
- 6. How often do you use the taxi? i.e. days per week
- 7. Do you ride the taxi on the weekend also, or just during the week?
- 8. Do you ride the taxi in the morning, or evening, or both?
- 9. When you do not ride the taxi, how do you get to where you need to go?
- 10. Why do you ride the taxi?

Yes	No						
one	two	three	four	five	six	sev	
weekdays only			weekends only			both	

morning only	evening only	both
--------------	--------------	------

bus	train	car	train and bus	other
-----	-------	-----	---------------	-------

safety	comfort	convenience
time saver	caters for indiv prefer	
costs less than other public trans		
other		

11. When you left home this morning, what sort of transport did you use?

car	bus	train	taxi	combination
other _____				

12. How many different types of transport do you use to get to where you want to go (on your journey to work)?

one	two	three	more than three
-----	-----	-------	-----------------

B. Route Characteristics

- 13. If you ride the taxi in the morning, where does it pick you up?
- 14. What time does the taxi pick you up?
- 15. Where does the taxi drop you off from your morning journey?
- 16. If you ride the taxi in the evening, where does it pick you up?
- 17. What time does the taxi pick you up?
- 18. Where does the taxi drop you off from your evening journey?

my home	bus stop	bus terminus (ta
in front of shop		other

my home	bus stop	bus terminus (ta
in front of shop		other

19. If you had ridden the bus would it have dropped you off closer to home than the taxi, or further?

closer	further	same

20. Do you get home (to your destination) quicker by taxi or by bus?

taxi	bus	same

21. In the evening, do you wait in line longer for the taxi or for the bus?

taxi	bus	same

22. On what days are taxi (waiting) lines the longest?

Mon	Tue	Wed	Thur	Fri	Sat	Sun

C. Fare Structure

23. How much money is your taxi ride?(single fare)

.25	.30	.35	.40	.45	.50	.55	ot

24. How much money would a bus ride be to the same place? (single, no clip-card)

25. Do you use a clipcard when you ride the bus, or do you pay each time you ride the bus?

clip card	pay each time	other

26. Do the people you work for give you extra money for transportation?

yes	no

D. Passenger Characteristics

27. When did you begin riding in taxis?

'77	'78	'79	'80	'81	'82	'83	'84	ot

28. Did you used to ride in the 'old valient' taxis?

yes	no

29. Have you ever had anything stolen from you when riding the taxi?

yes	no

30. Have you ever had anything stolen from you when riding the bus?

yes	no

31. Have you ever had anything stolen from you when riding the train?

yes	no

Comment

32. Why do you ride the taxi?

speed	convenience	comfort	usual mode
safety	late for work	cheaper than bus	
cheaper than train	other		

APPENDIX 3

CASE STUDIES

OWNER A

Owner A has lived in Nyanga since 1945. He has a wife and four children. Prior to driving taxis he worked for the civil service. Owner A began driving taxis for his uncle in 1970. When his uncle moved to Pretoria in 1975, Owner A bought the business which at the time consisted of a rank permit and a sedan taxi. Four years later Owner A acquired his first kombi vehicle. Having retired from driving in 1981, he now owns five kombi taxis and employs five drivers who earn an average wage of R120 per week. His drivers collect approximately R100 in total fares per day of which R25 is for petrol and R20 is for the driver in the form of a wage (25% total fares minus the cost of petrol).

His five taxis are ranked within the african townships of Nyanga and Guguletu and have five kilometre radial distance permits attached. He received two rank permits by application and purchased the other three (the one purchased from his uncle and the other two purchased for R2 750 each). Rank permits are a form of investment to beat inflation says Owner A. Today, for example, one 'rank' in a township sells for approximately R10 000.

Owner A's attitude about taxis is that they are "doing something for the community by trying to put people nearer to where they must go." Talking openly about taxis and other related issues, he feels that

"we (as citizens) must commit ourselves to politics if we talk in South Africa. We (taxi operators) are business people, but policy (of the Government) commits us to politics. Everything here is politics, even where we live."

OWNER B

Owner B's family has been involved in the taxi business for over forty-five years. His father drove taxis for thirty-five years before retiring from the business in 1974. Owner B, initially trained as a toolmaker, inherited the family taxi business in 1974 which, at the time, consisted of a rank permit at Wynberg and one sedan taxi. He expanded the business in 1978 upon being granted public road carrier permits for three additional vehicles. Owner B has since retired from driving and now manages his taxi business and owns a garage, giving service discounts to other taxi operators in return for patronage.

Owner B's present taxi fleet consists of five kombis and one sedan. His vehicles are ranked at Wynberg, Retreat and Steenberg. He inherited one rank permit from his father, applied for three and purchased two. All of his radial distance permits are for a five kilometre range. Purchasing second hand Volkswagon kombis to stock his fleet, Owner B usually pays between R3 000 and R3 500 per vehicle.

Owner B sees taxi associations as long-term strategies of organization for the benefit of those involved in the taxi business. Regarding the Welgemoed Commission recommendation to phase out kombis as taxis, Owner B asks, "Other than the bus company, what is a person's alternative in public transport?" He feels the intention of the recommendation is to "restrict the earning ability of the non whites."

OWNER C

Owner C was a self employed carpenter prior to entering the taxi business in 1972. He purchased a rank permit for R3 000 but did not have the additional funds at the time necessary to purchase a vehicle. When he eventually bought a taxi, an old valiant, he employed a driver to operate it. After paying the driver he received approximately R120 per week. In 1976 Owner C abandoned the carpentry business and began driving the taxi himself. Between 1976 and 1978 Owner C operated from the Hanover Park rank. In 1979 he changed to operate from the Uitsig rank. He drove from this rank until 1982 at which time he retired from driving. Speaking of the taxi business, he remarks that, "This is the work that took me out of shit street".

Owner C now owns six kombis ranked at Bishop Lavis, Hanover Park, Mitchells Plain and Uitsig. His present drivers have been with him for between three and four years and receive a wage of 30% on total fares collected. Each of his taxis cover between 150 and 200 kilometres in total distance per day, using R20 to R25 for petrol. Owner C's most recent rank purchase at Uitsig cost R8 000. In less than a year however, he has made up the difference. In fact, for each kombi he owns Owner C receives approximately R250 over per week (after driver and petrol have been paid). Thus, for his six kombi taxis he receives approximately R6 000 income per month.

Owner C has been affiliated with various taxi associations but does not think they do much good. He feels that the operators are there only to make money and not to make the taxi business operate any better.

OWNER/DRIVER A

Owner/driver A has been a taxi driver for eight years. He began driving taxis at Ocean View and worked there until 1979 at which time he moved to operate in Mitchells Plain where he remained until 1981. Owner/driver A liked working at Mitchells Plain, saying that, "The money was good and the drivers looked after each other." In 1981 he purchased a kombi and moved from Mitchells Plain to operate in the Wynberg - Grassy Park/Lotus River area. Here Owner/driver A hires a rank for R115 per week. Working a six day week he collects a total of R550 in fares. A breakdown of Owner/driver A's weekly salary leaves him with R205 after his subsistence expenses have been paid.

Total fares collected per week		<u>R550</u>
Less room and board	R25	
Less weekly installments	R55	
Less petrol	R150	
Less rank	R115	
Total remaining		<u>R205</u>

DRIVER A

Driver A has been driving taxis since 1971. Before that time he worked as a pool cleaner and later as a vehicle mechanic. Employed by a taxi owner who has one kombi, Driver A conveys passengers along the Wynberg - Parkwood route. The return trip on this route is approximately five kilometres and takes roughly fifteen minutes to complete. Driver A collects approximately R70 in total fares on the average weekday and approximately R80 on a Saturday. He does not drive on Sunday. As a wage, Driver A receives 30% of the total fares collected minus the cost of petrol. In addition, he has a contract job with nine factory workers whom he collects six mornings per week. ceives a weekly salary of R30 for this job, keeping the sum total amount. Thus, Driver A's weekly income is approximately R123. On this salary he must support his wife and three children. Driver A has three times applied for a public road carrier permit in order that he may operate his own taxi, however, his applications have yet to be granted.

DRIVER A
WEEKLY SALARY BREAKDOWN

Weekday Fares

Total fares collected
at R70 per day R350

Less petrol
at R20 per day R100

Total weekday wage
at 30% total fares
minus petrol R75

Saturday Fares

Total fares collected R80

Less petrol
at R20 per day R20

Total Saturday wage
at 30% total fares
minus petrol R18

Total weekly wage
from fares R93

Total weekly wage
from contract R30

Total weekly salary R123

APPENDIX 4

SURVEY RESULTS - ABSTRACTED

TAXI TRIP RECORD

Questions and Responses

5. Vehicle type:
- Toyota (40%)
 - Volkswagen (30%)
 - Datsun (30%)
6. Year make of vehicle:
- 1983 (10%)
 - 1981 (10%)
 - 1979 (50%)
 - 1975 (10%)
 - 1974 (20%)
7. Are you the owner or the driver?
- Owner (6%)
 - Driver (81%)
 - Owner/Driver (13%)
18. Before you drove or owned a taxi, what sort of work did you do?
(owner/driver)
- Commerce (14%)
 - Building (72%)
 - Civil Service (14%)

23. Before you started driving taxis, what sort of work did you do? (driver)
- Commerce (25%)
 - Building (30%)
 - Bus driver (15%)
 - Delivery (10%)
 - Taxi driver (5%)
 - Auto mechanic (5%)
 - Machinest (2%)
 - Civil Servant (8%)
26. Wages, do you have a fixed wage or receive a percentage of the fares? (driver)
- Percentage (88%)
 - Fixed wage (12%)
32. How many passenger seats does this kombi have?
- Ten (100%)
35. What kind of permit do you have?
- 5 kilometre (80%)
 - 35 kilometre (20%)
48. How many trips do you do in a day? (full trips)
- 10 - 12 (3%)
 - 13 - 15 (30%)
 - 16 - 18 (10%)
 - 19 - 21 (25%)
 - 22 - 24 (15%)
 - 25 - 27 (10%)
 - 28+ (7%)
49. When is the busiest taxi driving time of the day?
- a.m. peak (18%)
 - p.m. peak (6%)
 - Both a.m. and p.m. peak (76%)

50. What day of the week is the busiest taxi driving day?
- Friday (10%)
 - Saturday (27%)
 - Friday and Saturday (37%)
 - Saturday and Sunday (10%)
 - Saturday and Monday (6%)
 - Friday, Saturday and Sunday (10%)
53. When do you leave home to start work?
- Before 5:00 a.m. (50%)
 - 5:00 a.m. - 5:30 a.m. (40%)
 - 5:31 a.m. - 6:00 a.m. (10%)
57. When do you pick up your last passenger of the day?
- Before 6:00 p.m. (11%)
 - 7:01 p.m. - 8:00 p.m. (34%)
 - 8:01 p.m. - 9:00 p.m. (22%)
 - 9:01 p.m. - 10:00 p.m. (11%)
 - After 10:00 p.m. (22%)
60. Do you pick up or drop off passengers along the way (along the route)?
- Yes (91%)
 - No (9%)
62. Are your passengers mostly men or women?
- Men (2%)
 - Women (22%)
 - Both men and women (76%)
64. Why do you think people use your taxi?
- Safety (9%)
 - Comfort (9%)
 - Convenience (18%)
 - Time saver (46%)
 - Cost (18%)

65. Do you have a fixed fare charge for the passengers?
Yes (98%)
No (2%)
74. What do you do with the money you are paid during the day?
Keep with (100%)
76. Where do you deposit this money?
Owner's home (100%)
78. What do you do with the kombi at night?
To owner's home (31%)
To driver's home (69%)
80. Who keeps the kombi washed and cleaned?
Driver (100%)
82. Where does the kombi get washed and cleaned?
Rank (63%)
Home of owner or driver (37%)
86. How do you pay for your petrol?
Cash (100%)
Amount spent per day:
Less than R15 (3%)
R16 - R20 (25%)
R21 - R25 (33%)
R26 - R30 (36%)
R31+ (3%)
89. Where do you get the servicing done on the kombi?
Mechanic (80%)
Operator (20%)

PASSENGER TRIP RECORD

Questions and Responses

6. How often do you use the taxi? (days per week)
- One day (1/15)
 - Three days (2/5)
 - Five days (1/3)
 - Six days (1/5)
7. Do you ride the taxi on the weekend also, or just during the week?
- Weekdays only (1/2)
 - Weekends only (1/10)
 - Both weekdays and weekends (2/5)
8. Do you ride the taxi in the morning, evening or both?
- Morning only (1/5)
 - Evening only (1/5)
 - Both morning and evening (3/5)
9. When you do not ride the taxi, how do you get to where you need to go?
- Bus (1/3)
 - Train (1/4)
 - Automobile (1/3)
 - Other (1/12)
12. How many different types of transport do you use to get to where you want to go? (on your journey to work)
- Taxi only (1/3)
 - Train and taxi (2/3)

13. If you ride the taxi in the morning, where does it pick you up?
 Bus stop (1/5)
 Bus Terminus (4/5)
16. If you ride the taxi in the evening, where does it pick you up?
 Bus/Train interchange (5/5)
22. On what days are taxi (waiting) lines the longest?
 Friday (3/5)
 Friday and Saturday (1/5)
 Saturday and Sunday (1/5)
25. Do you use a clipcard when you ride the bus, or do you pay each time you ride the bus?
 Clipcard (1/7)
 Pay each time (6/7)
32. Why do you ride the taxi?
- | | |
|--------------------|-----|
| Time saver (2/5) | 40% |
| Convenience (1/6) | 17% |
| Comfort (1/12) | 8% |
| Cost (1/6) | 17% |
| Reliability (1/12) | 8% |
| Efficiency (1/10) | 10% |