

3 Social networks: A review of literature relevant to the Pagewood Island study

The concept of social network as a means to investigate the different interactional spheres in which an individual is placed has been prevalent in the social sciences for many years. The appeal of the social network perspective lies in its focus on the relationships among social beings and on the configurations and significance of these relationships. This literature review begins by looking closely at the social network and examines the structure of the network. It considers how different researchers have defined the transactional possibilities of network members. This is considered a necessary departure point since it clarifies many of the terms and concepts that appear throughout the overview of literature that follows. The chapter then extends its focus and takes a look at uses of social networks within different disciplines. Section 3.2. deals with social networks within the social sciences. This is followed in section 3.3. by an examination of how the social network concept has been utilised within linguistics. Finally, in section 3.4. the focus of the review is again narrowed down to take a look at how others within the systemic functional tradition have begun to see the importance of the social network concept.

3.1 Social network structure

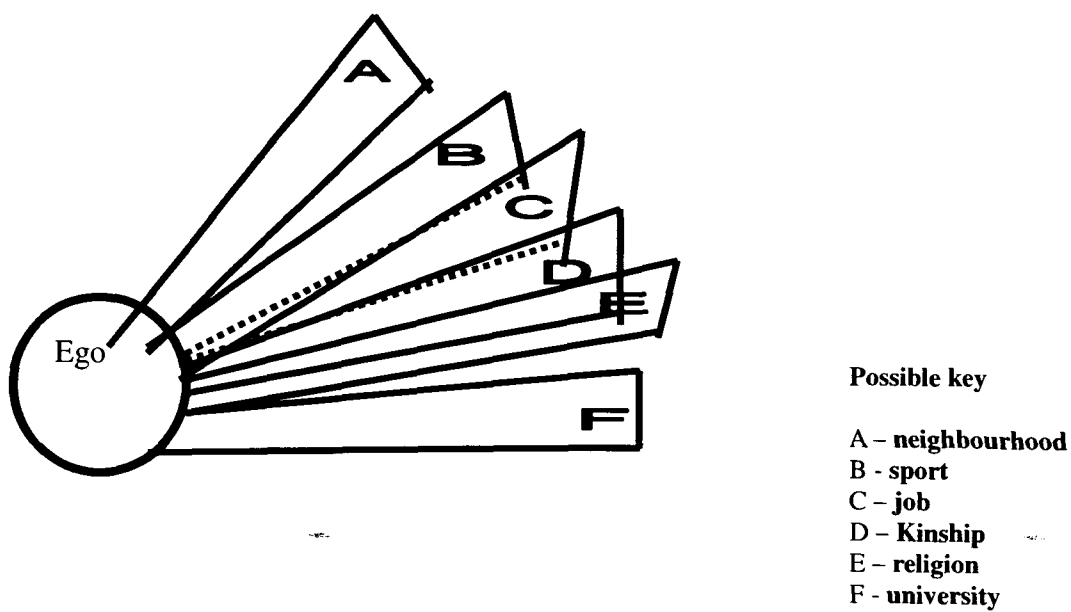
The concept of social network refers to the set of individuals and the links or number of transactions among them. The notion emphasises the patterns of the relationships and allows us to start to say something about the implications of these. In order for analysts to examine an individual's personal network or speech fellowship structure, to be able to interpret his transactions with his fellow beings, it is necessary to understand the different characteristics that construct a network. Networks may be defined in terms of

their structural or interactional make up. These two distinguishing characteristics are both important ‘in constraining social action’ (Milroy and Milroy, 1992:5). It is the interactional aspects of a network that will be looked at first.

3.1.1 Interactional criteria

Interactional refers to the content of the network ties, to the links of persons with whom a given person, *ego* in Boissevain’s (1974) terms, regularly interacts with, and their interconnections. It refers to criteria such as **multiplexity** and **uniplexity** and to the transactional content and directional flow of these transactions. Boissevain diagrammatically illustrates possible interconnected roles with his image of a many-bladed Japanese fan, each blade viewed as an individual’s partial network and as representing an activity field, but all converging at *ego* in the centre. This may be seen in figure 3.1.

Figure 3.1: Network of interconnected roles from ego’s point of view



(taken from Boissevain, 1974:29)

Multiplexity refers to the ‘number of exchange contents which exist in a relationship’ (Kapferer, 1969). A social network is said to be multiplex where individuals are simultaneously linked to one another in several different ways, for example, as kin, fellow employees and neighbours who voluntarily associate as friends. This multi-stranded link is a common feature of relatively isolated small communities and inner-city low status communities. This overlap could be shown diagrammatically as a fan with its blades overlapping, almost closed, illustrating the many-stranded nature of an individual’s interactional ties. The assumption in the network approach is that ‘where a many-stranded relationship exists between two persons, there is greater accessibility, and thus response to pressure, than is the case in a single-stranded relation’ (Boissevain, 1974:32). Multiplexity can be measured by dividing the number of multiplex relationships by the total number of all relevant relationships:

$$\text{Multiplexity} = \frac{Nm}{N} \times 100\%$$

N (N refers to the total number of persons)

Multiplexity can be contrasted with **uniplexity** where ties are single-stranded, individuals being linked in only in way. Continuing with Boissevain’s metaphor, it could be shown as a fully extended fan, the blades’ lack of overlap highlighting the single role relations often contracted in large-scale industrialized societies.

Transactional content is another interactional criteria. This refers to the quality of the relationship and is arrived at by classifying the elements exchanged. The transactional content indicates not only the investment of the actors in the relationship but also their anticipated benefits from it (Boissevain, 1974:33) and is connected to the final interactional criteria, namely, **directional flow**. This flow is the pattern of ties in the

transaction, the direction in which an exchange takes place in a relationship, and is again an indicator of the quality of network links. Links that are equal and symmetric reflect joint investment in relationships. The converse is true of unequal asymmetric ties.

3.1.2 Structural criteria

Social networks may also be characterised by other criteria, namely structural elements which ‘pertain to the shape and pattern of the network’ (Milroy and Milroy, 1992:5).

Here we are interested in network size, density, degree, centrality and clustering. Firstly, we can turn our attention to **density**, which refers to the fact that many people share the same social contacts. It is ‘the degree to which the members of a person’s network are in touch with each other independently of him’ (Boissevain, 1974:37). Density may be formulated by:

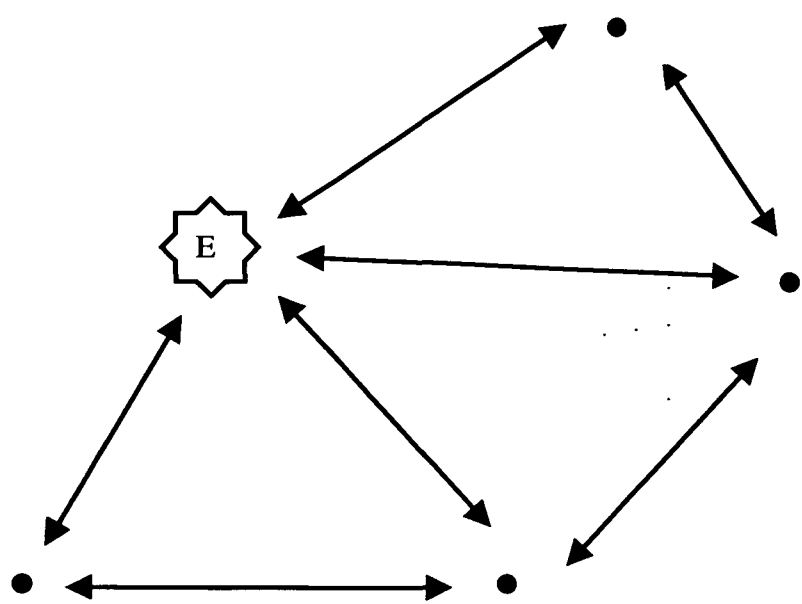
$$\text{Density} = \frac{100 N_a}{1/2 N (N-1)}$$

(N_a refers to actual links)
(N refers to total persons)

High-density personal network structures are known as **closed networks** and are found when an individual’s personal contacts all know each other. This is shown in figure 3.2 below, where E is the focal point of the network (ego) and the arrows represent reciprocal acquaintances.

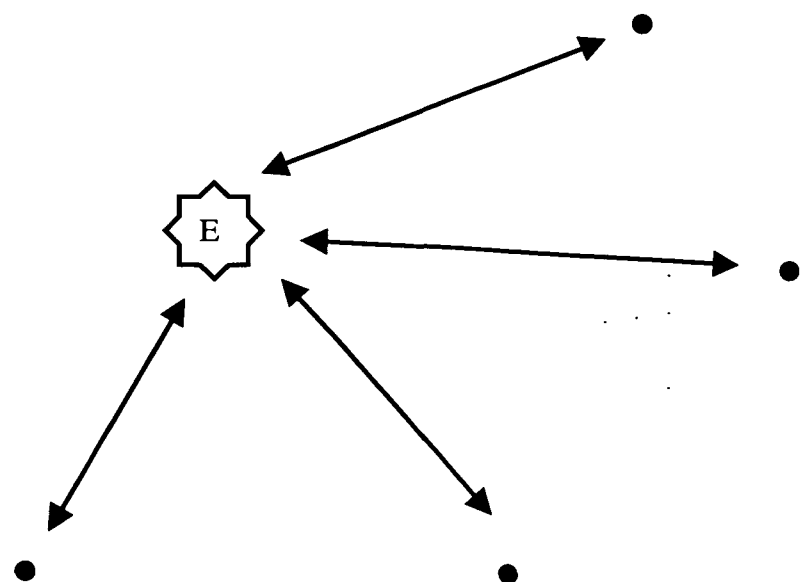
Low density on the other hand, occurs when individuals belong to an **open network** where personal contacts of a given person do not necessarily know each other. This is shown diagrammatically in figure 3.3. Again E represents ego.

Figure 3.2: High-density personal network structure



(adapted from Milroy, 1987:20)

Figure 3.3: Low-density personal network structure



(adapted from Milroy, 1987:20)

Density refers to the potential rather than actual transactional flow. Boissevain stresses that how an individual perceives the density of his network will influence his behavior. If a participant believes in a high degree of social investment in a relationship, if he believes there are strong ties to another individual, whether or not accurate, he will act accordingly and feel bound to reciprocate transactions promptly. In the present study all participants are interconnected, the members are all laterally linked and the network can be seen to be of relatively high-density.

Degree of connection of a network is the average number of relations each person has with others in the same network. It may be formulated as follows:

$$\text{Degree} = \frac{2 \times N_a}{N} \quad \begin{array}{l} (N_a \text{ refers to actual number of persons}) \\ (N \text{ refers to total persons}) \end{array}$$

The degree is informative in that it can give validity to different density scores that may otherwise appear the same.

Centrality is an important criteria, which allows a person with a relatively high number of links or paths of communication passing through him to influence and manipulate others in a network, to control, through unequal centrality, the transactional flow of information or goods and services to other network members. An individual's centrality is calculated in the following manner:

$$C = \frac{\text{sum of the least number of links from every member to every other member}}{\text{sum of shortest distance from Ego to every other member}}$$

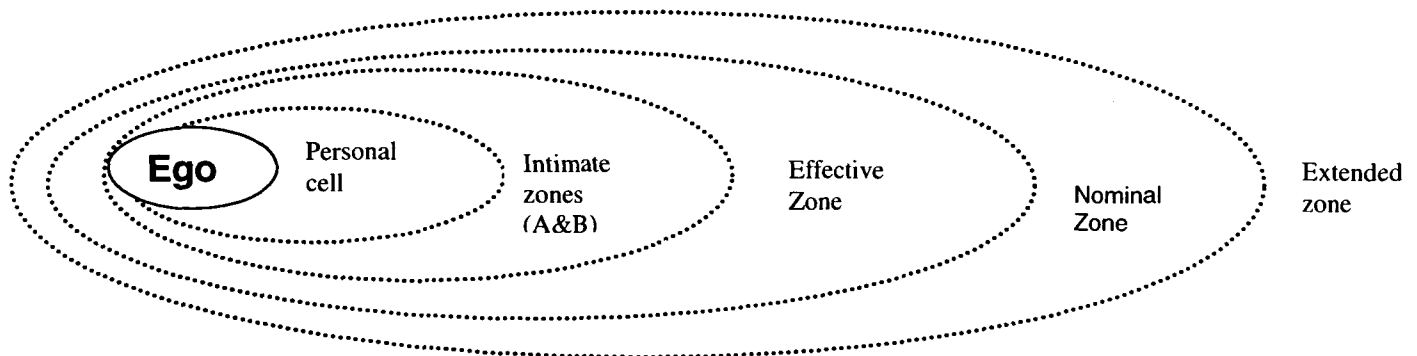
Boissevain cites Klien (1956) as an example of where the strategic importance of a high relative score for centrality in small group experiments has been demonstrated.

Centrality also plays a focal role in the Pagewood Island study where what is being examined is the ability to influence linguistic transactions. However, since the present study involves a relatively dense cluster rather than an entire personal network the centrality formulation set out by Boissevain is limited in application. In our Pagewood Island example with its 100% density and 4 members, the centrality for each person is 4. The centrality score is designed to examine ego's total personal network. The present study is of a partial network and a centrality score which takes into account the number and type of ties in such a network is practically more possible in that it does not have to deal with the enormity of a person's entire network. Milroy's Network Strength Score (detailed below) is thus considered more useful in defining central participants in partial networks such in the present research in that it enables us to express multiplexity, density and centrality in terms of factors definable from the data and which evidences levels of integration into the network.

Clustering in a network involves members forming 'segments or compartments ...which have a relatively high density' (Boissevain, 1974:43). An individual may belong to different of these highly interconnected clusters in their different roles and 'activity fields'. In each of these activity fields varying types of transactions will be exchanged and the interactants will adjust their behaviour accordingly so as to maintain social relations. It is such sectors of overall networks that have been seen to be of more importance than overall density (Cubitt, 1973) and it is such a clustering that the present research deals with.

Finally, this leads us to take a look at the **size** of social networks. The total possibilities of an individual's links is the 'social universe of persons' (Boissevain, 1974:36) with whom he can transact. An individual's total network, which is a 'fluid, shifting concept' (1974:48), can be broken down into different zones. A first order, or primary zone, consists of direct network contacts, whereas second order zones are formed by contacts of contacts, or 'friends of friends'. As the diagram in figure 3.4. shows, there is the possibility of this reaching right out to the extended zone. In Boissevain's terms this is done via the intimate, effective and nominal zones and can be seen visually in the diagram.

Figure 3.4: Ego and the zones clustered around him



(adapted from Boissevain, 1974:47)

The Pagewood Island study, dealing with a small cluster, uses the terminology core, secondary and peripheral zones. These can be seen to correspond to Boissevain's zones in the following manner. Personal cell is considered **core**, that is to say that it consists of the persons who are very close, with whom ego transacts regularly and in whom ego invests the most time and other resources. Next is the **secondary** zone corresponding to

Boissevain's intimate zone and consists of persons with whom ego is less well acquainted but are considered friends and are emotionally important to him or her. The **peripheral** members in the present study members consist of those from Boissevain's effective zone, those with whom ego is acquainted and is friendly to but are perhaps 'instrumental' friends rather than emotional friends in that he or she may gain access to a broader range of goods, services and information via these persons.

Boissevain stresses the importance of the size of a personal network since all calculations are made by use of actual persons in the network. Within the linguistic framework of social networks or speech fellowships, where the analyst's concern is more likely to lie with partial network structures, the elements of density and multiplexity are the most frequently used to define the network. These two elements often co-occur, typically found in working-class communities, isolated villages and tribal communities. Conversely, where communities are relatively geographically and socially mobile industrial societies tend towards low-density uniplex network structure. Density and multiplexity provide a means of quantifying a speaker's contacts and it is this interactional environment which constrains and shapes a speaker's linguistic behaviour. Each speaker can be seen to be continually negotiating his/her transactional contribution as each exchange unfolds.

In summary, the structural elements of a social network tell us about an individual's transactional possibilities. On the other hand, the interactional elements indicate the possible importance of various communication paths. Together they help:

establish a statistical portrait of the form and content of a person's network. They help to build a model of his social universe which enables us to formulate hypothesis about the way he may behave, given the constraints of his cultural and physical environment. (Boissevain, 1974:45)

In the present study, the significance of the social network concept lies in its ability to shed light upon a reciprocal relationship between the integration of an individual in the group and the language choices that he or she makes. By constructing an individual's social network we are putting on display the form and content of the possible transactions which constitute a network and which, at the same time, are constitutive of the same network. The social network diagrams 'record the traffic flow between members of a community – in fact, the community is defined by the traffic of exchanges' (Butt, 2000b:230).

Now that the structural aspects of networks and the terminology relevant to them have been introduced it is possible to take a look at social networks and how they have been adapted both outside and within linguistics. The next two sections then offer an historical overview of social networks. The point of departure is within the social sciences and secondly, within the field of linguistics.

3.2 Social networks outside linguistics

To begin with, it was Barnes (1954) who most influentially used social networks as an analytical concept in his description of inhabitants' behaviour in the Norwegian village of Bremnes. His 'structure of personal relationships' was based on friendship, kinship and neighbourliness, and his social network concept and definitions were closely followed in later studies.

Bott's pioneering investigation of kinships was one such study. In this extension of interaction theory, Bott found a link between the level of marital segregation and network structure among London families. Where dense network ties had been

contracted prior to marriage the networks investigated had the capacity to act as a norm enforcing mechanism. In such cases partners were seen to be independent of each other and more dependent on their networks. The reverse was found to be true of loose network ties (Bott, 1959/1971).

Welcoming the move from placing total value on the framework of class and economics, researchers quickly saw the benefits of social networks. Research by the social anthropologist Boissevain, by suggesting a framework for analysis of social behaviour that starts with interacting, mutually dependent people, attempts to provide:

insights into the social processes in which we all participate. Coalitions, groups, classes and institutions are composed of people who, in different ways, are bound to each other. Together they form the constantly shifting network of social relations that we call society. (Boissevain, 1974:233)

Boissevain stresses that the notion of social network is not a theory of society, rather it offers a 'concept or social dimension intermediate between relationship and social system (or society), between local level and national level' (Boissevain, 1974:25). In his Maltese study, Boissevain compared the total personal networks of his two informants, Pietru and Cecil. He traced the influence of the macro-environment via their personal networks on their behaviour and personality. The greater sociability of Pietru, a countryman with a dense and multiplex network who attached importance to his network, as compared to Cecil, a townsman with lower less multiplex network, is explained in terms of the structure of their personal networks. This in turn is related to the difference of the environment between town and country. Boissevain also investigates partial networks such as cliques and factions.

Throughout his work Boissevain, closely following the work of Bott, sees central to the

network concept the notion of man as an 'interacting social being capable of manipulating others as well as being manipulated by them'. He further states that 'the basic postulate of the network approach is that people are viewed as interacting with others, some of whom in their turn interact with yet others, and that the whole network of relations is in a state of flux' (Boissevain, 1973: preface). The network model, in its description of 'mutually interdependent' people (1974:231), is used in an egocentric sense 'as the chains of persons which whom a given person is in actual contact, and their interconnection' (1974:24).

Further research which has been influenced by Bott include Mayer's study of Xhosa immigrants in South Africa, which linked the differences in network structures effect as to the rate in which the immigrants were absorbed into urban institutions (Mayer, 1963). Kapferer's (1969) study of a dispute in a Zambian mine adopts a similar view in his use of network structure, or what he preferred to term 'reticulum', to gain insight into the need to consider the total configuration of relations between people at a given moment in time.

Analysts in a variety of disciplines have begun to see the usefulness of the social network perspective to their work. For example, incorporating evidence of relational ties into social psychological studies (Marsden and Friedkin, 1994). Those in the field of epidemiology have recognised the benefit of examining the role of social contact to better understand the spread of disease (Morris, 1994). Network analysts have studied non-human primates (Sade and Dow, 1994) and substantive computer-mediated communication systems research has been undertaken (Rice, 1994). More recent studies include such work as the investigation into the development of social networks in

preschool children (Johnson et al.,1997) and Stoloff et al.'s (1999) examination of the role of social networks on the constraints and opportunities which women face in labour force participation. (See Mitchell, 1969 for a more comprehensive review of the uses of social networks in other disciplines).

3.3 Social networks and linguistics

When we turn our attention to linguistics we see that it was Milroy's (1987) Belfast study which most influentially introduced the social network study to sociolinguistics. This study is reviewed in some detail below. But first a look at earlier work where the network concept has been touched upon.

Heath's examination of the maintenance of patterns of language use and their mutually reinforcing cultural patterns in two textile mill communities in Piedmont in the 1970's deserves mention as it is one of the first studies of child language to treat issues of community or cultural background.

Heath investigates different networks of a white working class community, Roadville, and neighbouring Trackton which is home to black working class families. She examines the effects of everyday language on young children and what happens when they enter the school system. Her findings, which are primarily of importance to the study of socialization and for its ethnomethodological implications, are of interest here because Heath's 'community' and 'social group' has many characteristics of what other research has termed social networks or speech fellowships. They are 'closed' with their 'own identity and inner life' where what is crucial is the 'face to face networks' in which each child learns the ways of acting, believing and valuing (1983:6). Her comparison of

the geographically and spatially limited preschoolers in both Trackton and Roadville with the townspeople whose children benefit from the voluntary associations of parents and networks which extend beyond the neighbourhood further highlights Heath's emphasis on the critical nature of patterns of face-to-face interactions. Her findings illustrate that the extent and density of interaction influence language (for example, the extent to which babies are talked to or about).

The social network concept was first explicitly brought into the field of sociolinguistics by Blom and Gumperz in 1972 but was suggested in Gumperz's earlier work. (For example, his study of dialect choice in India, 1958). In later work Gumperz highlights how speakers of very similar social background may use language differently and how large number of factors, for example, education, occupation, ambition, or generation cohort influences the personal network structure (1982:71). Gumperz's 'closed' network structure described in his Gail Valley study are characterized by the use of 'the local system of overlapping kin, occupational, friendship and religious relationships' (1982:46).

In his work with Blom the notion of the 'local team' and patterns of social ties are investigated (Blom and Gumperz, 1972:419). In the Hemnes community in Norway, Blom and Gumperz highlight the relationship between social and linguistic alternatives, with 'local social system' and the sharing of local background being critical influencing factors of local dialect maintenance. Those who had tight-knit network characteristics, who showed commitment to and believed in 'signs of local identity' maintained their local dialect. By contrast, those with non-local background who maintained significant ties with other communities preferred standard speech (1972:423).

Milroy's (1987) investigation of three low-status communities in Belfast: Ballymacerrrett (a Protestant area in East Belfast), the Hammer (a Protestant area in West Belfast) and the Clonard (a Catholic area in West Belfast) examines the relationship between linguistic variation and social networks, defined as 'the informal social relationships contracted by an individual' (1987:178). Her focus is on the individual rather than the group, on the 'structural link which binds individual members together' (1987:179), as she details how low-status Belfast speakers use Belfast vernacular to demonstrate allegiance to their communities. She shows how the notion of social network can be used to account for variability in individual behaviour. Milroy devised a Network Strength Scale and a Network Strength Score to be used as an analytical tool to demonstrate a correlation between the integration of an individual in the community, and the way that individual speaks. She developed the argument that 'dense close-knit network structures function as important mechanisms of vernacular maintenance, with a powerful capacity to resist the social pressures associated with standard language' (1987:169). And her findings suggest that the dense networks which function as norm-enforcement mechanisms are characteristic of working class communities and that it is the men's networks which are denser and more multiplex than the women's. It is therefore the men's speech that is closer to the vernacular. (See sections 3.4. and 3.5 below for discussion of these last points).

Milroy's findings refute earlier studies which suggest that members of loosely-knit networks will change their speech in the direction of publicly legitimised norms (See Labov's 1972 New York City status-based model outline). Yet, Labov's work, which has been highly influential in variation theory, also identifies a relationship between

vernacular features and local identity. Whilst, like other earlier sociolinguists such as Trudgill, Labov's main concern is with the relationship between linguistic variation and variables such as socioeconomic status and gender, some of his work is of interest in an overview of social networks. His study of the residents of Martha's vineyard, a small island on the northeastern coast of the United States, does not explicitly use a social network concept. Instead it is 'categories of local identities' (Labov, 1972:299) which are referred to in order to highlights a correlation between vowel centralization and attitudes towards the island. The permanent residents of Martha's Vineyard differed in their feeling towards the intrusion of visitors, to the 'summer people'. While some showed resentment of insensitivity shown to traditional island life, other 'Vineyarders' believed the island to be enhanced by its wealthy visitors. Labov's overall findings suggest that those with the greater allegiance to the island centralized more frequently the diphthongs under observation. They tended to reject mainland values, unconsciously establishing the fact that they belonged to the island, that they are the ones to whom the island belonged (Labov, 1972).

Labov also introduced the term 'lames' to refer to outsiders, those individuals isolated from the central group and its culture (Labov, 1972). His 'categories of local identity' may be seen to be akin to Le Page's 'acts of identity' (Le Page and Tabouret-Keller, 1985), and Le Page's conditions favoring cultural focussing have all been seen to be relevant to studies of social networks (see Milroy, 1987:183).

Labov's report of Black English vernacular of Harlem teenagers in New York further outlines the shared activities and values associated with group membership. Here the language of the street gangs, the Jets and Cobras, correlated with position in social

networks (Labov, 1972). (See however further study (Labov and Harris, 1986) that concentrated on an interconnected set of social networks and their relationship to the vernacular of Philadelphia where social networks are viewed as useful organizational tools but as having little explanatory value for individual differences in linguistic systems).

Following Milroy's interpretation of 'close-knit social networks as mechanisms enabling speakers to maintain such vernacular codes, which themselves constitute an actively constructed, symbolic opposition to dominant legitimized codes' (Milroy and Milroy, 1992:4), a significant body of research has emerged. Before taking a look at some of these studies it is worth noting that, as suggested above, Milroy's study has not been without its critics. For example, Murray's critique concludes that the 'network remains a metaphor, a suggestion, a so-far unfulfilled promise of explanation' (1993:172). He considers Milroy's six point scale to be of dubious character, an 'elastic ruler' that misrepresents data. His reanalysis of the data leads him to suggest that the best predictor of linguistic forms is the sex of the speaker. See also Kaplan (1988) who questions to what extent Milroy utilises the social network concept to explain individual behaviour, rather than the different styles observed representing average differences in individual scores and that the styles observed represent a range of the community's behaviour rather than the individual's linguistic repertoire.

A further possible criticism of the network concept is its focus on the strengths of the social network concept to aid in interpretation of individuals with such close-knit relational ties. Whilst it may be argued that the notion of social network is less capable of handling relational ties between speakers of less dense networks, recent work by

Milroy and Milroy looks at the implications of a weak-tie model of social networks and this hopes to start to address problems in this area and increase the scope of network application (1992). See also section 3.5. below.

Despite these comments however the network concept is generally seen as a successful way of viewing social relations; of putting on show the interpersonal relations an individual contracts in his social sphere and highlighting how a person's linguistic choices can be mapped against these relations. In the present research it is considered a valuable tool to examine individual's interactional spheres and to display the significance of these.

It has been within the field of phonological variation that the majority of researchers have taken up social networks. Here is a brief overview of the types of studies that have been undertaken. Many are dealt with in specific detail elsewhere, for example in the methodology chapter or in the section below dealing with issues relating to women studies.

Tracing social networks and examining the nature of social identity in the adolescent community at Belton High in Detroit, Eckert identifies two main categories, or clusters, of 'jocks' and 'burnouts' and outlines integration into local network as the most influential factor in language choice (1989). Austrian-Hungarian bilinguals were studied by Gal who states that speakers' 'linguistic behaviors are constrained and shaped by the sorts of social contacts they maintain' (1979:131). Phonological variation was the focus of enquiry in Russell's (1982) study of 'insiders' and outsiders' of Swahili-speakers in Mombasa. She found networks to be a determining factor in linguistic change within the

community.

These findings are echoed in other studies. For example, personal network structure has been shown to be of great importance in predicting language use in Lippi-Green's (1989) study of language change in a small rural Austrian village. This research was based on individual usage for the dialect of Grossdorf in Vorarlberg, western Austria, and identifies the need for a quantitative approach to network analysis. Lippi-Green found that 'interaction groups are able to exert a great deal of pressure on the individuals within them, working within a system of norms which define and constrain social (and hence language) behavior' (1989:217).

Other studies modelled on Milroy's include Salami's (1991) report which indicates that the variable of social network manifests a powerful influence on variation in Yoruba language use and potential change within common spoken Yoruba. Bortoni-Ricardo's (1985) examination of the changes in the language of rural migrants to a city in his Brazilian research also sees social network as an important variable.

British black communities have been studied by Edwards, who emphasises the social network's strength to measure 'a person's degree of group membership' (1989:41) and finds the notion of social network to be the most important explanatory variable in her study of the of the language behavior of Patois speakers in Britain.

The empirical case study carried out in the Pont-rhyd-y-fen community of South Wales by Thomas (1989) highlights the fact that a tight-knit network structure is an important mechanism of language maintenance. She argues that the linguistic behaviour of the

informants reflects the social groups with which they wish to be identified. Other recent UK studies following Milroy's model include work in Derby and Newcastle (Docherty and Foulkes, 1999), and open networks in Milton Keynes, Reading and Hull (Williams and Kerswell, 1999) and in Sheffield a study of 2 low-density social networks (Stoddart et al., 1999).

Studies reviewed so far focus on phonological variation. Cheshire in her challenge of Labov's New York findings, extends her investigation to include morphological and syntactic variation in 'Reading English'. Using a social network approach she investigates male and female adolescents in two adventure playgrounds, concluding that a tight-knit network acts as a powerful norm-enforcing mechanism.

Other studies concerned with language choice rather than phonological variation include Hughes' examination of expletives used by lower working class women of Ordsall Family Center in a British deprived inner-city area (Hughs, 1992). Hori (1986) investigates the use of Japanese honorifics from a social role-oriented departure point rather than sex. His findings indicate that the 'crucial factor which decides the choice of linguistic forms is the social network within which the speaker operates; i.e. the kinds of people the speaker comes into contact with' (1986:385). Holmquist (1985) also adopted social network analysis in his study of rural Spain. The analysis of the Mayan social networks and 'social motivations' point to certain linguistic choices with regard to politeness. Brown (1980) finds that positive politeness prevails if and when social networks involve multiplex relationships, that is, members have many-sided relationships with each person they interact with regularly.

A major aim of the present research is to examine the effects of change over time of the social network and linguistic output of the participants. The social network concept has been seen as a useful notion with which to examine change. As Boissevain stresses, 'a person's network is a fluid, shifting concept' (1974:48). Milroy too found the social network perspective instructive in sociolinguistic enquiry focusing on change. Her studies reported that structure change is implicated as a contributory factor in linguistic change. Similarly, Gal (1989) also found change in network structure effected language choice.

It has traditionally been reported that the dense networks which function as norm-enforcement mechanisms are characteristic of working class communities and that it is the men's networks which are denser and more multiplex than the women's. As Pagewood Island is a middle-class community and the informants that have been chosen are women, it is important to examine these traditional findings and take a look at studies where the reverse has been found to be true. First, a review of some of the relevant studies of women and the networks they form is offered.

3.4 Women in social network studies

As already stated, Cheshire, in a comparison of the males and females participants in her research, finds that the two groups exploited language in different ways. In order to investigate social relations in detail she found it necessary to devise different indicators to account for structured patterns of relationships (Cheshire, 1982 and see section 4.6. for a detailed account of her Vernacular Culture Index).

For Thomas it was the women not the men who formed dense, multiplex relations. Here

the lives of the women revolved mainly around the home, the immediate neighbourhood and the chapel and the conclusion reached is that the dense networks of friends and relations that were relied upon for support and company created the multi-stranded social networks (Thomas, 1989). For Brown too women's relationships will 'be relatively multi-stranded, male ones relatively single-stranded' (1980:134) where men dominate in the public sphere and women stick largely to the domestic sphere. Her example comes from her study of politeness in Tenejapa, a Mayan community in Mexico.

It was also the women who formed more dense, multiplex relations in Russell's report (1982). Edwards' findings too indicate that it is the young women as much as the men who are asserting their category identities through language. In this sociolinguistic investigation of British Black speech the fact that many of the most competent patois speakers were women is highlighted (Edwards, 1989). Also, contrasting with earlier reports, women were seen to favour close-knit networks and high communal loyalty and integration into the city community of Ile-Ile in Nigeria (Salami, 1991 and see also Hori, 1980 and Eckert, 1989).

These studies appear to contrast with Milroy's overall findings that it is men rather than women who form denser, more multiplex networks than women. Yet Milroy also points to the existence of counter-examples. Her examination of the women of Clonard acknowledges that where economic circumstances allow, that is to say, where women take on more 'male roles', their speech takes on the characteristics of male speech. That 'where men loose their interaction patterns and women live as neighbours and work and amuse themselves together, then it is the women who display consistent usage of

vernacular forms' (Coates, 1993:104). In fact, it is the Clonard women who display the highest Network Strength Score of all sub-groups studied by Milroy. It has also been pointed out that Milroy's network categories can be seen to be judged by male criteria. As Cameron and Coates (1985) state careful scrutiny of conditions is needed to ensure against networks that are biased towards males.

Thus, it is the social identities of the individual speakers and the interaction networks they form rather than gender differences which need to be considered when examining the density and multiplexity of a social network. As the above reports show, being female is not inevitably a concomitant of weak social networks (Coates, 1993).

3.5 Social networks and non-working class, non urban studies

Milroy focuses on working-class areas of Belfast to gain data for her investigation. In these 'urban villages' (Labov's term) social networks are typically of high density and multiplex. By contrast, in socially mobile, highly industrialised communities networks tend to be of low density and multiplex. Many network studies have concentrated on inner city neighbourhoods (for example, Edwards, 1992). However, it is not only within such low status communities that 'local loyalties' (Milroy, 1987:16), characteristic of closed norm-enforcing networks, are to be found. Social network analysis has also been applied to rural villages (see for example, Gal's Oberwart community study, 1979, Lippi-Green's rural alpine research, 1989, and Schmidt's work in a Queensland Aboriginal community, 1985). In fact, as the above review hopes to indicate, network studies have been carried out in a variety of different settings, that networks prove practical in studies where there is a 'territorially well-defined neighbourhood' with a strong sense of 'local identity' (Milroy and Milroy, 1992:6). All speakers then contract

social networks as they transact their role relations and carve out their social space. In fact, social networks are contracted by speakers everywhere, they are less ethnocentric than the class model, and since 'all speakers everywhere contract informal social relationships, the network concept is in principle capable of universal application' (Milroy, 1987:178).

3.6 Social networks and Systemic Functional Linguistics

The social network concept is an effective tool for investigation of the interdependency of individuals in their everyday interactions. As this literature review so far hopes to point out, studies, mainly in the tradition of phonological variation, have demonstrated that people are 'in their everyday encounters, largely dependent in the ways they use language on others with whom they interact rather than on an abstract society' (Salami, 1991:219). Turning now to the analytical perspective adopted towards the language in the present study, namely systemic functional linguistics, we can see that the concept has been used to capture the social relations in which every individual is embedded. The appeals of the network focus lies in its ability to provide measures and statements of social structural properties that otherwise might only receive descriptive attention. It is a tool that emphasises the significance of relationships among interacting beings and as such the significance of its inclusion in a notion of linguistics that focuses on man and his social context becomes evident.

Firth's approach to language and meaning, influenced by Malinowski's context of situation, highlights the importance of meaning in context. He uses the concept of speech fellowship to refer to the interactional links that bind individual members together. Here we find similarities to Goffman's notion of life as a 'performance'

whereby everyday life is framed and performed, and defined as 'all the activity of a given participant on a given occasion which serves to influence in any way any of the other participants' (Goffman, 1959:15). We can take a particular performer and his performance as a basic point of reference and we may refer to those who contribute the other performances as the audience, observers or co-participants. The pre-established pattern of action is a part or routine. This is echoed by Firth who saw social roles created through interactional language. He saw every 'social person' as a 'bundle of personae, a bundle of parts, each having its lines' and urges researchers to 'apprehend language events in their contexts as shaped by the creative acts of speaking persons' (1957:193).

In his studies of personality and language in society, his emphasis is on 'persons and personalities as active participators in the creation and maintenance of cultural values, among which languages are its main concern' (Firth, 1957:186). He stresses how language is actively maintained by persons, 'that is by people who are members of society.' In his treatment of personality and language as a basis for linguistics with a sociological component, Firth states 'I have preferred the whole man with his fellows' that is the whole man, thinking and acting as a whole, in association with his fellows' (1957:19). He saw man as being members of various speech fellowships, and these fellowship can be seen to be akin to the concept of social network outlined above, where 'the whole of our linguistic behaviour is best understood if it is seen as a network of relations between people, things and events, showing structures and systems, just as we notice it in all our experience (1968). Butt sees Firth's notion of speech fellowship as referring to 'the actual connection/interaction which relate people in the transaction of a kind of business'. He goes on to state that we:

are all members, then of many speech fellowships – we all hold a specific place in relation to a number of others who might be deemed part of the same fellowship. These connections.... constitute the various actions from which the social meaning of our behaviour is interpreted. (Butt, 2000b:234)

Approaching language from a Hallidayan view as a semiotic, Thompson's (1994) study of bilingual children in a Cleveland nursery school suggests that the dense network of preferred participants has an influential role to play in the developing communicative competence of newcomers to the nursery. However, Thompson, unlike the present study, makes no attempt to utilise the tools available to the systemic functional linguist to foreground regularities in linguistic choices and comment on language and the social order.

This present study aims to bring the two sets of complementary tools (SFL and social network) together as a way of exemplifying the relationship between language and the social order. The aim is to show how an adoption of the two different perspectives can enhance the findings of the study and allow for more grounded statements to be made about the behaviour of the Pagewood Island participants and their social landscape.

There are two issues that need discussion before we can conclude this literature review. The first is the notion of speech community and its relevance to social networks and secondly the distinction between network and class.

3.7 Social network and speech community

In any research the object of investigation needs to be defined. In sociolinguistics, where the concern lies with the study of language in a social perspective, defining this unit has proved difficult. A theoretical construct of some kind of 'ideal' speech

community is not being searched for, but rather a means of appropriately delineating communities or social groupings within the environment under observation. What is needed is a working definition of the unit of study. In the present case this is a definition of the term *community* which as Hasan states is 'a relative concept: the boundaries of a community cannot be fixed once and for all' (1988:36).

A starting point in search of such a definition is Gumperz's notion of 'speech community', which concerns a group of speakers not necessarily of the same language, and which is defined in terms of social groups held together by the sharing of knowledge and of a set of norms and rules for language use (1972).

The complexities involved in defining the concept are detailed in Milroy's study and leads to the term 'community' as being loosely referred to as 'a social unit whose language patterns are amenable to study' (Milroy, 1987:17). She later, indebted to Bell and Newby (1974), defines communities as 'cohesive groups to which people have a clear consciousness of belonging' (Milroy, 1987:14).

Romaine's discussion is more enlightening. In criticism of Labov's 'rigid' model, she interprets a social network as effectively representing a level of abstraction below the speech community (Romaine, 1982). A social network is in fact closer to the notion of 'community' put forward by Hymes, where a community is defined as 'a local unit, characterized for its members by common locality and primary interaction' (1974:50). A 'micro-level social cluster' is Chamber's interpretation (1995:67). One notion that is critical to the notion of speech community is its overlapping nature. We all belong to many different interactional groups, we may be colleagues at work, social friends at

dinner, or mothers at home (or at a playgroup as in the present case). In each context our network may change, each element transacted will depend upon the different roles played.

For Boissevain the concept of social network consists of the messages that flow between persons, between the 'scattering of points connected by lines' (1974:24) that are in fact transactions. He goes on to say:

By transaction I mean an interaction between two actors that is governed by the principle that the value gained from the interaction must be equal to or greater than the cost (value lost). If the transaction is reciprocated in the sense that goods and services are returned, and thus flow in both directions, it is then useful to speak of exchange....Over time...the pattern of transaction may usually be viewed as a relation of exchange, for messages, goods and services move in both directions. (1974:26)

Like Boissevain, Butt highlights the transactional content of the relationship. He defines the notion of social network terms of Firth's speech fellowship as 'all those who are linked, by customs and by roles, to a particular social context. It is the network of persons relevant to a form of transaction or activity' (2000b:321). In this present study, social network, or speech fellowship, replaces speech community as the unit of investigation and refers to the social connections or transactions that shape and constrain our linguistic behaviour.

3.8 Social networks and class

Studies of linguistic variation have traditionally focused on stratification according to socioeconomic class, but the social network model has emerged as a useful tool to apply to linguistic research, especially of subgroups. The overall findings of Milroy's work is that the 'individual patterns of variation in language use can often be accounted for better in terms of network membership than in terms of a speaker's rating on conventional social scales which measure his position hierarchically in relation to the

rest of society' (1987:169).

Some of the reasons for preferring a social network model will now be expounded.

Firstly, class as an independent variable can be difficult to apply. For instance, it may be difficult to compartmentalize communities into neat social categories (see for example, McEntegart and Le Page, 1982). Further, Milroy suggests that classes may not be the most suitable way to categorize the interactional sphere of an individual since they 'do not necessarily have any kind of objective, or even intersubjective reality'. She goes on to say that 'membership of a group labeled, for example, middle class, does not necessarily form an important part of a person's definition of his social identity' (1987:14).

It is at this point that I wish to digress briefly from the main topic somewhat and to emphasise that social class is a 'crucial sociological concept' which refers to a 'complex, variously interpreted, principle of hierarchization' (Hasan, 1992:82). Although sociolinguists have outlined the complexities involved in delineating social groupings, indeed Chambers begins his account of class and sociolinguistic sampling by declaring that 'the notion of social class is inherently fuzzy' (1995:34), it remains one of the most important criteria of social structure. Hasan points out that much of the problem within sociolinguists stems from the unsatisfactory use of terminology to socially rank individuals in the community, including the employment of the term socio-economic status without thorough investigation into how the equation of occupation, income and education goes to make up such a term. She goes on to usefully define membership in social class 'as the possibilities open for participation in social processes' (Hasan, 1992:85).

Returning to social networks as a method of delineating human beings, the concept is less problematic to apply than class. Furthermore, it can be seen not to exclude considerations of economic nature, but rather as extending a framework to include other influences (Milroy, 1987). Other studies underscore the role of social network to reflect a person's social identity rather than to categorize an individual by abstract social class. Let us now take a look at some of these findings. Firstly, Lippi-green also found that it is not necessarily 'occupation that determines one's place in the hierarchy, but rather the degree of integration into the established structures'. She goes on to say, 'it is not so much a matter of class or status, but who you know, and who knows you' (1982:216). Labov too suggests, in his Harlem study, that identification with a particular ethnic culture was more powerful than social class ties in influencing language choice. Cheshire categorizes her male adolescent informants by how closely they adhere to the 'norms of the vernacular culture' rather than by social class. (See also Gal, 1979).

Boissevain also offers another example of the benefits of taking a micro, social network approach rather than a macro class approach. He stresses that social behaviour is the behaviour of people who are dependant upon others, and 'cannot be explained by means of a single set of underlying values. One has to consider the total configuration of relations between people at a given moment in time' (Boissevain, 1974:65.) This notion is further elaborated upon in Heath's study of language, life, community and the classroom. Arguing here that it is relationships rather than ethnic group which shape language choice, she states that:

The place of language in the cultural life of each social group is interdependent with the habits and values of behaving shared among members of that group...Children in Roadville and Trackton came to have different ways of communicating, because their communities had different social legacies and ways of behaving in face-to-face interactions...Members of social groups may not differ racially, but their respective histories, patterns of face-to-face interactions, and ways of adjusting both to the external environment and to individuals within and outside their groups have shaped their different patterns of using language. (Heath, 1983:11).

3.9 Conclusion

This literature review highlights the uses of the social network perspective in different disciplines and illuminates why the social concept model is seen as a successful tool to adopt for the Pagewood Island study. In brief, we are all members of many networks or fellowships in which we transact to exchange information, goods and services in our everyday life. The notion of social network offers a 'concept or social dimension intermediate between relationship and social system' (Boissevain, 1974:25) and is an efficient system to map out and put on display social relations. As communicating human beings we continually renegotiate our interpersonal relations, our social network or speech fellowship, as we perform our daily transactions. These networks or fellowships impose certain obligations and confer corresponding rights upon its members and these can be ideal sites in which to examine the linguistic output of the individual and to show the relation between an individual's linguistic choice and his or her network.

4. Methodology

This thesis presents analysis of the social network of a small group of women and their linguistic choices on two taped occasions. This chapter discusses the methodology adopted and positions the Pagewood Island data within the SFL framework and the social network model outlined in the previous two chapters.

This outline of the research design begins with an overview section that sets the scene and is expanded upon in the remainder of the discussion. Section two introduces the island community and its environment and details the island as an ideal site for network application. This is followed in sections three and four by a detailed description of the data collection techniques adopted in the present study. Section three concentrates on the collection of data for the SFL investigation and discusses some of the methodological issues that were dealt with in an attempt to overcome the difficulties inherent in such research and to ensure unflawed data. These include exploration of the difficulties in capturing casual conversation in writing for analysis and the kind of features that should be included in a transcription. Other factors discussed include why it was considered necessary to collect incidences of naturally occurring everyday talk and how to overcome the effects of altering participant behaviour whilst collecting taped data. The focus in section four is the collection of the social network data and includes a discussion of the role of the researcher. How the data was analysed is the focus of the next two sections. Section five deals with examination of the linguistic data, outlining the tools of SFL that have been most insightful in analysis. This is followed in section six by the methods employed in the measurement of the network ties and integration that have been adopted for the Pagewood Island network interpretation and includes a discussion of the Solidarity Index and how it was devised. How other studies have

informed the way relational ties are measured and the issue of other social variables are also dealt with in this section. Section seven emphasises the importance of bringing together the two models of interpretation and shows how the analysis took these complementary perspectives into account. Having outlined the procedure and process of data collection and analysis this chapter concludes with a closer look at the more theoretical concern of qualitative versus quantitative research methods. Reliability and validity issues are dealt with throughout the chapter as appropriate. The aim is to outline the adopted research design and at the same time to justify why the chosen methods were considered the most appropriate for the present study.

There is an ethnographic element to this study since my own contact with the island has continued over several years including two periods of living and being a member of the group under observation totaling over 3 years. At the time of the initial recording one of my own children was a preschooler and we regularly attended the island playgroup. I can be seen in many ways to be both a participant and a non-participant observer. In collection and analysis of the network data my insider status can be seen as constituting a participant observer. However, as regards the linguistic analysis, I remained a non-participant in all recording sessions and analysis.

4.1 Overview of methodological framework

This section outlines the aims that needed to be taken into consideration in choosing a research design and the criteria that were considered vital in achieving these. It begins with a brief overview of the methodology which is expanded on in the sections that follow.

The central aims of the research were to:

- analyse the linguistic output of the four adult participants
- analyse the social relationships of the participants
- analyse how change over time may be reflected in both the linguistic options available to the participants and their network orientation
- interpret the findings in a way that would allow for a revealing of the relationship between the linguistic and the social.

To achieve these aims several criteria were considered vital. These included the necessity of:

- selecting an ideal site for social network investigation
- collecting data that comprised of incidences of everyday talk
- devising an index to allow for numerical evidence of the relation ties that the participants transact
- analysing the linguistic output and relational ties of the *same* network over a period of time.

In consideration of the above, the point of departure for this study was the selection of Pagewood Island as an ideal site for analysis. Although initially, the study began as a linguistic enquiry only, it soon became evident that the social network concept was to prove very insightful in allowing for a more thorough investigation into the relationships of the women and in relating these interactional ties with the SFL model of analysis that was being undertaken. The next step was collecting the data for analysis. This was done on two separate occasions to allow for an investigation into the changes that may occur over time both linguistically and within the network. Once collected the data was analysed, firstly employing tools from SFL and secondly the relational ties were analysed with the aid of the social network concept. The findings from these two were used to make some grounded statements about language and the social in the interpretation phase of the study.

The following is an overview of the research, summarising the procedure taken to achieve

the above aims and ensure that the essential criteria were an integral part of the study:

- selection of site for analysis.
- collection of data – linguistic and social network
- participant interviews and observation
- analysis of data – linguistic and social network
- interpretation of the findings –relating the two models.

Prior to a closer examination of each of these procedures, the site for the data collection, Pagewood Island, will be outlined highlighting how this island community is an ideal location for network application.

4.2 The island community under observation

Pagewood Island is an island-based community situated in the northern limits of one of Australia's coastal cities. As regards its local environment, the island is situated in a partially enclosed body of water. It is enclosed to the east and south by mainland ocean beach suburbs. To the west its boundary is National Park and to the north it opens into the mouth of a major river.

There are approximately 400 homes on Pagewood Island and a permanent population of a little over 1000 residents. Whilst this population is made up of people from all walks of life and of all ages, it is nowadays predominantly made of persons from a white middleclass socio-economic group. Fifteen years ago the population consisted mainly of weekenders who owned holiday properties. Those that lived full time on the island tended to rent their homes. Further they were a fairly transient, small and mainly youthful population of artists and musicians who were looking for somewhere to escape to from city life. Things have changed. While there are some old timers still residing on the island, the majority of islanders now reside permanently on the island and own their

homes, which are often substantial, especially the many luxurious waterfront properties. The population has increased and these days islanders tend to be educated upwardly mobile and white collar, visible achievers and socially aware.

Geographically, the terrain is hilly, and trees, predominantly grey gums, cover the majority of the land. The roads are mainly unsealed and there are very few private vehicles on the island. Generally residents leave their car on the mainland. Once on the island there is the island community vehicle, a 4WD service which is run by the residents and used to transport heavy goods and/or visitors unused to such steep terrain. Pagewood Island is accessible only by boat. There is a ferry service from the mainland, which runs every hour from 5am till 7pm. This service is complemented by a 24-hour water taxi service. There are also several commercial barge companies to transport cargo on and off the island. For daily life many, though not all, of the islanders have their own small boat, or 'tinny' with an outboard motor and, depending on the location of an individual's home, the journey from the mainland can take between 5 and 15 minutes. Other island services available are the Pagewood Island Preschool, which caters for children from 3 years to school age, and the Rural Bush Fire Brigade and Medivac Service. Since there are no shops, cafes or pubs on the island, it is at the fire shed that community events often take place. The Community Hall is frequently used for meetings and large private parties and celebrations. These services are all centered around Allyson Park and it is here that the annual Pagewood Island Fair takes place.

The following section expands on the description of the island offered here to incorporate a picture of island life and community solidarity. Its aim is to show how these factors help create an environment conducive to the study of social networks.

4.2.1 Island solidarity

Pagewood Island can be regarded as a fairly close-knit community, akin to isolated country communities rather than the 'urban villages' of Milroy's (1987) study. Close-knit refers to relatively dense and multiplex groups where everyone knows everyone else (density) and the group members know one another in a range of capacities (multiplesity). See section 3.1. above for a detailed outline of network structure and their implications. As the above outlines, and similar to Heath's Trackton and Roadville communities, Pagewood Island is 'closed, somewhat set apart, with an evolved identity and inner life of its own' (Heath, 1983:6). This territorial restriction to a specific neighbourhood is an ideal site for close-knit community studies such as in the present research to evolve. For more on the ideal site and on the universal application of the social network concept see section 3.5.

The sense of local identity experienced on Pagewood Island is echoed in the name it is often given. Along with neighbouring Foreshores, the island is known as one of the 'Offshore Communities' and enjoys the sense of community that comes from a love of natural surroundings and a special feeling of isolation. The expressions of solidarity frequently heard on Pagewood Island, the 'we all know each other', and 'we all look out for each other' echo those of in Hymes' (1974) study. 'We are all friends here' also recurred throughout Blom and Gumperz's Hemnes study (1972). As in the remote Austrian village of Hemnes, the quality of ties on Pagewood Island is symbolized through greetings, exchanges of personal information and general informality towards other islanders. Furthermore, just as the participants in Labov's study expressed their affiliation with a group of people termed 'Vineyarders' so too, in the present study, the sense of solidarity and shared territory lead the residents to refer to themselves as

‘Islanders’.

People make a special commitment when they come to live on the island. Life, while peaceful, safe and beautiful, is also isolated and tough. This is especially true of the female population who do not get paid for work outside of the home, and the burden increases for the women who in addition to daily chores and shopping may be caring for young children. Carrying heavy loads and coaxing young toddlers up steep paths is part of daily life for these women. This coupled with dealing with issues such as connecting to the emergency water supply when the tanks run dry, rough crossings in inclement weather and getting off the island quickly in emergency situations etc. is what encourages these women to form close friendship ties. They rarely have family nearby and quickly form strong support networks with other mothers in similar situations. They tend to be willing to help out in moments of crisis, knowing all too well that they themselves will need and receive support in return. In many ways then it is the women, who often spend the majority of their time on the island, who are subject to greater territorial constraints than their male counterparts who frequently travel off the island to work. And hence, like the women in Thomas’ welsh study of the Pont-rhyd-y-fen community, the females tend to be more community based and form denser network ties. Some men do form strong ties. These are the men that tend to hang out at a regular mainland drinking spot. But, these men are generally working in different occupations and spend far less time together and form far fewer links than the island women who are the focal point of this study.

So while being part of a city suburb the residents of the island enjoy a lifestyle greatly different from that of their mainland neighbours. There is an overwhelming sense of

community and systems of reciprocal support and assistance characteristic of dense networks can be found in the groups or clusters formed in this rural atmosphere. Thus, the island's remote location and geographical constraints encourage the formation of close-knit networks and make Pagewood Island an ideal site for social network analysis application.

This chapter now goes to look in detail at how the data was collected and the methodological concerns that were taken into account.

4.3 Collecting data on Pagewood Island

All fieldwork and data in the present study originate from recordings, observations and interviews over a 15-month period. There were two recording environments. The first, phase 1, took place in the playground of the Pagewood Island preschool in May, 1998. The participants consist of four mothers and their young children. The second excerpt is taken from the same four women as they interact 15 months later (August, 1999). Again the children are present. This second recording takes place in the park outside the preschool building. The social network formed by these women was also analysed on these two occasions. Both excerpts were examined to see how the linguistic output could be related to the social structure of the individual's within the group. In aiming for clarity it has been chosen to talk in terms of phase 1: Playgroup and phase 2: The Park. These correspond to text 1: Playgroup and text 2: The Park in the linguistic analysis that follows in chapter six.

All participant and place names have been changed to prevent identification. All participants were presented with a consent form ensuring anonymity, freedom of

withdrawal, and addressing issues of ethics as required by the University Ethics Review Committee for gathering data on human subjects. As highlighted by Dufon, a 'well executed piece of research is not only technically sound, but ethically grounded as well' (1993:158).

Looking more closely at how the data was collected this next section begins by outlining the collection of the linguistic data and then goes on to elaborate on the social network data collection.

4.3.1 Research data collection: linguistic

The database for the linguistic analysis in this study is composed of two 10-minute recordings of a small group of four women taken from a total of approximately 4 hours of recording. The initial procedure for both recorded sessions was the same. After permission was granted, a small, high quality tape recorder was placed out of sight close to where the women were seated.

Video taping the exchanges was an initial consideration and would have given access to much non-verbal evidence to supplement the linguistic content. However the practical difficulties involved and, moreover, the concern that the conspicuous nature of video equipment would probably affect participant behaviour lead to a decision to use only the less obvious tape recorder. This appears to have achieved the analytic purpose.

In the belief that researcher presence may place stress on the interactants, I removed myself from the recording environment. The aim was to allow the participants to converse freely and to make the taped session as unobtrusive and relaxed as possible in

order for uninhibited recordings to take place, to create an environment somewhat akin to Labov's 'bugged' minibus in his New York study. It is hoped that the social nature of the chats of the women limited inhibitory taping effects. When later questioned the participants said that after a while they forgot that the tape was on. For this reason I chose to take the excerpts from the middle or end of the recording sessions rather than from the beginning, the focus being maximising the spontaneous nature of the interaction and thus alleviating as much as possible the observer effect.

However it was also considered necessary to have my own impression of what was going on. For this reason where possible I remained within earshot. For example, on the initial recording while the women chatted I was inside the building's kitchen able to overhear the conversation unfold without being observed. This was especially helpful when it came to the task of transcribing the data. My own close relationship and knowledge of participants also helped overcome some of the transcription issues discussed below (section 4.4.1).

While in agreement that such insider knowledge is helpful, this research remains mindful that this method of gaining access to data from one's own pre-existing network, while allowing for possibilities to capture large amounts of data, has limitations. For example, awareness that such a study in effect restricts the data to the researcher's own social world (Eggins, 2000). It is hoped that the richness of interpretation permitted to me as a researcher with intimate knowledge of her participants to overcome at least some of this limitation.

The question of validity and appropriateness of data collection needs to be taken

seriously. This point was neatly outlined in Kasper and Dahl's (1991) study of interlanguage pragmatics. Offering a descriptive overview of methods of data collection, they characterise methods of data collection in terms of modality of language use and degree of control. Methods of linguistic data collection were placed on a continuum ranging from elicited responses of different kinds of rating tasks and interviews, which are highly constrained, through to the least controlled data collecting techniques of observation of authentic conversation. These, showing minimal or no control, appear at the right end of the continuum. Kasper and Dahl stressed that data collection needs to be thoroughly scrutinised since, while problems with analysis and quantification could, upon detection, be remedied, 'if raw data is flawed because the instrument or observation procedure was inadequate, repair is often not feasible, and the value of the study is questionable' (1991:216).

Of particular relevance to the present study is the discussion of authentic data. As stated above, it was considered crucial that this study opt for the naturally occurring end of a data continuum, that the linguistic data analysed be taken from everyday interaction. It is to the considerations that gave rise to this decision that the next section turns to.

4.3.2 Spoken or written data?

One of the initial questions facing the researcher is what type of data best suits the purpose of the study? Where language is the main concern of enquiry the issue of spoken rather than written data needs to be addressed first. Writing and speaking are both forms of expression in language, both function as the realization of lexicogrammar (Halliday, 1985/9:12). Discussing these two different forms of expression, Halliday states that both speech and writing deserve investigation:

The fact that we are less conscious of the processes of speech does not make them any less important. We achieve different goals by means of spoken and written language; but neither has any superior value over the other. (1985/9:vii)

Halliday suggests that linguists should at times be encouraged to give priority to spoken language because it is in the unconscious nature of spontaneous language which 'reality is constructed' (1978:40). It is this unselfconscious, casual nature found in the spoken expression that the present study aims to capture. It is this casualness, which masks the deeper purpose of social construction (Hasan, 1996), that the Pagewood Island research wishes to explore. For social interaction to occur there needs to be negotiation and this negotiation takes place in the exchanges of transaction in casual conversation. The different parties bring their own social realities to the interaction and it is this production of two or more 'realities in collision' (Butt, 2000b:342) that the social worlds of the participants are most vividly put on display.

4.3.3 Why the need for spontaneous natural speech?

Once the analyst has decided that spoken rather than written data best suits his or her research, the next issue to be faced is what type of spoken language is to be captured? This research opts for spontaneous natural speech. It considers as a crucial point of departure to have talk from everyday encounters as the database for analysis. As Clyne points out, analysing 'real data, spontaneous and unscripted' (1994:18) is the only way to realistically reflect language in everyday use. Milroy also emphasises the benefits of studying 'real speech events in contemporary communities' (1987:2). Eggins and Slade are in agreement. They outline the debt owed to early researchers involved in Conversation Analysis, such as Sacks, Schegloff and Jefferson, who highlighted the need to capture everyday language data as a first step to achieving a 'naturalistic observational discipline' to deal with details of social interaction in a rigorous, empirical

and formal way (1974). Halliday, in discussing the corpus as a database, also stresses the benefit of authentic 'real language' (1996:25).

Moreover, and crucial to a study such as the present one, it is at the site of spontaneous speech that the continual negotiation of role relations takes place. It is extremely problematic to gain access to such social world building through methods other than recording natural conversations between persons in their natural environments.

Verifying this view, Milroy suggests that access to the vernacular can only be obtained via analysis of recordings of spontaneous conversation. Reviewing the literature on differences between language choice in interview and when reading aloud, Milroy questions Labov's belief that 'the only way to obtain good data on the speech of any one person is through an individual, tape-recorded interview: that is through the most obvious kind of systematic observation' (1972:209).

This research agrees with Milroy's counter argument that, in fact, interview techniques 'show a shift away from the vernacular which is appropriate to spontaneous interaction amongst neighbours, kin and friends.' (1987:101). While it may be more difficult to obtain good-quality recordings of the situation under observation using less controlled methods, following Milroy, the Pagewood Island research insists on naturally occurring occasions of everyday interaction, rather than on data collected by more controlled techniques. It is believed that control prohibits the spontaneous flow of exchange, in which participants can build and constantly negotiate their social realities.

4.3.4 Spontaneous, natural speech and the observer effect

Once choice of data has been confirmed the question confronting the researcher, and to which this methodological overview now turns, is how to collect data which adequately represents linguistic behaviour? In his introduction Halliday (1994) comments that, historically, the invention of the tape recorder is perhaps the most important linguistic invention in that it makes accessible the systematic study of the spoken word. The investigator is, however, faced with problems of access to good quality taped sessions allowing for natural speech.

Knowing that they are being observed can alter behaviour no matter how unobtrusive the researcher tries to be in recording interaction. If the researcher is present then he or she will acquire some status or role, the natural setting becomes a 'setting with researcher present' (Burns, 1997:321). Similarly, even where the researcher is able to minimise this effect on interactants by removing him or herself from the immediate environment, it remains a recorded session. Where the aim is to find out how people talk when they are not being systematically observed, how do we obtain data which realistically reflects everyday language use? This, Labov's 'observer paradox', has been overcome, or reduced, by several of the methods outlined below. The Pagewood Island study follows these suggestions by incorporating the notion of a pre-existing social network with an element of self-recruitment into the research.

Recording group sessions has mitigated the possible data-flawing effect of researcher influence. Gumperz and Hymes (1972) found that participants who normally interact socially within closed networks were able to overcome the constraints of knowledge of observation. Labov too, in more recent work, has seen the value of 'group sessions, in

which the interaction of members overrides the effect of observation' (1972:109).

To modify the researcher effect, and encourage language as it is used in natural circumstances, Blom and Gumperz utilised the self-recruited group (1972). Here local acquaintances were asked to arrange a friendly gathering at which the researchers could record the informal interaction between network members. Self-recruitment allows for group definition via locally recognized relationships. Participants' roles and obligations towards each other encourage unaltered behaviour despite being observed. Where the data is collected from pre-existing social networks participants are more likely to speak as they normally would in the groups presence (Milroy, 1987). It is foreseen that in the present research the group may be seen as somewhat self-recruited, for example, in the decision to attend the playgroup and socialise together. This coupled with the fact that the group is pre-existing is considered suitable means to alleviate some of the effects that my presence may have had on the participants.

Recently, the anxiety of the observer's paradox has been seen as overstated (Cameron et al.1997:153). Arguing that Labov fails to sufficiently take the broader social world into account, Cameron et al. continue by emphasising the need to encourage participant voices in analysis. (See also section 4.8.2 below for more detail). In the present research naturally occurring linguistic data that reflects language use is regarded as crucial. However, the research is also indebted to such comments from Cameron et al. and attempts to encourage participants to provide their own highly valued insights. This, as previously mentioned, is particularly relevant for the social network analysis. And it is at this point that our attention is turned to how this social network data was collected.

4.4 Research data collection: social network

In both phases 1 and 2 of this research data for social network analysis was collected at the same time that the participants' linguistic output was recorded. There were two methods of data collection. Firstly, the network data was collected from observation and knowledge of the participants. This took place immediately after each excerpt was taped. Secondly, evidence from these observations was triangulated by interviews. Three types of interview were conducted. The participants were formally asked to state their own opinions on how they had been rated on the network index. Less formal interviews, or discussions, also took place to gain further information. Finally, island residents other than those participating in the study were asked to comment on how the participants were positioned within the network. Again these were informal interviews and took place with informants who had intimate knowledge of the relational ties being investigated.

As outlined above, information regarding social network structure was collected from a pre-existing social network in an ethnographic manner due to my own contact with the island. In all studies the interplay between researchers and their subjects relative to the community under observation is crucial. In each given environment the researcher must decide how he or she will observe and collect data. Does the researcher wish to minimise interaction with participants and focus unobtrusively on the participant's behaviour as in non-participant observation? Or does he or she wish to gain an insider status and explore the behaviour via involvement and absorption in the life of the community under observation as in participant observation? For the present study the social network data was collected from a pre-existing network in a manner that the researcher can be considered both participant and non-participant. Since I have intimate

knowledge and my own relational ties within the group I can be seen as an insider. However, I did not participate in either of the exchanges and did not analyse my own relational ties so remained non participant observer for the actual analysis. This can be seen as similar to the role adopted by Heath in her study of the Roadville and Trackton communities. Here, she was acquainted with an old-time resident in the community and her relationship with that individual opened the community up to her, allowing her to acquire both 'insider and outsider' status.

To be able to collect data and gain an insider's perspective of the community the researcher must find ways to overcome social barriers to the social network under exploration. Milroy, a participant observer in her studies, outlines the necessity for defined and unambiguous relationships between participants and researchers. Her 'friend of a friend' status guaranteed good faith (1987:54) and, this second order network contact, gave her the status of neither an insider nor an outsider but able to collect data without being viewed as a threat. Researchers such as Cheshire (1982) also undertake studies of an ethnographic nature and also choose the participant observer option. Cheshire obtained her Reading adolescent data via long-term participant observation.

The value of such studies where the researcher works within his or her own culture has been justified in studies such as Saville-Troike in which she states that:

Combining observation and self-knowledge, the ethnographer can plumb the depths and explore the subtle interconnections of meaning in ways that the outsider could attain only with great difficulty, if at all. In the same way then, with the ethnographer able to function as both observer and informant, some of the problems of verification can be overcome, and a corrective to unbridled speculation provided. (1989:108)

Thus it may be stated that the outcome of successful research may be dependent on the

researcher's 'personal presence for establishing relationships with the inhabitants of situations' (Burns, 1997:307). The goal is to maintain 'detached objectivity' (Saville-Troike, 1989:108) whilst interpreting the unit of investigation.

The researcher's role then is seen as critical. In order to gain access to the data on Pagewood Island I presented myself as both participant and non-participant observer. For the network analysis insider intimacy with the group was used to gain valuable insights into the relationships. The close connection with the women allowed for relaxed interviewing or information eliciting sessions, which aided in the collection of reliable data. In brief, the aim I hoped to have achieved was to maintain roles of both acquaintance of the group and recognized researcher.

Social network description and scores were based on ethnographic evidence, researcher knowledge and answers to a wide range of questions. Again intimate knowledge of the Pagewood Island women provided notes on the environment, the factors that were considered relevant for inclusion in the Solidarity Index devised and of the women's relationships and the different ways in which they were linked to others in the group. These notes were given validity by eliciting information and interviewing the participants and other islanders. For example, informants were asked to evaluate the various links in the network subjectively to check for agreement. They were also questioned regarding which indicators should appropriately be included. Accuracy of self-report data was initially of concern, but informant and researcher results matched well and the social network data was considered accurate. A colleague with intimate knowledge of the island and its residents and a sound grasp of the social network concept also critiqued fieldnotes.

Research with ethnographic detail such as the present study usually has high internal validity due to a sound knowledge of the participants and setting. Such internal validity may, however be threatened by participant desire to present an ideal self, wanting to please or be seen as popular etc. For example, do any of the participants wish to be portrayed as an outsider? Further, participants' reports in interview may reflect the same desire to please and may lead to misrepresented claims. Aware of the fact that undertaking research can effect behaviour, it is hoped that in the present study artificial responses have been reduced due to my own 'insider' knowledge and close relationship with the participants.

High external validity is often difficult to achieve in qualitative studies because of replication issues associated with natural settings. Moreover, no two subjects are the same. This threat to validity has hopefully been limited by careful description of those who have provided data (see chapter five). Qualitative studies are also vulnerable due to the lack of corroboration possibilities by others. In this regard, frequent checks on researcher bias by a colleague were undertaken.

Reliability and validity have mainly been addressed by triangulation. As Watson-Gregeo points out 'the putting together of information from different data sources and/or data collected through different research methods.....is an important strategy for arriving at valid (or dependable) findings in an ethnographic work' (1988:575). The interview sessions in particular have improved the reliability of the social network and contributed to the validation of the discourse analysis. This hopefully limits the criticism that 'exclusive reliance on one method...may bias or distort the researcher's picture of the

particular slice of reality she is investigating' (Cohen and Manion 1989:233).

This supplementing of data by triangulated evidence took place after the second recording. The rationale for this was that too much knowledge of the research might put pressure on the interactants to act out different roles for the taped recordings. Although the participants were aware of the nature of the research and the fact that their linguistic output was to be examined in relation to the relationships within the group, researcher notes for the initial recording were not verified by detailed questioning until after the second phase.

4.5 Data analysis

This next section deals with the method of data analysis adopted. As with the data collection outline above, this section will first focus on the research design employed to examine the linguistic data. This is then followed by the methodological concerns with regard to the social network data analysis.

4.5.1 Data analysis: linguistic

Each excerpt was transcribed and analyzed using the SFL framework discussed below. Since data for linguistic enquiry always needs to be transcribed, the first consideration I faced was that of transcription.

4.5.2 Data transcription

Issues such as overlap and interruptions that necessarily involve a subjective component can be problematic since as a result errors can be made, and biased expectations can

influence judgement (James and Clarke, 1993). Thus the best way to tackle transcription was investigated. Hasan succinctly captures the difficulties inherent in transcribing everyday talk when she says:

Casual conversation is the most difficult kind of discourse to put on display. First, because it is spoken, and to represent speech in writing can never be wholly satisfactory. Secondly, because of all kinds of speech casual conversation is the one that is most different from written language; and hence the distortion that takes place when it is translated is correspondingly greater than with other spoken forms. (1983:15)

She goes on to point out that there is no such thing as a 'faithful rendering' of a text, and outlines some important guiding principles for transcription. She suggests that features should only be included if useful to the analysis and concludes that 'much is to be said for providing straightforward orthographic rendering with modified punctuation (and a key to its interpretation)' (Hasan, 1983:18). The focus of the Pagewood Island study lies with speakers' interactive achievements, where exchange is foregrounded as a resource for construing interpersonal meanings. Repetition, gaps, interruptions and overlaps are features of casual conversation that researchers must attempt to include and evaluate. Eggins and Slade's (1997) transcription framework is followed in the present study as it allows a sufficient degree of delicacy to undertake my analysis whilst adhering to Hasan's above suggestions.

Having insider status within the network knowledge proved valuable at this point since it permitted clarity of transaction and analysis.

4.5.3 SFL analysis

SFL tools were employed to analyse the data once transcribed. Following SFL's theory of analysis the transcripts were broken down into clauses. Each of the clauses was then analysed. Three major areas of analysis can be categorised, namely grammatical

patterning, Appraisal and semantic patterning. These are summarised in figure 4.1 below. SFL theory was outlined in chapter 2 and the resources used in interpretation are fully explored in the appropriate sections in chapter 6.

Figure 4.1: Summary of SFL categories employed for linguistic analysis

Grammatical patterning	Appraisal	Semantic patterning
<ul style="list-style-type: none"> • number of clauses • declaratives • polar interrogatives • tagged declaratives • wh-interrogatives • imperatives • minor clauses • non-verbal interaction • number of incomplete clauses • Subject choice • vocative • adjuncts • modality • topic choice 	<ul style="list-style-type: none"> • Appreciation (reaction, composition, valuation) • Affect (un/happiness, dis/satisfaction, in/security) • Judgement (social sanction, social esteem) • Amplification (enrich, augment, mitigate) 	<ul style="list-style-type: none"> • Opening moves (attend, initiate) • Sustaining moves (continuing, monitoring, prolonging, appending) • Reacting moves (responding, developing, supporting) • Rejoinders (tracking, challenging)

Firstly, the texts were examined for grammatical (or lexico-grammatical) patterning. Here tools essentially taken from Halliday's mood and modality systems are employed since it is the choices selected from the mood and modality paradigms that allow us to look at the interpersonal aspect of language use. It is in the grammatical category of mood that meanings and social identities of speakers are continually negotiated and renegotiated. Grammatical features analysed include the use of the imperative and allow for statements to be made about *who* is able to tell other speakers *what* to do by selection of the imperative, *to whom* are such selections directed and *how* are they reciprocated?

Other issues include *who* gets to utilise the powerful grammatical options of declarative to select topics and *who* more frequently selects options such as polar interrogative which shows a willingness of the speaker to give up their turn by inviting a response. The interpersonal examination also included areas such as who gets to be nominated clausal Subject and how vocatives or terms of address are utilised to pre-select the next speaker thereby allowing participants to attempt to manipulate special relationships.

The findings from the grammatical analysis were summarised in three ways. An overall summary was given in the initial mood summary sheet and this was further broken down for clearer analysis of adult-adult interaction and finally for adult-child interaction. This allowed for percentages of total (or adult-adult/adult-child) interaction to be taken into consideration and aid the interpretation. Modality selections were summarised in a similar way.

The second area of analysis was Appraisal. The resources available for the participants to select from here include evaluative lexis of judgement (for example, social sanction and social esteem) and lexical items to amplify a judgement (such as augment and mitigate). Examination of such resource selection puts on display issues such as *who* is permitted to select evaluative language and *who* such sanctioning is aimed at. For example, can a network member judge other members and/or their children? Does a member select resources for intensifying her argument or does she choose mitigating lexis to play down the force of an evaluation? Such questions are the focus of the Appraisal analysis. The Appraisal analysis findings were summarised by category. Again these results were further broken down into adult-adult or adult-child recipient of different evaluative resources.

At the Appraisal analysis stage I found my own relationship with the participants especially beneficial since examination of evaluative lexical items must be contextualized in relation to the actual textual instances. An Appraisal analysis explores how attitudinal meanings can add to the negotiation of roles and relationships and such analysis may gain valuable insight from intimate knowledge of the participants' characters and relationships. I hope that knowledge of the participants and the context in which the analysed exchanges take place also led to a sensitivity of the intended attitudinal meanings allowing a more meaningful exploration of the text and its context.

Finally, the examination moved to display how patterns of dominance and independence begin to emerge from the enquiry at the semantic strata. Utilising the framework outlined by Eggins and Slade (1997) the texts were broken down into moves and analysed for speech function selection. Under this category of semantic patterning issues such as who gets to *initiate* the conversation and who is permitted to *develop* the information put up for negotiation became the focus of examination. Also in this category were factors such as which of the participants choose to *support* rather than *confront* fellow network members in the interaction. As for the previous two categories of analysis, the semantic patterning findings were summarised on a speech function summary sheet.

The above analysis was repeated in the second phase of the research, text 2: The Park.

4.6 Data analysis: measures of network ties and integration

This section discusses background details as to how network ties have been measured in various studies and hopes to justify the method chosen in the present study. Details of the present studies methodology can be found in section 4.6.1 below.

To determine the degree of network ties and integration and to achieve systematising of social networks researchers often devise an index. The initial vital question that was faced in the formulation of the index in the Pagewood Island research was what are the relevant variables to be measured in order to reflect accurately these linkage-defined relations and how will they be measured?

The way in which the level of a person's integration into a given network is measured is a crucial aspect of the network perspective. The defining feature of a network tie is that it establishes a linkage between at least two individuals in the network under investigation. The collection of ties among members of a network can be called a relation. Methods that allow each individual to be assigned a score regarding the number of such relations are particularly insightful in that they permit direct comparison between different speakers in a network. This then allows us to say significant things about the role relationships between network members. Why the methods chosen in the present study were adopted and how the indicators particular to the island were devised are the issues taken up in this section.

The Pagewood Island index was initially informed by the Network Strength Scale utilised by Milroy which allowed a highly beneficial numerical evaluation of an individual's integration into the network. As the literature repeatedly suggests, multiplexity and density are factors that influence the degree of this integration, and

Milroy's index centres on conditions in which these are reflected. She incorporated the following factors into the six-point scale that she constructed:

- membership in a high-density;
- territorially based cluster;
- kinship in the immediate neighbourhood;
- working with at least two other people of the same sex from the same area;
- voluntary association leisure-time with workmates;

Whilst the first of these conditions refer to density, the remainder are indicators of multiplexity. A Network Strength Score (NSS) was given to each member depending on these five factors. The NSS was calculated by assigning one point for each condition fulfilled.

Some of the criteria that have been used in others studies to devise a network strength scale are now outlined to illustrate the varying determinants of network integration indicators that have been employed to date. For instance, patterns of occupation, friendship and leisure activities and associates were considered the most important determinants of social network in Edward's (1989) investigation of black speech in Britain, and took into account factors such as how much contact people had with the black community and how much they participated in black social activities. Participants were asked questions about housing and employment and they were asked to name their three closest friends and to indicate whether they were black or white and the types of social activities that they engaged in.

Thomas (1989) extends her index criteria to include affiliation with a particular chapel. Salami (1991) and Russell (1982) have also added religious associations. For Russell's Mombasan study membership of the same Muslim women's association was an indication of network strength. Other indicators employed by Russell to determine

whether a resident was an 'outsider' (generally an incoming migrant worker) or an 'insider' (generally an Old Town district resident) included living in the close neighbourhood and being ex-classmates.

Each network under examination is unique and the salient criteria to determine the degree of network integration 'will vary in kind with community organization' (Milroy and Milroy, 1992:7). A researcher must then not confine his or her index criteria to a given set. Rather he or she must carefully define the features and select the indicators that are relevant to the unit of investigation and the purpose of the study, since 'clearly some types of ties will be relevant or measurable for some sorts of units but not for others' (Wasserman and Faust, 1994:8). Milroy suggests that 'the range of choices actually available to an investigator depends on the local cultural categories which reflect more abstract properties of network structure such as multiplexity and density' (1987:171).

Further examples of how quantification of network structures has been approached include Kapferer (1969). In his study of fourteen workers in the Cell Room dispute, he determined 'reticulum' or network integration by recording information regarding conversation, joking behaviour, job assistance, personal service and cash assistance as some of the important considerations.

More recently, Cheshire (1982) has devised a Vernacular Culture Index to examine peer-group culture in Reading. She highlights the fact that the index criteria chosen are dependent on the network under consideration, and selects the following elements to identify friendship patterns among male adolescents: skill at fighting; carrying of

weapons; participation in criminal activities; style; jobs and swearing. She asks her informants questions such as 'do you like fighting?' and 'who do you reckon is a good fighter?' She utilised the divisions of inner, middle and outer ring, of core, secondary and peripheral members on the basis of responses received. Cheshire is indebted to Labov's Harlem Jets study for the terms of core, secondary and peripheral members (1972). Her female participants were found to require different defining criteria to determine degree of group interaction. These included information about closest friends and whom they spent most time with to enable her to devise a 'good' and 'bad' category.

Degree of peasantness was the relatively simple but effective method to define network affiliation in Gal's (1979) rural study of Austrian-Hungarian bilinguals. Here animal ownership was a local cultural feature that was found to be an important indicator. Bortoni-Ricardo's (1985) account employs an integration index and urbanization index (see Milroy, 1987:173 for a more thorough account) and Edwards (1984) devises her index in terms of such factors as participation in street dancing, forms of dress and frequenting rum shops.

The above illustrates the many ways other researchers have defined network integration depending on different study environments. Likewise, in the Pagewood Island study, the salient criteria to determine individual integration into the network is based on local conditions and includes factors specific to island life such as length of island residency and boat ownership (see the section 4.6.1 below for a detailed outline).

Studies then employ different criteria to highlight how participants are multilinked, but

they all agree that it is this degree of integration in a close-knit network, which is crucial in influencing a person's linguistic choice. What the network index does is to allow the researcher to demonstrate the link between language use and social network systematically by comparing the network scores and the linguistic analysis. It is hoped that this, combined with the quantifiable analysis that the tools of SFL offer, allows for a rich and thorough investigation of the correlation between a speaker's affiliation in a network and the way that speaker speaks.

4.6.1 Pagewood Island Solidarity Index

The elements that were isolated for analysing the Pagewood Island data are laid out in the Solidarity Index below. As mentioned above, to add validity, that is to say, to ensure that the index measures what it is intended to measure, information about which aspects would be appropriate to include was elicited from the participants. In interview, each of the participants was asked to comment on the Pagewood Island Solidarity Index criteria. In a less formal way, other islanders were also asked to comment on how accurate they believed the index to be. These results not only helped in devising the final index, but were also very informative as regards the weighting of the index as discussed below.

The participants received scores of network strength depending on:

- attendance at the playgroup
- involvement in the playgroup organisation
- having children who attend the island preschool
- length of residency
- home location
- receiving money for work
- studying
- owning own home
- owning own boat
- exchange of (childcare) services
- voluntary associations -

- social interaction of mothers with children
- social interaction of mothers and partners
- attendance at community social events
- involvement in community affairs
- having older children who interact

As indicated above, to attain clarity of the picture of network affiliation, the criteria were weighted. Two points were given to the factors considered to be a greater indication of network strength. For instance, voluntarily socialising with other members was seen as a clearer indication of core membership than attending community events since attendance at such may function differently. The participants may wish to socialise with each other or they may be more interested in catching up with other friends, members of other networks to which they belong. Other reasons for attending may include meeting new friends. Weighting was also considered necessary to distinguish other criteria. For example, while owning your own home may be a culturally desirable thing and may be highly relevant since it gives the members something in common, it is less of a predictor of strong network ties in the small community than living close by, helping out with childcare and voluntarily socialising with other members. Reasons such as these led to the decision to weight the criteria. Figure 4.2 shows how this weighting was distributed.

Figure 4.1: Weighting of the Solidarity Index criteria

two points	one point
attendance at the playgroup	involvement in the playgroup organisation
having children who attend the island preschool	receiving money for work
length of residency	involvement in community affairs
home location	attendance at community social events
social interaction of mothers with children	owning own boat
social interaction of mothers and partners	studying
exchange of (childcare) services	owning own home
having older children who interact	

Note that the criteria change slightly for phase 2: The Park, since factors that refer to the

playgroup are no longer relevant in influencing group membership. Recall that it is only Laura who has a very young child, and in phase 2 only she regularly attends playgroup. All the other children are considered too old to attend playgroup. Similarly studying is no longer a measure of network ties since Holly has finished her studies and thus Laura has no one to be connected or linked with. The other criteria remain the same as for phase 1.

As Butt's work on personality illuminates, the factors in the Solidarity Index or inventory can be seen, in systemic terms, to be the tenor relations that may influence the (linguistic) behaviour of the participants and can be related to Hasan's status relations and social distance (Butt, 2000).

Before going on to discuss other variable which need to be taken into consideration in a study such as this, it should be noted that network analysis can become very complex and often an operational decision as to which participant(s) should be focused upon needs to be made. As Wasserman and Faust (1994:169) urge, identifying the most important actors in social network is a beneficial departure point. Prominence or importance suggests that the focal point may beneficially be the person who is most tightly bound to the social network. Butt (2000b) also suggests this as a possible operational decision. The limited size of the unit of observation on Pagewood Island allowed focus on all the participants, although focus was predominantly placed on those persons most densely linked to the social process and on those whose shift in orientation was observable.

4.6.2 Other social factors

It is important to stress the fact that other social factors are obviously crucial to a person's establishment of relationships. The 'variables of class, age and sex are generally seen to be the primary determinants of social roles in modern industrial societies' (Chambers, 1995). Others such as education, ethnic background also need to be examined and accounted for in studies of individuals and their social universe.

Whilst demographic and other attributes obviously cannot be overlooked, in the present study they remain constant. Indeed, the Pagewood Island network was considered an excellent site for analysis for two reasons. Firstly, as outlined in section 3.1., it is an example of a high-density territorial social network, or cluster. A second crucial factor of site choice was that the women were from a homogeneous social group. They are all of similar ages (35–39) and from similar social backgrounds. All are tertiary educated, married and mothers of young children. By keeping these variables constant, it is hoped that the measure of an individual's degree of integration into the network will be seen as an efficient tool to use as a point of departure for an analysis of the way the women linguistically negotiate their roles and relationships.

4.7 Interpretation of analysis: Relating the two models

The aim of this research is not simply to examine two slices of social reality for linguistic and network ties. Rather the major concern of the Pagewood Island study is to examine how the two models employed in analysis can inform each other. The vital question is how the linguistic and the social can be mapped onto each other. In order to look closely at such issues it is necessary to speak in terms of the linguistic rights and

privileges bestowed on different members of the network and to ask questions such as do core members get to produce different grammatical and semantic options to secondary and peripheral members?

In the initial analysis what was found, for example in the grammatical patterning investigation, was who gets to produce imperatives and to whom they were directed. This interpretative phase of analysis takes such issues and relates them to the social network findings. Questions then also have to be considered such as whether certain members can only select imperatives. Is it, for instance, restricted to core members to utilise such power inferring resources? Other issues include do these core members select confronting or challenging moves at the semantic level? Are such dominant members permitted to make more judgements of others? Further focus questions include are the marginalised members of the network permitted to initiate topics for discussion and/or evaluate the core members? Are secondary and periphery members the most frequent utilisers of supporting speech functions?

The findings from such questions lead to the making of some grounded statements about the relationship between language and the social and the benefits of incorporating the social network and SFL models.

4.8 Other methodological considerations

The above has outlined how the research was undertaken and has included some reasons for why the particular research design was chosen. The final part of this chapter offers a brief discussion of other methodological concerns that have had a bearing on this study. It details the benefits of quantifiable research methods whilst at the same time

acknowledging the benefit of allowing for qualitative insights into the notion of social network. It then goes on to take a look at the role of the researcher in the present study.

4.8.1 Quantitative or qualitative research methods?

The importance of quantifiable research methodology with its accountable attitude towards analysis is a major premise of this research. Quantitative research, with its objective, empirical investigation of data, permits a high degree of precision and control. Statistical analysis may be replicable, and quantified results are comparable. Within the systemic framework adopted for the present analysis, the linguistic tools allow for discovery of latent patterns within a text. When these consistencies are accounted for within a quantitative paradigm there is greater possibility of substantiating claims, of making such claims demonstrable from the analysis, and thus creating more plausible argumentation and evidence. As Eggins and Slade point out a quantitative approach gives ‘substance to any claim we make about patterns in casual conversation and its varieties’ (1997:38). In a critique of Conversational Analysis, they further postulate that:

quantitative analysis is just what is necessary to give empirical validity to claims that conversations are typically organized in particular ways, and to provide evidence of any statistically significant variations in conversational behaviours. To develop such systematic analysis we believe it is necessary to draw very specifically on linguistic expertise, employing linguistic methodologies to relate aspects of conversational organization to aspects of the organization of language as a whole. (1997:32)

In agreement, the Pagewood Island study relies heavily upon the tools of SFL to give statistical evidence in its linguistic argument.

As regards the social networks perspective, which details the social ties of the participants, Milroy’s Network Strength Scale allows to some extent for the quantitative research methods to be brought into the analysis of an interactant’s social relationships

(Milroy, 1987). Sociolinguistics has however recently tended to favour a more subjective qualitative approach to investigation in belief that when we focus on the overall picture in a purely quantitative way we lose sight of the individuals on whom the study is based. Thealander (1982) suggests a danger in 'over-quantifying' in sociolinguistics, of denying the voice of the subjective, social world of the participants as in the phenomenological tradition. Such issues are important in the present study where there is an obvious qualitative element in the fact that interviews and observations have been employed to collect social network data.

4.8.2 Ethnographic insights

At this point in the discussion, an account of ethnomethodology and some of the studies within this tradition is offered to advance the argument for the inclusion of qualitative methods of research in the present study. To begin, ethnomethodology essentially involves descriptive data collection as the basis for holistic interpretation; it represents 'a dynamic picture' of the way of life of some interacting social group (Burns, 1997:297). Ethnography focuses on people's behaviour in 'naturally occurring, ongoing settings' (Watson-Gregeo, 1988:588) and the ethnographer's goal is to provide a description and an interpretative-explanatory account of what people do in a setting, taking into account the broader context, which becomes imperative for an understanding of language and the social order. Ethnography may be seen as the 'study of the social and cultural practices of a group from an insider's perspective' (Roberts, 1997:31), where the aim is to 'get beyond the fieldworker's notebook to the reality of native life' (Malinowski, 1935:45). Learners as ethnographers, have been seen as 'detectives' in their exploration of the 'tightly interwoven nature of language and context' (Heath, 1983:355).

The anthropologist Malinowski in an early example of an ethnographic observer who valued interpretative description in his personality studies. Firth depicted Malinowski as 'seeing his "social ideas" embodied in institutions or traditional texts formulated on the basis of work with competent informants' (1957:95). Malinowski's ethnographic work has been seen by others as full of 'vivid life' that is 'not merely an artistic device, it is a matter of theoretical insight' (Leach, 1957:119).

More recently, others have made apparent the significance of qualitative description of language to investigate a wide range of social behaviour (for example, Gumperz, 1970). Heath (1983) also valued ethnographic description in her informative work. She warns that quantitative research may ignore social and cultural factors for individuals and their face-to-face networks and urges researchers not to ignore social and cultural factors when looking at individuals and groups. Heath opts for qualitative research methods to allow 'a unique piece of social history' to emerge (1983:7).

For the ethnographic observer then the participants in a study are vital. Roberts stresses that far from being 'empty vessels, informants are saturated with theories, models and metaphors which give meaning to their activities and guide its direction', they are not subjects, but 'experts' on what the researcher wants to find out (1997:67).

Thus, although in this present study the priority lies with systematically analysing data from the casual exchanges of the Pagewood Island speech fellowship, remaining mindful of the fact that people can be empowered to provide their own highly valued insights as to their relationships is considered vital. The role then of researcher and informant can be seen as 'negotiated between researcher and researched as part of the process of

establishing social relations' where the aim is to complete research that can be considered 'done *on, for* and *with* social subjects – empowering research' (Cameron, et al., 1997:153).

In agreement with the need for 'thickness and richness' in interpretation (Roberts, 1996:30), the Pagewood Island study can be seen as a quasi-ethnographic study and the qualitative nature of the description is seen as insightful. Yet, ethnographic evidence, whilst useful in shedding light on the social network analysis plays little part in the SFL analysis. The theory of SFL allows for a mapping of both the linguistic and the social from the linguistic data itself. In other words, in SFL theory the social identities of the participants are evidenced from the linguistic data which in turn illuminates the social process. Thus the social is incorporated into the theory and as such question such as how the participants can inform the research outside of the analysed data become irrelevant.

Within sociolinguistics it is often emphasised that the role of both the participant and the researcher are crucial and issues such as how the researcher can best position him or herself to allow for participant insights while remaining sufficiently independent to offer objective judgement are seen as important. It is said that whilst the participant supplies the linguistic data for analysis the researcher needs to be able to understand the general norms and values of the community before he or she is able to interpret this linguistic behaviour (Gumperz, 1970). To interpret with insight he or she needs 'background knowledge of the local culture and of the processes which generate social meaning' (Blom and Gumperz, 1972:434). This need for background detail was also pointed out in Labov's Martha's Vineyard report, and is especially relevant for small-scale

community studies like the present.

Whilst it may be true that 'knowledge of community patterns and conflicts...can be extremely useful to a linguistic investigator; some will argue that such knowledge is essential' (Milroy, 1987:16) and indeed in the Pagewood Island study my own relationship with the participants has been beneficial. Yet what needs stressing at this point is that the SFL relies on its own model to gain access to the subjective.

SFL does not ignore social and cultural elements. The theory allows us to evidence the internal dynamics of speakers as it reveals the social process. Far from its quantifiable methods avoiding the essential aspects put forward by those in the ethnomethodology tradition, rather as mentioned above, the social is incorporated into the very framework of the tools that Halliday's theory offers. The tools of SFL mean that we do not have to go beyond the language to discover the social, the social is embedded in the language. This point can be clarified by looking at it in relation to the present study.

The two texts analysed offer examples of how the notion of subjectivity or social identity can be regarded in SFL. The two slices or readings of the social process demonstrate the changing social identity of the participants. These social identities are put on display through linguistic options. As their social worlds change new identities emerge and new linguistic options become available to the speakers. Anticipating the analysis below, the participant who experiences the changed social orientation, Liz, offers a clear example of how the social connections of an individual can be seen to map her identity.

Liz makes choices. However, it must be remembered that these choices are negotiated, they are only the choices that are available from negotiation within the group. Liz brings about change in her subjective positioning, but only within the options available to her from within the social structure in which she is transacting. It is circular. Liz's subjectivity is based on social membership which is based on how she negotiates this linguistically. The changing social practices reflect who she is – her subjectivity. Her changed social orientation in phase 2 allows us to see this and, for the present debate as to whether or not subjective knowledge is beneficial it is apparent that such SFL analysis tends to avoid the argument. It is not so much a question of subjectivity and having background knowledge to be able to better interpret linguistic output. Rather the change in an individual's social identity means a change in her potential linguistic output. Thus the SFL analysis gives us a quantifiable argument as regards the social identity of the Pagewood Island women.

That is not to say that this present study does not value the qualitative approach. Within the social network concept, whilst the Network Strength Score allows for quantification of the integration of individuals into the network, much of the network description is gained from qualitative insights. The clarification of the subtleties and complexities of participants' networks are often available only from the insider's view of the environment under investigation. In the present case this is especially true in regard to the categories used in devising a Solidarity Index to evaluate the degree of network integration. In other words, this research believes there is much to be gained from further explanation through the triangulation of documented ethnographic evidence.

The present study then applies both quantification and description to the analysis and

interpretation of complex systems. The benefits of doing so are advanced by Layder, whose multistrategy approach encourages use of quantitative data and forms of measurement in order to complement qualitative analysis. (Layder, 1993). A central feature of Layder's realism is an attempt to pressure a 'scientific' attitude towards social analysis at the same time as recognise the importance of actor's meanings and in some way incorporate them in research. Others have also argued for the importance of both qualitative and quantitative approaches to analysis (see, for example, Schiffrin, 1987).

Respectful of such suggestions, and in order to obtain a clear picture, this research has been approached both quantitatively and qualitatively. The analytical tools of SFL and the Network Strength Score are combined with the interpretative and social analysis and are together utilised to account for the linguistic patterns emerging in the meaning of the texts and the relationships of the participants. To conclude, insights from quantitative studies as well as those in the ethnomethodological and qualitative tradition have proven valuable in the quest for how best to capture the Pagewood Island network and its linguistic output.

4.9 Summary

This chapter has outlined the research design of the present study and examined some of the different methodological concerns that were faced with the aim of setting the scene for the remainder of the enquiry. The review of the methodological framework adopted in the present study shows that several different notions have been useful in the analysis of the conversations from the female participants on Pagewood Island at the playgroup and later in the park. The methods used for data collection were recorded exchanges, observing, interviewing and questioning of the participants. Researcher positioning can

be seen as twofold, both inside and outside of the network. The network was viewed from the status of participant observer for the network analysis of the life and community of the island and the four female participants. At the sites for the linguistic observation, i.e. in the recording situations, a non-participant observer status was adopted. In these two capacities it was felt that recording the sessions and eliciting information in interview style could take place in the most efficient manner.

The emphasis of the study is the linguistic meaning making behaviour of the network. This has been examined within the Hallidayan systemic model. However, SFL has been complemented by insights taken from studies of an ethnographic nature to allow the participants and researchers voices to be heard. The inclusion of such descriptive elements has been particularly insightful in the interpretation of the unit of investigation, the social network, which is taken up in the following chapter.

5 Analysing relational ties: A Social network perspective

5.1 Introduction

In chapter three it was shown that within the field of linguistics the majority of studies incorporating social networks have been concerned with phonological variants. This research however is located at a higher strata and aims to investigate the nature of social networks with regard to what extent relational patterns shape or constrain the linguistic output of the participants. Put another way, to examine the extent to which the findings in the social network analysis offer an explanation of the linguistic description of the group of women in this study. This chapter will analyse the participants for their social network positioning. The following chapter will, utilising the systemic functional model, examine the linguistic traits of the participants to see how the social network positioning is reflected. So rather than different variants, it is the different linguistic choices available to persons who are differently positioned within a network that the present research is concerned with. In network terms, to what extent can outsiders or non-core members be seen to stand apart linguistically from insiders or core members?

In chapter three the different characteristics, the interactional and structural criteria that go into the construction of social networks were outlined. Further, in the previous chapter, various methods of measuring network ties and integration were considered. The Pagewood Island data was also introduced. Now our attention turns to the participants and it is this chapter that offers an analysis of the network that they constitute, a mapping of the participants' relational ties. Once the participants are introduced in section one, the remainder of the chapter will then map the women's relational ties onto the Solidarity Index to measure their degree of network ties and

integration.

5.2 Pagewood Island data - the participants

Pagewood Island is a relatively close-knit community and it is a small group of four women residents who make up the participants for the present research. While seeing that a social network may be a 'boundless web of ties that reaches out through a whole society, linking people to one another, however remotely', Milroy and Milroy highlight the need to 'anchor' network studies for the practical purpose of analysis (1992:5). By limiting this investigation to a small group I hope to be able to analyse in great detail both the social network and the linguistic traits that arise. Moreover, in close-knit communities like Pagewood Island not everyone has close relations with everyone else. Size and limited resources do not permit this. Rather communities are typically segmented into localized clusters or cliques, into what Blom and Gumperz refer to as 'small nuclei of personal interaction' (1972:419). The group studied can be seen as a one such small cluster from the larger community.

The cluster consists of four women, Holly, Kate, Liz and Laura. They are all tertiary educated, white middle class Australians in their thirties. All the women are well acquainted, although they have lived on the island and known each other for different periods of time. At the time of the first recording, Holly has been on the island the longest (5 years) followed by Kate (4 years). Laura has been living on the island for 18 months and Liz is a relative newcomer being there for only 1 year. All the women have children. Holly has 3 children (aged 3, 6 and 8 at the time of the initial recording). Kate has one 3-year-old child. Liz's two children are 3 and 6 years old. Finally, Laura has two children (aged 6 months and 3 years). While each family makeup is different, it is

the 3-year-old preschoolers who can be seen as the initial point of contact for the women and the reason for the attendance at the playgroup where the first recording takes place. The preschoolers are the women's common ground and it is having children of a similar age that has enabled systems of reciprocal support and network ties to develop.

The playgroup is a voluntary service run by the women to offer support and friendship to preschool children and their parents. The weekly playgroup is held in the island preschool building when the preschool is closed. It is very informal and seen as a chance for parents to get together, drink coffee and chat. Everyone is welcome and the number varies from about 4 to 10 families. It is predominantly women who attend with their offspring, although occasionally fathers come along. On the occasions that the recordings were made, the group consisted of mothers only.

Returning to the participants, the Solidarity Index is used to capture the relationships between the women. This index, devised to measure the relationships between the women, to capture the degree of integration each of the participants displays within the network, was outlined above. Section 4.6.1. discussed the index criteria and the salient local conditions leading to its formation. Briefly, the 15 factors that I have used for analysing the Pagewood Island data are as follows: attendance at the playgroup; involvement in the playgroup organisation; having children who attend the island preschool; length of residency; home location; receiving money for work; studying; owning own home; owning own boat; voluntary associations (social interaction of mothers with children, social interaction of mothers and partners and attendance at community social events); involvement in community affairs; exchange of (childcare) services and having older children who play together.

As also explained in the methodology chapter, the criteria were weighted for salience so as to give a clearer indication of the network ties. If we now take a look at each of the Solidarity Index factors in turn we can see how well integrated into the group each of the women is. The weighted Network Strength Score attached to each criterion is given in parenthesis. The analysis begins with phase 1: Playgroup.

5.3 Network analysis – phase 1: Playgroup

- **attendance at the playgroup (2)**

The point of departure for the social network is the playgroup that brings the participants together. It is a chance occurrence that the four women in the Pagewood Island study have children of the age suitable for playgroup. Yet they choose to attend this weekly meeting because they enjoy the support and friendship ties that such a gathering creates. So all the women score on this initial criterion. Outside of the playgroup they have differing amounts of affiliation and thus their measure of network integration varies. It is these various areas of involvement that constitute the remaining criteria of the Solidarity Index.

- **involvement in the playgroup organisation (1)**

This is considered a separate category to the first since, while all members attend the playgroup, it is Holly and Kate who score network strength points for their roles in the running of the playgroup service. Although the playgroup is run without a leader as such, it is Holly who does much of the organising. She has the keys for the preschool building and organises group times, outings and Christmas parties etc. Kate is in charge of the playgroup finance. She also organises outings and looks after the key in Holly's absence. By contrast, Liz and Laura play no role in the playgroup's organisation.

- **having children who attend the island preschool (2)**

The majority of the island children attend the Pagewood Island Preschool. Liz, Kate and Holly all chose this option for their children. Since the preschool hours were unsuitable when Laura was previously employed, her son attends a mainland daycare centre. In order to encourage him to socialise more with the peers he will soon go to school with Laura is considering moving him to the island preschool.

- **length of residency (2)**

Holly and Kate both score here since they have resided on the island longest (5 and 4 years). Laura has lived on the island for 18 months and Liz for 1 year. The decision to give points only to those who have lived on the island for more than 2 years came from interviews with the participants and other islanders. Due to the hardships caused by island living many people find that the lifestyle does not suit them and move elsewhere. The general feeling is that the first two years of adjustment are the most difficult and that if you make it past this you a 'true islander'. All the participants are relatively new to the island, and it is also true that newcomers often look to residents that have not been on the island too long to form their networks or clusters of friends. The old-timers may want to be friendly but resources are limited and they may have already established solid networks.

- **home location (2)**

Being an island the geographical outlay is of utmost important. The north of the island is the most secluded and attracts the most desirable weather. It also houses the most prestigious properties and is seen as the most desirable part of the island to live. Three of the participants, Holly, Kate and Liz, live close to each other on this side of the island.

Although only a short walk to the south side of the island, the terrain is steep and the ‘southsiders’ will use a different wharf to catch a ferry or moor their boat, whilst the ‘northsiders’ will use a wharf closer to their homes. In terms of our participants, this means that frequent interaction can take place between Kate, Holly and Liz as they commute back and forth to the island, whereas Laura will be limited to interaction at the mainland terminal. Further, living on ‘the other side of the island’ limits interaction since inclement weather would encourage Laura to miss playgroup sessions. Also some mother on the island’s south side, especially those with very young children, find it too burdensome to walk up and over the hill to the play group and will instead invite each other to their homes and establish their own informal ‘mother’s group’, their own networks of support. Due to its significance this location criteria has been weighted, with two points awarded to those participants who live on the north of the island.

- **receiving money for work (1)**

Kate and Holly are both in paid employment. Both work part time from home. Holly works approximately 10 hours a week. Kate’s number of hours varies according to demand but is approximately 10 – 12 hours per week. Liz and Laura are homemakers. Both are considering returning to the workforce shortly.

- **studying (1)**

Holly and Laura are part time students.

- **owning own home (1)**

Liz, Laura and Kate all own their own homes while Holly is renting her place. Her and her spouse are hoping to buy their own place soon, and in deed this is one of the changes that occur in the passing 15 month period between phases 1 and 2.

- **owning own boat (1)**

Boat ownership is a variable specific to the island community. Its value in network tie strengthening lies in its ability to heighten feelings of 'local identity'. Three of the women, Kate, Holly and Liz, own boats. Boats, tides and water conditions are frequent topics of island conversation. Buying, selling, repairing and cleaning boats, all involve local knowledge and bring the islanders together. Whilst often the domain of the males, boat ownership was considered an important inclusion here due not only to their focal point in island life, but also since, in the current network, boats are not only man's business. Both Kate and Liz frequently use their boats and help in the upkeep of them. Laura relies on the ferry service and does not own her own boat.

- **voluntary associations**

Whilst the four interactants have established network ties via their attendance at the playgroup there are other social interaction factors which point to differing levels of familiarity and these are discussed next. Voluntary association is a broad category that I have divided into 3 subcategories. Each is discussed separately below. The first two are seen as of primary importance and are thus weighted with two points. The remainder complements the category of association and address issues of community involvement.

- **social interaction of mothers with children (2)**

All the mothers interact socially. They all attend the playgroup regularly and show a desire to get on and enjoy each other's company. But some of the participants interact with each other more frequently outside of the playgroup sessions. Kate and Holly, and to a lesser extent Liz, meet at the beach, park etc. and chat while their children play. The relationship differences here lie in the fact that, at the time of the first recording, Kate and Holly may have prearranged their meeting, whereas Liz's interaction is most certainly to be by chance. Kate and Holly's strong measure of integration can further be seen in the fact that their children are invited to play at each other's homes. They have chosen to interact as friends outside of the playgroup and meet for coffee, have lunch together etc while their children play. Since Liz and Holly both have school aged children they often meet by chance when the school ferry arrives and departs. Laura's home location means that a beach on the island's south side is a more likely play area than either the park or the beach frequented by the other network members. Thus her social involvement with the others is further limited.

- **Social interaction of mothers and partners (2)**

The interaction described above involved the mothers and their children. The amount of time that mothers and their partners interact with other network members is also an important measure of network strength. It is again Kate and Holly who most frequently socialise with their partners. They are invited to the same parties, and have both attended parties in each other's homes with their spouses. Liz and Laura do not socialise in the same fashion.

- **attendance at community social events (1)**

Voluntarily attending community events can be seen as a measure of participation in the social life of the island. All the participants attend social functions organised by the Preschool (often fundraisers). It is however, Kate and Holly who tend to go to the social functions organized the Pagewood Island Residents Association (PIRA), and this frequent attendance shows them to be more integrally involved in island activity than the other two members.

- **involvement in community affairs (1)**

Involvement with island life is further emphasised when we look at which of the members volunteer their time and show interest in community affairs. Kate is President of the Pagewood Island Parents Association and she and her husband have been heavily involved in a recent island project. Kate also regularly attends the PIRA meetings. Holly too is involved with the same project, and PIRA. Since she has older children she has been a committee member of both PIRA and the Preschool Parents Association for over 4 years. Like Kate she often attends meetings concerned with the local environment and bush regeneration etc that are held in the Community Hall. One particular issue very current at the time of the first recording led to several protest meetings. Whilst all of the women are concerned about the issue it was Kate and Holly who had attended all such meetings. Liz went to her first meeting one month prior to the first recording session. Laura has not attended such meetings. These overall findings show how Kate and Holly can be seen as the most involved in community affairs.

- **exchange of (childcare) services (2)**

Kate and Holly support each other by helping with childcare. This entails things like

picking up children from preschool, taking care of them for a morning while mum is working or busy etc. Other services exchanged may be requests for forgotten goods from the mainland, for example a loaf of bread or some milk. At other times it may be the borrowing of a household item or garden tool or a request for a lift over to the mainland. In all cases such network ties exist only between Kate and Holly.

- **having older children who interact (2)**

This final criteria measures the amount of time other children play together. For instance, both Holly and Liz have older children of a similar age. If they play together this would be a way to increase the mother's network ties. In the first exchange Holly and Liz are making arrangements for their older children to get together and play after school. It will be the first time that this has happened. Over time this becomes a more frequent event and thus other children's relationships become important when looking at the group 15 months later and will be dealt with below.

This investigation into the network ties that exist between the members suggests that the women are linked to each other in different ways. These relations can be seen more clearly when each individual is assigned a Network Strength Score (NSS) based on the 15 factors detailed above. Scores were calculated by giving one or two points for each condition fulfilled. The NSS then reflects the women's individual commitment to the community and is shown in a table 5.1 below.

Table 5.1: Social network coding sheet for phase 1: The Playgroup

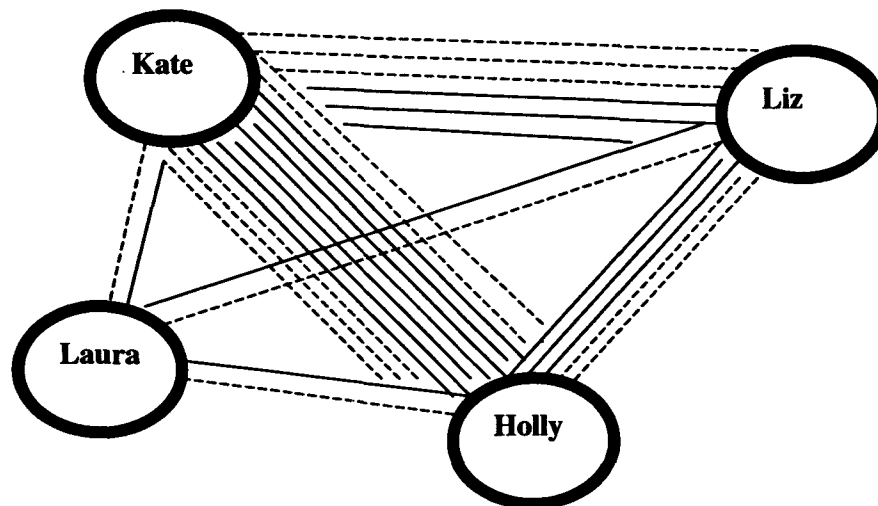
	Kate	Holly	Liz	Laura
Solidarity Index: two points				
attendance at the playgroup	2	2	2	2
having a child who attend the island preschool	2	2	2	-
length of residency	2	2	-	-
home location	2	2	2	-
social interaction of mothers with children	2	2	-	-
social interaction of mothers and partners	2	2	-	-
exchange of (childcare) services	2	2	-	-
having older children who interact	-	2	-	-
Solidarity Index: one point				
involvement in the playgroup organisation	1	1	-	-
receiving money for work	1	1	-	-
involvement in community affairs	1	1	-	-
attendance at community social events	1	1	1	-
owning own boat	1	1	1	-
studying	-	1	-	1
owning own home	1	-	1	1
Network Strength Score	20	22	9	4

Now that the Solidarity Index has been discussed and the participants given a NSS we can start to discuss the members and their roles in network terms. Holly and Kate have the highest NSSs. They have the main social links and are connected in more ways and thus can be seen as the core members. Liz, as a newcomer connected in less ways with a lower NSS, can be seen as a secondary member and Laura, who maintains the least links with the other women, as a peripheral or marginalized member whose status is reflected in her low NSS. This is not to suggest that Liz and Laura reject local values or even that they are less integrated into the island community, but merely that their roles are more peripheral within *this* cluster. They may, and in deed do have, other strong network ties. Laura, for instance, is a central member of a group of young mothers who live on the other side of the island. Liz also maintains stronger ties to friends in other offshore

communities who she knew before moving onto the island. The core members themselves are also members of many other networks. A good example of this is Holly, who is closely linked to a small group of women who have school aged children and have been on the island somewhat longer. The relations of the four women in the present network are mapped diagrammatically in figure 5.1.

Figure 5.1. displays the social interconnections of the women; it is a visual display of the social identities of individual speakers and in what ways the speakers are connected to each other. It offers a model of the transactional possibilities available to each individual. The solid black lines represent the reciprocal relations that have been given two points on the Solidarity Index. The dotted lines are those remaining integrating factors that have been assigned one point. The core member can clearly be seen to be the ones with the most connections. Taking into consideration the weighting factor (i.e. allowing for the assigned two points to be calculated as two links) Holly and Kate can be seen to be linked to each other in 19 different ways. They are tied to Liz in far fewer ways. Kate has 9 links with Liz and Holly 8. Still fewer links are evident between Laura and the other members (3). Thus the NSS foregrounds the central, most important or prominent members of the group, the individuals with the power to exert most pressure over the behaviour of others in the group. Evoking Boissevain's terms Kate and Holly's influential status is due to their position as the individuals with the highest 'centrality'. They are the 'network entrepreneurs' (Wasserman and Galaskiewicz, 1994:xiv), the actors in the network who are best able to exploit their positions to exert pressure on others and further their own interests.

Figure 5.1: Number and type of social ties for phase 1: Playgroup

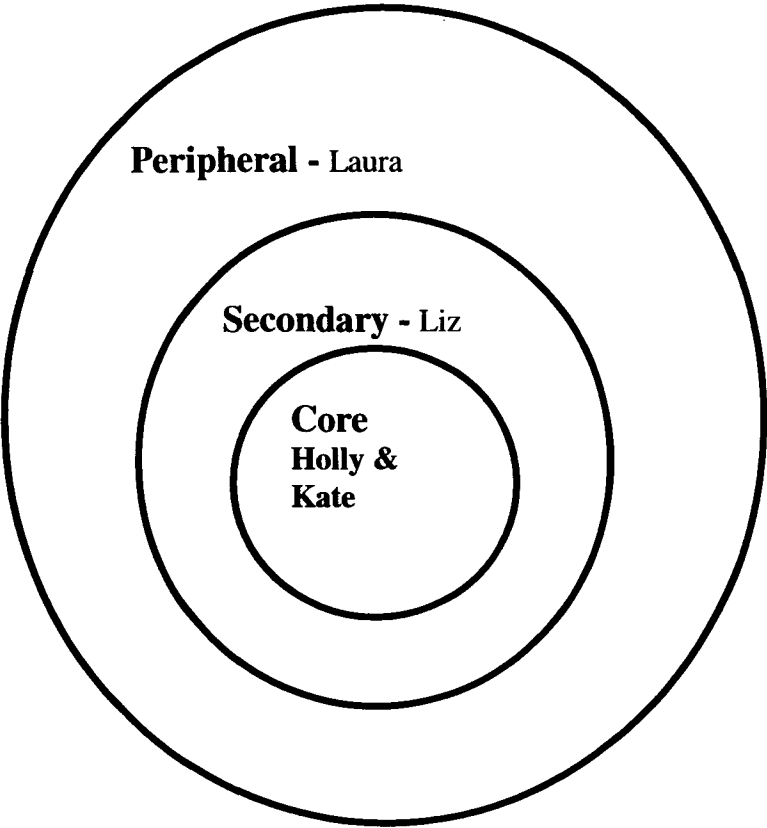


Key
—— indicators assigned 2 points
----- indicators assigned 1 point

(adapted from Cheshire, 1982)

Figure 5.2. below is a representation of the individual according to their integration into the network. It shows how two of the members can be considered as forming a central core within the network and the relationship of the secondary and peripheral members to those core figures.

**Figure 5.2: Group membership patterns for participants in phase 1:
Playgroup**



5.4 Revisiting the network: A second analysis

This research looks not only at the relationship of an individual’s network and her linguistic output, but also how that relationship is affected by change over time. A concern of this work is to examine how changed social conditions may exert influence on participants to assume different network positions and alter their linguistic behaviour. Thus, a new network analysis was carried out to reveal the changes in the relationships between the four women. This second examination (phase 2) takes place after a 15-

month interval and reveals that there has been a shift in orientation amongst the women. In order to look at these changes in greater detail each of the criteria from the Solidarity Index will once again be examined to see how the changes have affected the network ties of the participants. Again the weighted NSS is given in parenthesis. Note that, for reasons outlined in section 4.6.1. the criteria have changed slightly.

5.4.1. Network analysis – phase 2: The park

- **having children who attend the island preschool (2)**

As suggested in phase 1, Laura's son now attends the Pagewood Island Preschool with the other network member's children, therefore all participants now score on this criteria in the second phase.

- **length of residency (2)**

Obvious changes here mean that all network members now score, since they have all now resided on the island for 2 or more years.

- **home location (2)**

Although Holly has now moved, the measure of the home location ties remains the same since she remains a 'northsider' with her new home still being very close to the properties of Kate and Liz, still on the north side of the island.

- **receiving money for work (1)**

Laura has returned to the workforce part time and thus increases her network ties with Kate and Holly. It is worth noting also that, although not scoring in the present phase, Liz now wishes to return to the work force and has recently had several job interviews.

- **owning own home (1)**

As mentioned above, all participants are now homeowners.

- **owning own boat (1)**

The situation here remains the same as in phase 1.

- **social interaction of mothers with children (2)**

Voluntary association is perhaps the category in which most change has occurred. Kate and Holly and Liz now all interact socially outside of picking their children up from preschool. Their children play at each other's homes, are invited to parties, meet in the park or the beach etc. Whereas in phase 1 it was pointed out that only Kate and Holly may prearrange such meetings, now all three may do so. Laura and her child are not included in such social activities.

- **Social interaction of mothers and partners (2)**

It is again Liz whose level of integration has changed most over the 15 months between phases 1 and 2. She and her partner have strengthened their friendship ties with their neighbours and now frequently socialise with Kate and Holly and their partners. In the intervening 15 months all three have attended social gatherings at each other's homes and at other venues.

- **attendance at community social events (1)**

Liz's increased social involvement in the network is also evidenced by her attendance at community social events. Like Kate and Holly she now frequently attends community events. Laura remains marginalized with regard to this criterion.

- **involvement in community affairs (1)**

Liz is also more involved in community affairs in phase 2, having become a committee member of the Pagewood Island Parents Association and a member of PIRA. . Laura and her spouse regularly attend the preschool parents meetings but are not committee members and have no involvement in PIRA.

- **exchange of (childcare) services (2)**

The increased integration of Liz with Holly and Kate has lead to a greater reliance on each other for friendship and support. Indeed, rather than turning to other networks for support, Liz is more and more offering and seeking help from Kate and Liz. She is now linked to both Kate and Holly in many ways, she both gives and receives support for childcare and other services. Moreover, at the time of the phase 2 analysis, Liz was often, due to the working commitments of the others, picking up the children from preschool. Laura remains non-integrated as in phase 1.

- **having older children who interact (2)**

As suggested in phase 1, Liz and Holly's older children now interact frequently. They play in the park or at the beach after school and occasionally at each other's homes.

This has been seen as a major factor in increasing the link between these two members.

The NSSs for phase 2: The park are given in table 5.2.

Table 5.2: Social network coding sheet for phase 2: The Park

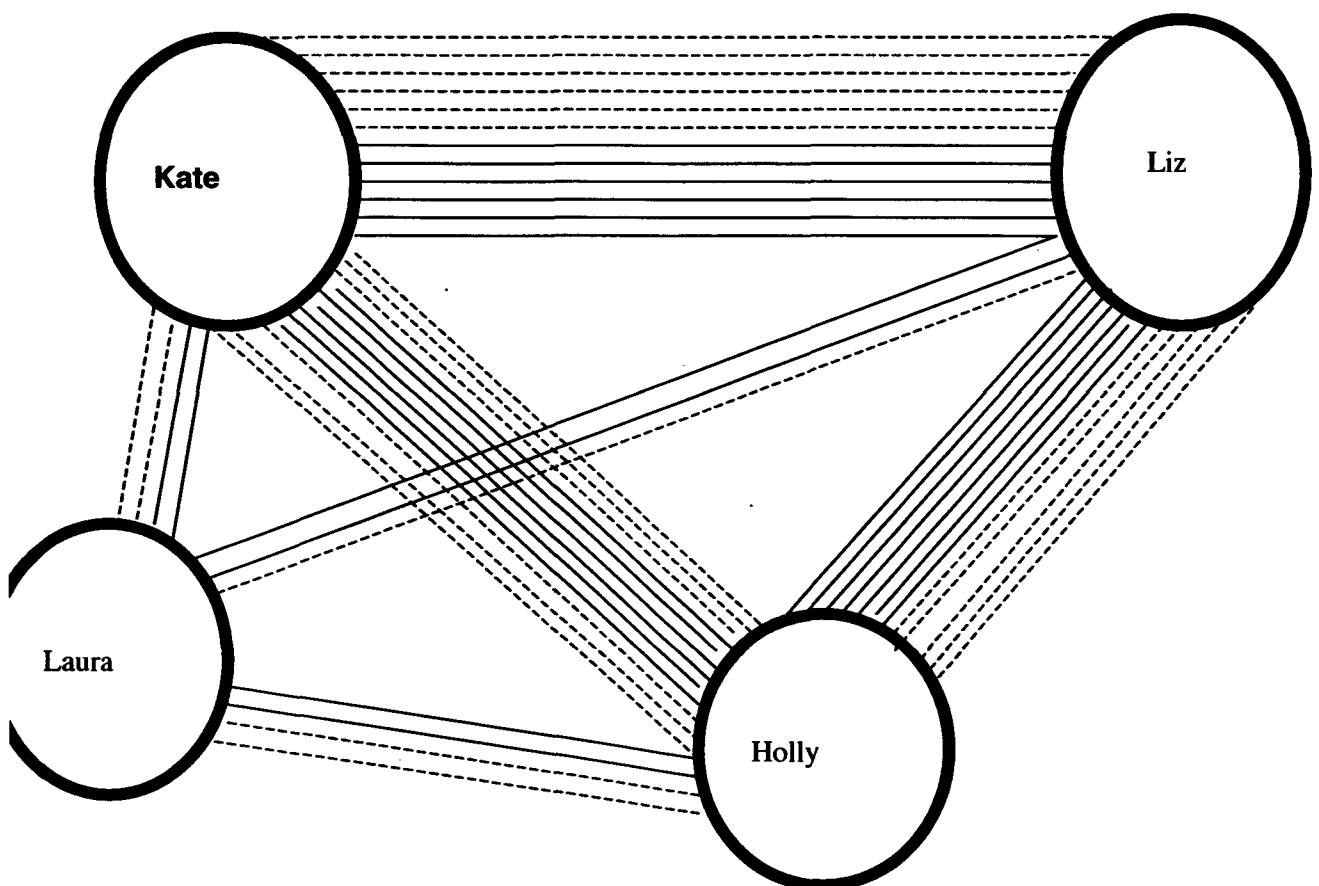
Solidarity Index: two points	Kate	Holly	Liz	Laura
having a child who attend the island preschool	2	2	2	2
length of residency	2	2	2	2
home location	2	2	2	-
social interaction of mothers with children	2	2	2	-
social interaction of mothers and partners	2	2	2	-
exchange of (childcare) services	2	2	2	-
having older children who interact	-	2	2	-
Solidarity Index: one point				
involvement in preschool affairs	1	1	1	-
receiving money for work	1	1	-	1
involvement in community affairs	1	1	1	-
attendance at community social events	1	1	1	-
owning own boat	1	1	1	-
owning own home	1	1	1	1
Network Strength Score	18	20	19	6

Looking at this table it is immediately evident that there has been a large increase in NSS for Liz. Now Liz, Kate and Holly have far more equitable amount of network ties. Laura too has slightly increased her NSS and is therefore marginally more integrated into the group, although the large difference between her score and the others leads to the conclusion that she remains a peripheral member. Kate and Holly's slight decrease in NSS from phase 1 is due to a necessary altering of the in Solidarity Index. This makes it difficult to compare the actual NSS across time since the criteria have necessarily altered. What is crucial for the present purpose is the relationship between the four women in each separate phase.

The diagram in figure 5.3 once again offers a representation of the network as a model of a social system consisting of the four individuals and the ties among them. This time we

see that now there are three core members, each of whom are socially linked to each other in 18 or 19 ways. Laura's remaining marginalized status is reflected in that she has far fewer links to the other network members. She is linked in 4 different ways to Holly and Kate and in 3 ways to Liz. Liz's shift in orientation from the middle or secondary ring to the inner ring or core of the group is also displayed visually in figure 5.4.

Figure 5.3: Number and type of social ties for phase 2: The Park



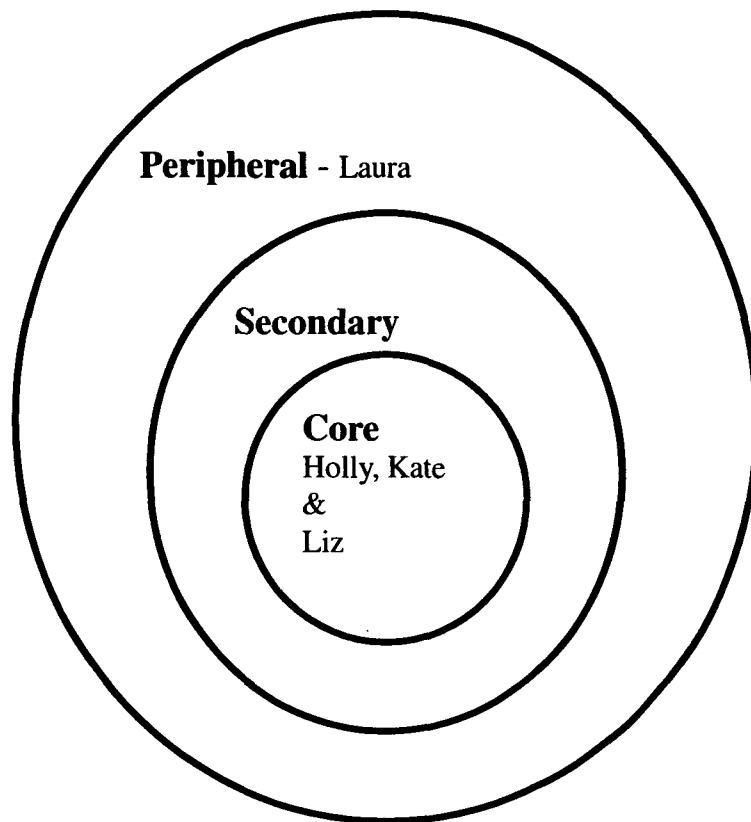
Key

———— indicators assigned 2 points

----- indicators assigned 1 point

(adapted from Cheshire, 1982)

Figure 5.4: Group membership patterns for participants in phase 2: The Park



5.5 Conclusion

This analysis reveals that in phase 1 the Pagewood Island network consists of two core members (Holly and Kate), one secondary member (Liz) and a peripheral member (Laura). During the 15-month interval between phase 1 and 2 the number of network ties has altered and while Laura remains peripheral to the cluster, Liz is now to be considered a core member along with Kate and Holly.

When we view the relations in which every individual is embedded as a social network we can begin to use this map of sociological variables towards providing an explanation for the linguistic behaviour of the individuals involved. In the next chapter we will examine the linguistic traits of the women to see to what extent the internal structure of the group constrains the linguistic output of each individual. Put another way, to what extent the members are exploiting the linguistic resources to project their social identity.