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# Embodying Friendship: Social Structure, the Use of Space and Language Use in a New Zealand Deaf Women's Group

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[T]alk and other ordinary conduct are informed by a principled orientation to the setting-specificity of their undertakings.

On the other hand, in any particular scene, on any particular occasion, moment-by-moment, this formal orientation is "filled in" by particulars, is implemented or realized in particular contextual orientations (Schegloff, 1992, p. 215).

Activity is always *located*. A person doing something always does it *somewhere* and his doing always entails a relationship to the space which has in it the objects or people with which the doing is concerned. (Kendon, 1990, p. 209).

Before speeches could be exchanged or a linguistic sound produced, there were conventional acts performed by human bodies. And before human bodies, there was space, not just empty space, but culturally meaningful space, that is space always ready to be occupied by social personae engaged in specific activities (Duranti, 1994, p.48).

## 1. INTRODUCTION

People structure their lives by arranging their environments, arranging themselves and conversing with each other in these created contexts. This study of the Mothers Club of Auckland, New Zealand, a Deaf women's group, looks at what spatial arrangements, as reflected in two years of seating patterns, can tell us about long term language use, particularly the relationship between sign language and lip-speaking, and the sociopolitical implications of this use of space.

All forms of language embody assumptions about space. These assumptions are part of Emmanuel Schegloff's "principled orientation" to specific settings which he sees as part of ordinary conduct and reflect Adam Kendon's insight that activity is always located. Schegloff and Kendon looked at informal Western interactions, organized but spontaneous at the micro-level such as telephone conversations and birthday parties, where people usually come together into conversation and then separate without formal planning.

Language is equally vital to Alessandro Duranti's work, but the setting is very different. His view of "space always ready to be occupied by social personae

engaged in specific activities” reflects his work in a more formal situation, the Samoan *fono*. He sees this space, with sometimes latent, sometimes active potential, as a key building block in the process “whereby social structure is presupposed and at the same time reproduced” (1994, p. 55). Other building blocks of the structure of a *fono* include a kava ceremony, rules for speaking and specific linguistic practices.

This study of seating patterns in the Mothers Club is an attempt to bridge the gap between small scale and flexible interactions characteristic of ordinary talk, the object of Conversation Analysis as done by Schegloff and his colleagues and the work of Adam Kendon, and the formal political settings of the *fono*. One difference between ordinary talk and interactions at the *fono* is that those at the *fono* are more structured in a way that is accessible to the participants. The open discussion of seating arrangements at the *fono* is an example of this:

Samoans can easily provide an outsider with information about seating arrangements, which can be used to draw an ideal seating plan...[This plan forms a schema which] allows for predictions that can be easily adapted to a great variety of situations (Duranti, 1994, p. 60).

Mothers Club patterns are intermediate because they are more planned than the small scale interactions looked at by Kendon and Schegloff but less organized than the seating at a *fono*. Mothers Club members sit in seats for extended periods of time in patterns sometimes not explained by chance but there is no open model for this seating such as ‘important speakers will sit here’ as Duranti has found in his work.

My argument is that by looking at such intermediate patterns in conjunction with language variation, we can get access to how the spatial assumptions in language held by this group of women are played out over time which in turn gives us insight to what these spatial assumptions are. These spatial assumptions, however, are not only related to physical constraints of space but models of what space should be—how many people should be able to understand and how many people should be included in a given conversation or other interaction. Seating patterns therefore can be teased out into a far broader picture, one that can help us understand such fundamental cultural notions as who one talks to, the nature of friendship and how this friendship can be utilized on behalf of larger political aims.

New Zealand Deaf settings are particularly privileged places to explore how language embodies space because the spatial assumptions of different kinds of language used in the community, including signing and lip-speaking, vary greatly. Signing can be used in a wide variety of spaces while lip-speaking needs close proximity and very clear lines of sight.

Let me give a few simple examples of what I mean by “assumptions about space.” In spoken language, such assumptions are reflected, among other ways, in choices about volume, duration of sound production and preciseness of pronunciation. In the house I grew up in, we would all stand at the bottom of the stairs and

yell “Diiiiinnneeerrrr” to alert people on the third floor that supper was about to be served. We assumed we would not be heard across two flights of stairs unless we changed the normal pronunciation of “Dinner” considerably.

Similar linguistic adjustments are found in sign languages. When she analyzed an American Sign Language (ASL) lecture, June Zimmer found that

the signing space often extends considerably beyond [typical]...boundaries. In addition to being larger, signs in the lecture are also executed more slowly. Individual signs are of longer duration, and final holds are longer (1989, p. 260).

These particular adjustments reflect an assumption of a large, probably captive audience.

The relationship between language and space, however, is bi-directional. Not only do people adjust language to communicate effectively within given spatial limitations, they also manipulate space as part of the communicative process. Adam Kendon (1990) describes what he calls “F-formations”: the patterns people take up when they are talking with each other. When analyzing a film of a small group of hearing people standing at a birthday party, Kendon found that “the move of one appears to be compensated for by the move of another, so that the net effect is that the arrangement is maintained”(p. 217). He notes, however, that when people are seated, that “active cooperation maintenance is not observed. The function of keeping participants arranged is taken over by the furniture”(p. 216). Choosing seats, therefore, becomes an exercise which both predicts and shapes interaction patterns.

In Deaf settings, space constraints revolve around the ability to see each other. Patterns (F-formations) made in such situations are quite different from those made by hearing people with each other. A circle where everybody is within sight of each other, for example, is a common F-formation in Deaf settings. On the basis of their findings in an American Deaf pre-school, Robert Johnson and Carol Erting hypothesized that

because of the visual demands of sign language reception, it is quite possible that deaf children choose to sit across from favored affiliates in order to enhance communication, rather than sit next them as we expect for hearing children (1989, p. 62).

In this paper, however, I will argue that the difference between this Deaf pattern and typical Western hearing seating patterns arises not because of a different way of interacting with a ‘favored affiliate’ but because of different cultural assumptions about the nature of interactions in group situations which are directly influenced by the F-formations possible in sign language contexts.

This study will look at two sets of seating pattern data, that from the Mothers Club and seating data that I have reanalyzed from the above mentioned study by

Johnson and Erting (1989). The Mothers Club is a particularly rich site to examine because of the tremendous amount of language variation at the club. The forms of language used, like those of the NZ Deaf community as whole, are strongly influenced by when and where people attended school. The New Zealand Deaf education system was strictly oralist until 1975. Children were expected to learn how to speak and read lips. The later in time one attended school, however, the more likely one was to learn how to sign fluently from Deaf schoolmates.

When I analyzed seating patterns at the Mothers Club, my hypothesis was that the more oral members would have different seating patterns because the constraints of being able to see lip movements are different from those of seeing larger signs. Oral language did seem to affect seating patterns but not in such a direct way. Instead, a separate Deaf group-oriented pattern seemed to be the most typical, and oral language seems to be a factor only in the limited situations. When members were close friends but didn't share a common sign language, they sat next to each other making communication by lip-spoken English (which they do have in common) much easier.

The specifics of the background to the New Zealand Deaf education system, including its influence on language use, and how this study was conducted will be discussed below in Section 2. Section 3 presents the analysis of seating data from New Zealand and my reanalysis of Johnson and Erting's American preschool data. Section 4, the conclusion, lays out some of the specific implications for language use in NZ and in other Deaf communities that we can draw by extending inferences about language from seating data and contrasts the implications of one-on-one relationships with group relationships.

## 2. BACKGROUND

As discussed above, language use in the NZ Deaf community is closely related to schooling. Where a member of the Mothers Club went to school and the nature of that schooling, therefore, needs to be known in order to understand her language use and seating patterns. This section presents a general historical overview of NZ Deaf schools and the larger Deaf community, particularly Deaf clubs (see also Monaghan, 1996; Monaghan & Turner, 1997). I also present some brief ethnographic background on the Mothers Club itself and discuss how this study was conducted. It is these details that will allow me to connect the bare bones of seating statistics to ideas of culturally specific ideas of space and the nature of interaction. This work is just one part of a larger linguistic and ethnographic study of the New Zealand Deaf community based on fieldwork done from January to October, 1992 and in July and August of 1996.

The first school for deaf, Sumner School in Christchurch, was founded in 1880 and was profoundly affected by international (particularly European) support for oralism. Sir Julius Vogel, head of the committee in charge of selecting a



principal for Sumner School argued that with oralism: deaf mutes may be able to compensate themselves largely for the loss of hearing and speech....[but with signing] there is a far greater danger...that deaf mutes...by congregating together, should in many cases increase the natural and inevitable disadvantages arising from their affliction (Vogel 1879 in Allen 1980, p. 11).

Despite this heavy emphasis on oralism and the acceptance by some members of the importance of learning how to speak, signing still arose in the Deaf community.

As signing was developed underground at each school, kinds of signing in New Zealand vary according to which school or schools people attended and when they attended. Dan Levitt (1986) listed the school his signing models attended and the current New Zealand Sign Language dictionary has checked each sign in the dictionary with older, middle-aged and younger signing cohorts.

Important divisions between signers include those who attended school before 1940, including Sumner and Myers Park, a day school in Auckland; between 1940 and 1960, when there were three major boarding schools, Sumner, Titirangi in Auckland and St. Dominic's, a Catholic school; and after 1960, when mainstreaming was introduced. The pre-1940 cohort is widely seen as being strongly oral, with a lot of mouth movement and some signs (e.g. colors like RED, BLUE, GREEN) being distinguished from a set of words with the same manual sign only by information on the lips. The language used by the post-1940 cohort at Sumner, Titirangi and Mt. Wellington (also in Auckland), and St. Dominic's, reflects a creolized form of NZSL, still influenced by oralism but with more fluent signing. Like creoles elsewhere, this form of NZSL was learned quite early (although usually not from birth as most children were not exposed to it until they came to school) and reflected richer grammatical inflection and vocabulary than the previous forms. Unlike spoken language creoles, however, it didn't reflect the unequal combination of two or more previously existing spoken languages. NZSL is instead a systematic mixing of invented, often iconic, signs used with grammatical features common to many sign languages and spoken English influences (see Hudson, 1996 for a discussion of creoles and Bellugi & Klima, 1980 for iconicity in sign languages). Students who went to school after 1960 had a variety of influences, including the creolized language of previous generations, and experience in Deaf units and mainstream classrooms.

By the 1970s, it was apparent even to the education authorities that oralism wasn't working. Since New Zealand Sign Language, the language of local adult Deaf people, wasn't recognized, a coalition of Deaf community members, parents and teachers worked for the acceptance of a signed English system from Australia for use in the schools. Australasian Signed English uses Australian Sign Language signs in English grammatical order, adds morphemes for English morphemes such as "s" and "ed," and is supposed to be done at the same time as spoken English. The acceptance of signed English, however, has since lead to the recognition and acceptance of the autochthonous sign language (NZSL) of the NZ Deaf commu-

nity.

Although New Zealand Sign Language first developed in NZ's deaf schools, NZSL was maintained at Deaf clubs across the country. The first Deaf club was started in 1926. A group of Sumner graduates met at a friend's house and decided to formalize the ties between them by starting a club. The activities were social, and included card games and sports. Other clubs were started in Auckland and Wellington at the end of the 1930s. Clubs are a major feature of general New Zealand social life and are often officially recognized by the government.

The Mothers Club is relatively informal. It is a women's group that meets regularly, usually every two weeks, to play games and socialize. It started approximately 15 years ago as a daytime activity for mothers of small children. The children have grown, but the women have continued to meet. Each time a different member hosts the gathering at her house. Turns to host and themes such as "kitchen" or "food" are designated up to six months ahead of time. A number of activities are economic in nature, including a raffle and sales of old clothes. The proceeds of these go towards paying for Christmas (a summer holiday in NZ) or Mid-Winter dinners at a nice restaurant for all active members. These meetings have much in common with other Deaf clubs and New Zealand hearing women's activities. All members, for example, are required to "bring a plate," a potluck dish, such as sandwiches or a dessert, a common NZ practice (Park, 1989). For the core members of the group, the Mothers Club is a key context where friendships are enacted and maintained.

Taking notes is an important part of the activities of the club and is the responsibility of the president. The president keeps track in writing of upcoming hosts of the meetings, money collected and attendance. The analysis below is based on seating information derived from xeroxed attendance lists from 57 meetings from 1990 to 1992 and a videotape of one meeting recorded in 1992. The videotape shows how attendance was taken—the president went counter-clockwise around the room, writing down names of people as they gave her money for the week. As members don't always give money in order, the attendance lists aren't a perfect representation of the seating patterns but they are a near representation. Thirty different women attended over this two year period, but the seating patterns of only the twelve most frequently attending are closely examined below.

The backgrounds of the women in the club are diverse. The twelve most frequent attendees ranged in age from their 30s to late 70s. Ten were raised in New Zealand and went to various schools including Sumner, Myers Park and Titirangi while two were originally from England. England also has had a long history of oral deaf schools so all members sign, lip-speak and lip-read, although some are more signing or oral than others. The two British members and eight of ten Zealanders were white while two New Zealanders were Maori.

In the analysis below, less frequently attending members were divided into two groups—four women who attended between 14 and 19 times were collapsed into a category referred to as "Frequent," while the remaining 14 who attended dix

nine times or less were categorized as "Infrequent" and have been included in the analysis as part of these categories rather than as individuals. When calculating seating patterns, I also made a decision to not list women sitting at the top or bottom of the list as sitting next to the person at the bottom or top of list, which they probably were as people sat in a circle. Future analysis of this material should probably calculate frequencies assuming circularity as well.

Table I is a sample seating pattern, taken from the videotaped meeting showing "seating partners," people sitting next to each other, while Table II indicates the discrepancies between number of times attending and seating partners for each member. As people sat in a circle, each woman would have sat next to two people each time. Since the data was taken from linear lists, however, only a woman never at the top or bottom of the list would have exactly double the number of seating partners as appearances. None do so; everyone was at the top or bottom of the list at least some of the time.

### 3. THE DATA AND DATA ANALYSIS

In this section, I present the seating data from the Mothers Club and an analysis of its implications as well as my reanalysis of the Johnson and Erting (1989) data and its implications. These two sets of data show that there are strong commonalities across these quite different Deaf situations.

#### 3.1 The Mothers Club

As can be seen on the videotape of the meeting, all the members of the Mothers Club have both sign language and lip-spoken English in their repertoire. There is variation, however, in how much signing, how large the signing is and how much information must be read from the lips to in order to understand the signing. As expected from schooling background, older members often used a lot of English lip speech and some spoken English. Not only is there variation between speakers, however, but there is also intra-speaker variation. Some of this was connected to spatial assumptions. As in Zimmer (1989), language used between people sitting beside each other was different, often in a smaller signing space, than that used with people across the room. Certain people also seem to code-switch depending on the kind of language that their conversation partners typically use.

This bilingualism means that members could choose from a minimum of two different patterns, signing and lip-speaking; seating patterns give us an unusual view into premeditated choices between these varieties. In order to lip-read each other, people need to be in close proximity. Sitting next to each other, therefore, would be the most convenient pattern for lip-reading.

A summary of seating data for the Mothers Club is presented in Table IV. A number of statistically significant relationships were found (positively statistically significant relationships are marked in bold. For the full calculations see Appen-



1). The chi-square ( $X^2$ ) with 121 degrees of freedom (df) was 324.2. The probability of this occurring randomly is substantially less than 0.1% ( $p < .001$ ). On the other hand, while the overall pattern was significant, the *majority* of choices made about seating could have occurred due to random chance.

1) For four women, Ada, Isobel, Jane and Lola<sup>1</sup>, all of their choices of seating partners could be described as random. These women came from widely different backgrounds. All are white and Ada, Isobel and Lola are New Zealanders. Ada was in her 60s and went to Myers Park and Titirangi, Isobel was in her late 70s and went to Sumner before 1940, Lola was in her 40s or 50s. Jane is British and was in her 70s.

2) Another pattern is that four women, Barbara, Gwen, Harriet and Kate, were part of a group of friends. Each sat significantly frequently with at least two of the others (See Table IIIa). Three of these women, Barbara, Gwen and Harriet, went to Titirangi at approximately the same time (entering between 1947 and 1949). The group also includes both Maori women, Harriet and Kate, who attend regularly. A third member, Gwen, is the wife of a Maori man and participates regularly in Deaf Maori activities. Kate, the only one who didn't attend Titirangi was, like the others, in her late 40s.

3) A third pattern applies to the last four of the 12 most regular attendees. Each of these women sat consistently with only one other person: Cathy and Fran with each other, and Dana and Eileen with each other. The great majority of each of these women's seating choices were random, but each sat next to one other person often enough to get a probability of  $p < .001$  that it could happen by chance (see Table IIIb). This could be considered the "best friend" phenomenon. The most striking aspect of these friendships, however, is that they happen between women who differ in age and in the schools they went to. Fran went to Sumner before 1940 while Cathy went to Titirangi after 1940. Dana and Eileen are even more divergent. Dana is the youngest member of the club, a NZer in her 30s, while Eileen was British and in her 60s. Dana and Cathy also have a negatively significant relationship ( $p < .05$ )—they never sat next to each other—but this might be an artifact of the highly significant relationships both have with others. In addition to sitting next to Eileen, Dana also sat regularly with members of the "Frequent" group.

4) The fourth pattern (Table IIIc) involves those members who weren't amongst the top twelve attendees. Both the Frequent and the Infrequent groups sat statistically significantly often with members of their respective groups indicating either that they formed separate groups of their own or that they were in some way excluded from the main group of members. The exception to this is that Dana sat significantly often with the Frequent attendees.

### 3.2 Some hypotheses about language and space in New Zealand

3.2.1 In the Mothers Club, and as will be discussed below in the American pre-school classroom, the predominant seating pattern is a random one. In the I

Mothers Club, four women have consistently random patterns while the others have at least some patterns random. This implies a different pattern for most interactions than the classic white female one-on-one interactions described by Maltz and Borker (1982) and Deborah Tannen (1990) in the United States and Jenny Chesire (1982) and Jennifer Coates (1996) in England.

Girls play in small groups, most often in pairs...., and their play groups tend to be remarkably homogeneous in terms of age.... The idea of "best friend" is central for girls. Relationships between girls are to some extent in opposition to one another, and new relationships are often formed at the expense of old ones (Maltz & Borker, [1982] 1996, p. 88).

The contrast between the behavior of Mothers Club members and this model supports the idea of a Deaf cultural focus on the general group rather than on individual friendships. The random seating patterns found in both data sets and the common phenomenon of Deaf people talking across the room makes us re-think not only our assumptions about who sits with whom but also the implications of that seating. Deaf interactions seem to be assume a larger group than typical western middle class female interactions.<sup>2</sup>

This also implies a different motivation for attending an event. Members can come to a meeting like that of the Mothers Club to associate with the general group rather than with just a best friend. In a study of hearing children in a New Zealand elementary school, I found that attendance was closely connected to popularity (Monaghan 1988) and it is probably safe to assume these women wouldn't attend the Mothers Club regularly unless they felt welcome and accepted. For the case of Ada, Isobel, Jane and Lola, it would be a general rather than a specific acceptance.

**3.2.2** Similar to this group-focused pattern is that shown by the group of four women who consistently sat near each other (Table IIIa). Each sat with at least two of the others with probabilities between  $p < .05$  and  $p < .001$ . There are two important connections between these women that might influence language use. First, three of the four women (Harriet, Gwen and Barbara) went to Titirangi and Mt. Wellington together in the late 1940s and 1950s. Second, two of the women (Harriet and Kate) are Maori and a third, (Gwen), is the wife of a Deaf Maori man also from Titirangi and Mt. Wellington. Two of the four (Harriet and Kate) were present at the videotaped meeting and both signed in a space larger than most other members and used relatively little mouthed English (although Harriet did vocalize while signing). Specific nouns and verbs were mouthed but most of the grammatical and affective information was signed. In the other situations in which I've seen her, Gwen also signs in a manner similar to Harriet and Kate. This kind of signing would correspond to the signing of fluent American Sign Language users. This makes sense in the context of the fact that all of these four women come from the post-WWII generation who had access to a more creolized version of NZSL.

I have mentioned the “best friend” pattern of typical female white Western relationships. This foursome’s pattern might reflect a separate Maori-influenced pattern of interaction, more group oriented than that of traditional Western female models.

In general the play groups of children tend to be as large as possible.... Usually groups of children seen playing at home or at school are about six in number or larger....

Behavior in the play group is subject to a minimum of adult interference and thus the patterns of the children are determined almost entirely by the standards of the children (Earle, 1958, pp. 26-27).

These large group patterns are closely connected to sibling care-taking practices which are in turn connected to large family size (Earle, 1958; Ritchie, 1963). They are also related to the importance of the extended family, “whanau,” in Maori culture (Metge, [1967] 1976; Hazlehurst, 1993, see also Ochs & Schieffelin, 1984; Ochs, 1988 for a Samoan example).

Part of the change in signing styles between the pre-World War II and post-WWII generations might be attributed to the large jump in the number of Maori and other Polynesian children at school - particularly at the Auckland schools, Titirangi, Mt. Wellington and Kelston. In 1956, for example, at least seven of the fifteen members of the Mt. Wellington boys’ Football Team and five of the eleven of the girls’ Basketball Team were Polynesian (Aspden, de Vere, Hunt, Monaghan & Pivac, 1992). The peer-oriented Polynesian culture of children’s home life might have combined with the peer-oriented culture of the Deaf schools to further increase distance from teachers and the development of the creolized version of NZSL. Over forty years later, these patterns seem to show up both in seating pattern choices and language use. Another implication is that studies of use of space of people from Polynesian language-speaking backgrounds should reveal a different use of space than that found for Americans (particularly for women).

**3.2.3** Two examples of one-on-one relationships typical of Western female patterns, however, do show up in seating data. Two pairs of women consistently sat next to each other - Cathy with Fran and Eileen with Dana (Table IIIb). Unlike the young girls described in Maltz and Borcker ([1982] 1996), however, these women come from widely varying backgrounds. These “best friends” are different ages and from different schools, therefore also from different linguistic backgrounds.

My argument here is that these women are all seating themselves to easily communicate by the use of lip-speaking and drawing upon hearing Western models typical of women in the larger New Zealand hearing society. Both Fran and Cathy are very oral so lip-speaking would be likely in this situation. Dana and Eileen are from radically different backgrounds. Dana signs fluently but on the videotape can be seen adding clear English lip movements for Eileen and another

British member. Lip-speaking would be the choice of communication here because the spoken English these women have access to is more standardized than any sign system in this setting. In order to do this lip-speaking and lip-reading, these best friend pairs recreate the kind of spatial relationships that Maltz and Borker ([1982] 1996) describe as female best friends in childhood as having.

**3.2.4** The final set of statistically significant patterns are Frequent attendees with each other and Infrequent attendees with each other (Table IIIc). The striking part about these patterns is that they throw light on how “the group” is defined in the above interactions. Although I have been arguing that Deaf patterns favor more general group interaction, these patterns show that the group is not automatic but instead is the result of a constructed set of relationships. The fact that these Frequent and Infrequent attendees (all of whom come less often than the twelve named members) interact with each other more often than with anybody else could indicate that they hadn’t yet been fully accepted as members of the club, the general group that members orient to.

### **3.3 Johnson and Erting reanalyzed**

Johnson and Erting’s (1989) work in an American Deaf pre-school class further illuminates the nature of group relationships in Deaf contexts. Although they found that interaction patterns for signing Deaf children were different from those of hearing children, due to an error in calculation, they found that seating patterns of the eight children they looked at were not statistically significant. When I reanalyzed this data I found that the seating pattern was significant ( $X^2 = 166.7$ , 100df,  $p < .001$ ). As with the Mothers Club, the majority of the relationships were random (see Table V for a summary and Appendix II for full calculations).

The reanalyzed figures support other interaction patterns found by Johnson and Erting.

When the children are grouped according to skill in ASL...The interaction patterns show substantial preference for group A children [fluent ASL signers] to interact with other group A children, for group B [less fluent signers] to interact with other group B children, and for each group not to interact with the other.

Johnson and Erting, therefore, considered ASL fluency more important than other factors, including whether students had deaf parents or not in determining the nature of interactions in the classroom:

the data...indicate clear differences in communication patterns between those children we would expect to be ethnically Deaf [including fluent ASL use] and those whom we did not. Moreover, the data suggest differences in the ways in which the Deaf adult interacts with the two categories of children, presumably also the result of the values and expectations associated with Deaf ethnic patrimony (1989, pp. 64-5).



Part of what Johnson and Erting call Deaf ethnic patrimony (Deaf cultural values) seems to include a focus on the general group rather than individual relationships. When their seating data are analyzed (see Table V), most subject's overall seating patterns and the overwhelming majority of relationships in the classroom are within the bounds of chance.

This fits with my analysis of the Mothers Club's patterns. The children who most reflect a Deaf cultural background, those with both Deaf parents and fluent ASL, again seem to focus on a general group in the way that hearing speakers of American or New Zealand English don't. The broad access to information is again used as a building block for an emphasis on the group, as it is in the Mothers Club.

Exceptions again seem to prove rules. In this classroom data, exceptions can be seen as reflections of some aspect of hearing culture and/or the physical requirements of English. Although the entire matrix was strongly statistically significant ( $p < .001$ ), only three of twelve participants have patterns that exceed the  $X^2$  of 18.3 required for significance of  $p < .05$  at 10 df. These are highlighted in bold in Table V. Two of the three people showing these patterns are H, the hearing teacher, and T, the student who depends most heavily on oral English.

It also appears that T, who has a fair amount of residual hearing, has been able to develop a primary competence in oral English. In interacting with the hearing adults, she depends heavily on her hearing to understand. Also, she has some difficulty understanding ASL as the other children use it. This may, in part account for her relative isolation from the other children (except J) and her tendency to sit next to the teacher (1989, p. 79).

This relationship between T and H is the most statistically significant of any in the classroom,  $X^2 = 11.77$  for H, 11.37 for T, both  $p < .001$ , 10 df.

The other person with a significant pattern of relationships, L, is another interesting exception to the rule—she is the only child of hearing parents in the group of fluent ASL signers. What is particularly striking about her pattern of interaction is that no one relationship is significant with her, but she consistently sits more often than chance with all the children of Deaf parents, including J, the least fluent signer of this group. L perhaps can be described as using a hearing strategy of sitting by people she wants to affiliate with to achieve the Deaf cultural aim of interaction with a group of peers.

There are also two specific pair relationships that are moderately or mildly significant on both sides, that between R and Sc and that between P and Su. In each case this is a same sex pairing between an ASL-fluent child of Deaf parents and a less fluent child of hearing parents. R is male, and a fluent signer while Sc is male and non-fluent ( $R p < .01$ ,  $Sc p < .005$ ). P and Su are female, and P is the fluent signer and Su is the less fluent signer ( $P \& Su$  both  $p < .05$ ). There again seems to be a hearing strategy of sitting near people influencing these relationships. The only other significant relationship was between F and L, F being another fluent signer of Deaf parents while L was the child of hearing parents mentioned above



as sitting noticeably more often with children from Deaf families. F didn't attend very often ( $n=28$ ) during the period of the study, and this skews the results: the eight times they sat together is unlikely due to chance with  $p<.05$  for F, while it is only  $p<.1$  for L, not considered significant. Still, this is a continuation of the pattern of children from hearing families sitting next to those from Deaf families.

It is interesting to note that information about appropriate seating patterns would be something a Deaf child of hearing parents could pick up from their families—it is an aspect of behavior easily seen. It also dovetails with the main thrust of Johnson and Erting's argument, that Deaf classrooms are places of key sites of socialization into Deaf culture. As such, the fluent signers are the high prestige individuals in the classroom. The children of hearing families here seem to be using the strategies they are familiar with—like sitting near role models—in order to aid their own socialization processes. The Deaf focus on inclusion does not exclude these children despite their different language abilities.

Charles Reilly's study of a Thai deaf boarding school showed that children clearly recognized that other children went through a language learning process, entering incompetent but progressing through stages until they could tell stories that would hold large audiences (1996). These American pre-school children can be seen as in the middle of the process of going from outsiders (as in the Frequent and Infrequent group in the Mothers Club) to insiders.

#### 4. CONCLUSION

[Among some peoples] group spatial configuration seems to be an almost projective representation of the social structure (Levi-Strauss [1953] 1988, p. 436).

As we shall see, the difference between institutional settings (such as the *fono*) and everyday settings lies not so much in the use of [specific] linguistic strategies...but in the range of participants who have access to such strategies as well as in the more immediate response that they evoke (Duranti, 1994, p. 147).

It is often said, too glibly, I think, that female friendship in adolescence is a dry run for later heterosexual relationships. In my view, the more straightforward claim would be that female friendships in adolescence are simply a dry run for later close relationships of all kinds, and that they constitute the first episode in the saga of female friendship which runs through our lives (Coates, 1996, p. 16).

As Duranti (1994) points out, the use of space is a key part of creating institutions. Levi-Strauss's ([1953] 1988) group spatial configuration isn't just a projective representation of the social structure, it is part of how a structure is created. The seating patterns of the members of the Mothers Club and the pre-school children are part of creating social organizations with meaning that extend beyond the

immediate contexts that these groups exist within. In this conclusion, I'd like to briefly summarize some of the implications of the findings of this paper and then explore some of the political ramifications. In doing so, I will connect both seating patterns and related language use with the larger sociocultural milieu they are part of.

The direct conclusions that can be drawn from this work include:

- 1) The most important pattern that emerges from both the Mothers Club and the American pre-school seating data is the general random pattern, reflecting an emphasis on the group and a range of interactions rather than exclusive one-on-one interactions. Contrary to Julius Vogel's desire to prevent New Zealand Deaf children from associating with each other, members of the Mothers Club not only associate with each other but do so in a way that is characteristically Deaf, so much so that it is also reflected in patterns of American Deaf pre-school kids.
- 2) Sign language is the language of this group interaction in both New Zealand and the United States. There is a wider variety of different kinds of language in the Mothers Club than there is in the pre-school but in both cases the most fluent versions were connected to an emphasis on a group audience. This use of sign language as the key medium in group interaction fits with Johnson & Erting's emphasis on the importance of ASL both in the pre-school and the more general socialization into Deaf culture.
- 3) In New Zealand, the emphasis on group interactions is also connected to a Maori and general Polynesian emphasis on peer group interactions. In the US pre-school, the Deaf children of Deaf parents seem to be the most important influence.
- 4) The use of lip-spoken and spoken English create the exceptions to the general group focus of both the Mothers Club and the pre-school. In New Zealand, friends without a common sign language but sharing the ability to lip-read English, sit next to each other, while in the US, spoken English is used by the child who was the least fluent user of ASL in the classroom. This led T to focus on interacting with the hearing teacher. In my work in a hearing NZ classroom (Monaghan, 1987), this focus on teacher-student interactions this was a clearly dispreferred strategy used only by the most unpopular of children.

Two further, indirect conclusions can also be drawn from the data about the sociopolitical ramifications of these patterns:

- 5) Elinor Ochs (1992) discusses how entire discourses, such as that between mothers and children, index gender. In White Western cultures such as those found in many communities in New Zealand, the United States and England, the use of space can also be considered to index gender. The women of the Mothers Club had two models available to them, that of the general Deaf group interaction and that of one-on-one spoken-English. Communication by lip-speaking heightens constraints on who can see and understand and so prevents other, more general forms of interaction, but among women isn't a heavily dispreferred option. It is interesting that the only child to rely on spoken English, T, is female.

This one-on-one pattern seems more problematic for males. In New Zealand,

I found that Deaf and Hard of Hearing men in their twenties and thirties who had been mainstreamed participated in a variety of Deaf community activities to get the kind of group, particularly male group, interactions they said they couldn't get among hearing peers. In "A Man's Country?", Jock Phillips (1986) describes the importance of these relationships to men. The traditional imbalance between male and female roles reflected in the phrase "man and wife" is perhaps related to this difference in emphasis. Compare the emphasis on male-male relationships with Coates's description of English women's friendships.

Women friends have high expectations of each other, but they often have to accept second place in each others affections, with first place belonging to a male sexual partner. Significantly, when asked about the term *best friend*, many women said it was a childish phrase which they associated with childhood, not with adult life, and two of the (married) women named their husband as their best friend (Coates, 1996, p. 32).

The Deaf women in the Mothers Club and other women emphasizing group ties offer different patterns to the emphasis on exclusivity.

6) Any use of space and the kinds of relationships that are built with these spaces have strong political implications. This is related to Duranti's distinction between ordinary and political talk, which varies by the "range of participants who have access to such strategies as well as in the more immediate response that they evoke" (1994, p. 147). The classic Western female best friend scenario brings strength on one level but is limiting on another level. Political organizations are institutionalized group relationships. The training for intense one-on-one friendships doesn't necessarily unite women. Particularly today, women not only have these one-on-one friendships—Coates presents groups of two, three, four and five women. Five women reflect far more connections, and therefore political resources than one-on-one. The strength and warmth of these group connections are apparent in the way she describes the Oxtou 'Ladies,' her own "support network of friends" (1996, p. 3).

Even the largest group described by Coates, however, is less than the "at least six" that Margaret Earle (1958) describes as being typical of Maori children's play groups. The Mothers Club, which had an average of 8.65 members present over the 57 days of this study, is therefore perhaps atypical of white Western women's groups, and has an unusual, although unacknowledged, power because of it.

On the other hand, the power in the Samoan *fono* is acknowledged. The *fono* is seen as being a place where ordinary conversation, ordinary strategies become something more meaningful, a place where words get converted into actions. The Mothers Club isn't seen as being out of the ordinary but the patterns reflected in seating arrangements show the potential for something more, for a group that can organize in other ways.

These ties of friendship and bonds between classmates extend beyond the

immediate social circumstances and help us understand the important social achievements of Deaf communities in New Zealand and the United States. Sign language (Australasian Signed English) was introduced into schools in 1975 because of the strong backing of a unified Deaf community, and teachers and parents of deaf children. The core of the support came from Deaf clubs across New Zealand—organizations slightly more formal than the Mothers Club but often similar in intent and function. The next step, the official recognition and acceptance of New Zealand Sign Language, was led by Deaf Clubs when the weaknesses of a system that didn't teach children the language of adults in the community became apparent to all.

In the United States, the 1987 Gallaudet University student strike, protesting the nomination of a hearing person with no experience with the Deaf community to the Gallaudet presidency, was also made possible because of just such a focus on a large and interconnected community. The foundations of this community are apparent in the seating patterns of children as young as the pre-schoolers studied by Johnson and Erting (1989).

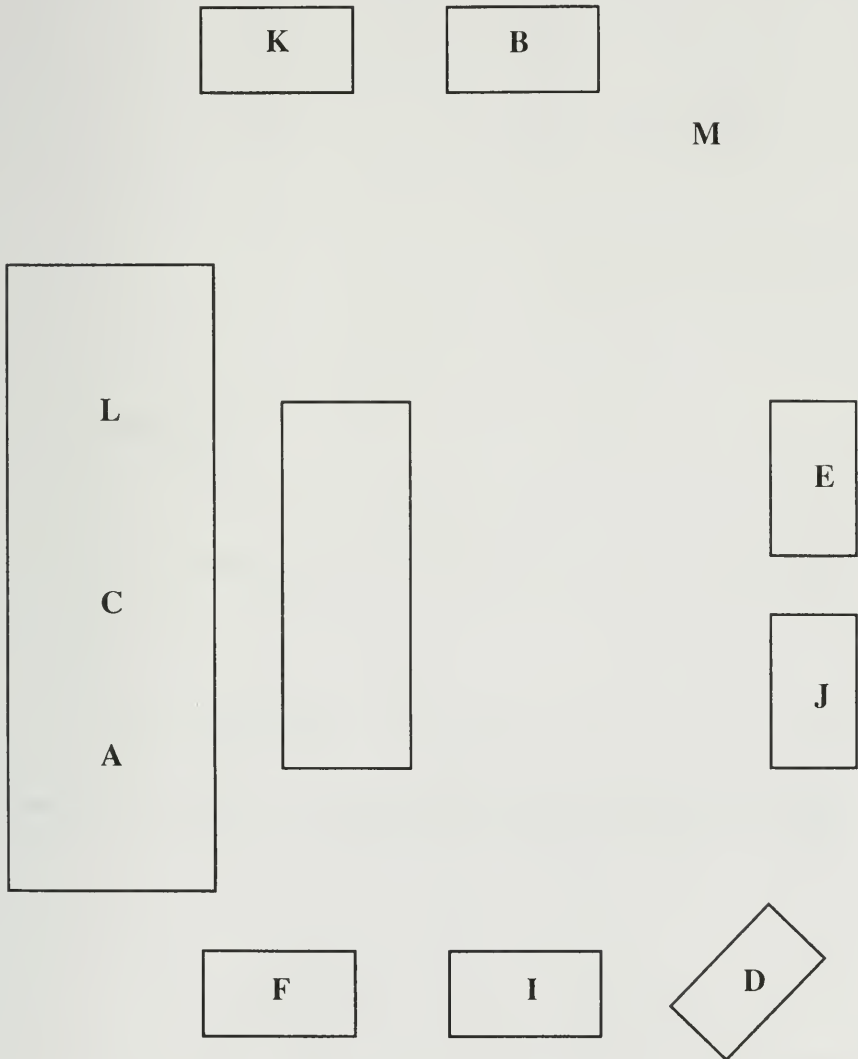
#### ACKNOWLEDGMENTS

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**TABLES**

**Table I: Sample seating pattern**

Most participants sat on chairs, and would turn to face whoever they were talking to. L, C and A were sitting on a sofa in front of a low coffee table. D was sitting on a low stool and also had her daughter with her, who would wander around the room. M, the hostess, was standing for most of the meeting.

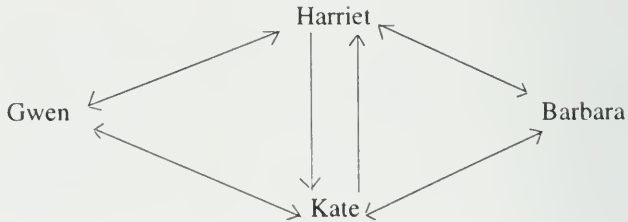




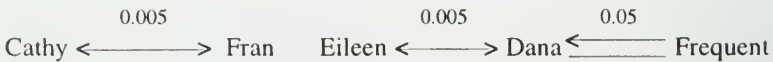
**Table II: Attendance and Seating Partners**

Person	Times	Partners
A	43	82
B	26	49
C	49	95
D	18	33
E	42	76
F	53	96
G	35	61
H	41	72
I	43	82
J	26	49
K	34	58
L	21	39
<b>Frequent</b>	35	64
<b>Infrequent</b>	28	46
<i>Total</i>	493	902

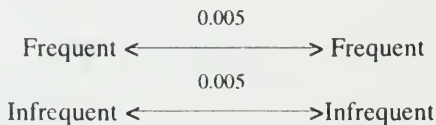
**Table III: Individual Patterns**



**IIIa:** Four-way relationship between Harriet, Gwen, Kate, and Barbara.



**IIIb:** Significance of "best friend" relationships and Dana's relationship with the frequent attendees. All numbers are probabilities, e.g.,  $p < .05$ .



**IIIc:** Relationship within Frequent and Infrequent groups



Table IV: Significance of seating patterns at Mothers Club

	A	B	C	D	E	F	G	H	I	J	K	L	Freq	Infrq	X <sup>2</sup>	df
	82	49	95	33	76	96	61	72	82	49	58	39	64	46		
A	82	8	8	1	5	14	6	6	11	7	4	5	5	2	11.4	12
B	49	8	4	1	1	3	7	9	3	0	<b>11</b>	0	2	0	<b>40.0</b>	12
C	95	8	4	<u>0</u>	14	<b>26</b>	4	5	9	9	4	5	6	1	<b>36.5</b>	12
D	33	1	1	0	<b>11</b>	3	1	0	3	0	2	1	6	4	<b>42.0</b>	12
E	76	5	1	14	<b>11</b>	8	5	3	12	2	1	7	5	2	<b>41.9</b>	12
F	96	14	3	<b>26</b>	3	8	7	4	11	7	3	3	3	4	<b>31.4</b>	12
G	61	6	7	4	1	5	7	<b>10</b>	2	4	<b>10</b>	0	3	2	<b>24.4</b>	12
H	72	6	9	5	0	3	4	<b>10</b>	8	4	<b>10</b>	4	3	6	<b>25.3</b>	12
I	82	11	3	9	3	12	11	2	8	7	5	4	5	2	10.1	12
J	49	7	0	9	0	2	7	4	4	7	1	2	4	2	10.0	12
K	58	4	<b>11</b>	4	2	1	3	<b>10</b>	10	5	1	2	2	3	<b>40.6</b>	12
L	39	5	0	5	1	7	3	0	4	4	2	2	2	4	12.2	12
Freq	64	5	2	6	6	5	3	3	3	5	4	2	<b>14</b>	4	<b>31.4</b>	13
Infrq	46	2	0	1	4	2	4	2	6	2	2	3	4	<b>10</b>	<b>41.0</b>	13
	902														<b>398.2</b>	144

Positively significant relationships are marked by **bold type**, while negatively significant are marked by underlining. Although the number of times A sat with B is the same as how many times B sat with A, both figures are included as significance may or may not be the same (see Appendix 1).



Table V: Original values of seating patterns from Johnson & Erting (1989).

		R	P	L	F	SC	SU	T	J	H	D	X	Y	X2	df
	a b >	56	51	58	28	47	47	39	53	32	23	8	2		
	v														
R	56		10	10	4	<b>14</b>	7	6	6	3	5	1	0	11.05	10
P	51	10		10	3	7	<b>11</b>	1	2	1	5	1	0	16.75	10
L	58	10	10		8	<u>1</u>	5	<u>1</u>	13	4	3	2	1	<b>19.81</b>	10
F	28	4	3	8		3	3	2	2	2	0	1	0	7.31	10
SC	47	<b>14</b>	7	<u>1</u>	3		6	4	8	1	2	1	0	16.46	10
SU	47	7	<b>11</b>	5	3	6		3	3	6	1	2	0	10.73	10
T	39	6	1	1	2	4	3		9	9	4	0	0	<b>24.47</b>	10
J	53	6	2	13	2	8	3	9		6	3	0	1	16.53	10
H	32	3	1	4	2	1	6	9	6		0	0	0	<b>21.33</b>	10
D	23	5	5	3	0	2	1	4	3	0		0	0	9.55	10
X	8	1	1	2	1	1	2	0	0	0	0		0	5.54	10
Y	2	0	0	1	0	0	0	1	0	0	0	0		7.22	10
	444													155.7	100

Positively significant relationships are marked by **bold type**, while negatively significant are marked by underlining.

Numbers used were from the body of the chart. Although the number of times A sat with B is the same as how many times B sat with A, both figures are included as significance may or may not be the same (see Appendix II).





Appendix I: Significance of seating patterns at Mothers Club

	A	B	C	D	E	F	G	H	I	J	K	L	Freq	Infreq	X <sup>2</sup>	df
a	82	49	95	33	76	96	61	72	82	49	38	39	64	46		
A	82	8	8	1	5	14	6	6	11	7	4	5	5	2	11.4	12
		4.9	9.5	3.3	7.6	9.6	6.1	7.2	8.2	4.9	5.8	3.9	6.4	4.6		
		1.96122449	0.236842105	1.603030303	0.889473684	2.016666667	0.001639344	0.0	0.956097561	0.9	0.55862069	0.31025641	0.30625	1.469565217		
B	49	8	8	1	5	14	6	6	11	7	4	5	5	2	40.0	12
		4.710433763	5.457209848	1.895662368	4.365767878	5.514654162	3.504103165	<b>4.135990621</b>	4.710433763	2.814771395	<b>3.331770223</b>	2.240328253	3.676436108	2.642438453		
		2.297292897	0.389111029	0.423182647	2.594822658	1.1466696168	3.487709723	<b>5.70174295</b>	0.621085829	2.814771395	<b>17.64890048</b>	2.240328253	0.764446312	2.642438453		
C	95	8	8	0	14	26	4	5	9	9	4	5	6	1	36.5	12
		9.653035936	5.768277571		<b>3.884758364</b>	8.946716233	<b>11.30111524</b>	7.180916976	8.475836431	9.653035936	5.768277571	6.827757125	4.591078067	7.534076828	5.41511772	
		0.283074446	0.542069193		<b>3.884758364</b>	2.854195457	<b>19.1182205</b>	1.490044673	1.425397835	0.044178426	1.810597657	1.171132806	0.636422196	0.312366301	3.599785912	
D	33	1	0	11	3	1	0	3	0	2	1	6	4	2	42.0	12
		3.113924051	1.860759494	3.607594937		<b>2.886075949</b>	3.64556962	2.316455696	2.734177215	3.113924051	1.860759494	2.202531646	1.481012658	<b>2.40379747</b>	1.746835443	
		1.435062262	0.39817446	3.607594937		<b>11.81151455</b>	0.11431962	0.748149685	2.734177215	0.004167953	1.860759494	0.0186236	0.156226333	<b>5.24879747</b>	2.906255733	
E	76	5	1	14	11	8	5	3	12	7	2	5	2	4	41.9	12
		7.544794189	4.508474576	8.740920097	<b>3.046319613</b>	8.832929782	5.612399799	6.624697337	7.544794189	4.508474576	5.536561743	3.588377724	5.888619855	4.232445521		
		0.858337193	2.730279088	3.164188795	<b>20.88719681</b>	0.078543817	0.066861722	1.983249968	2.630801891	1.395626221	3.523948313	3.243573405	0.134096828	1.177525612		
F	96	14	3	26	3	8	7	4	11	7	3	3	3	4	31.4	12
		9.76474938	3.836228288	11.31513648	9.930521099	9.052109181	7.265508685	8.57582382	9.76474938	5.836228288	6.908188586	4.6516129	7.622828784	5.478908189		
		1.834838811	1.378320125	19.05811893	0.220293819	0.12228462	0.009702674	2.44123123	0.155722957	0.232061621	2.21099031	0.58266129	2.803492847	0.399198044		
G	61	6	7	4	1	5	7	10	2	4	10	0	3	2	24.4	12
		5.947681332	3.554102259	6.890606621	2.393579073	5.512485137	6.96313912	<b>5.22235434</b>	5.947681332	3.554102259	4.206896552	2.828775268	4.642092747	3.336504162		
		0.004600422	3.340987503	1.212608147	0.811363474	0.047664757	0.000195131	<b>4.37080607</b>	2.620212319	0.05594234	7.977388255	2.828775268	0.580873484	0.33563748		
H	72	6	9	5	0	3	4	10	8	4	10	4	3	6	25.3	12
		7.112323012	4.25060241	8.240963855	2.862650602	6.592771084	8.327710843	5.291566265	7.112323012	4.25060241	5.031325201	3.38313253	5.551807229	3.990561446		
		0.174228262	5.306724859	1.274589536	2.862650602	1.957902663	2.24900714	<b>1.818956262</b>	0.110542985	0.01474745	<b>9.968004218</b>	0.112477259	1.17290979	1.012100576		
I	82	11	3	9	3	12	11	2	8	7	5	4	5	2	10.1	12
		8.2	4.9	9.5	3.3	7.6	9.6	6.1	7.2	4.9	5.8	3.9	6.4	4.6		
		0.956097561	0.736734694	0.026315789	0.027272727	2.547368421	0.204166667	2.735773705	0.088888889	0.9	0.110344828	0.002564103	0.30623	1.469565217		
J	49	7	0	9	0	2	7	4	4	7	1	2	2	1	10	12
		4.710433763	2.814771395	5.457209848	1.895662368	4.365767878	5.514654162	3.504103165	4.135990621	4.710433763	3.331770223	2.240328253	3.676436108	2.642438453		
		1.112872788	2.814771395	2.299959579	1.895662368	1.281986997	0.400070828	0.070178776	0.004471347	1.112872788	1.631910969	0.025780896	0.028476924	0.15619178		
K	58	4	11	4	2	1	3	10	10	5	1	2	2	2	40.6	12
		5.63507109	3.367298578	6.528436019	2.267772512	5.222748815	6.597156398	4.919401128	4.947867299	5.63507109	3.367298578	2.680094787	4.398104265	3.161137441		
		0.474431897	<b>17.301114798</b>	0.979252716	0.031617862	3.41421887	1.961380536	<b>8.477286</b>	5.158595268	0.071572352	1.66427254	0.172579314	1.307587024	0.008213903		
L	39	5	0	5	1	0	3	0	4	2	2	2	2	4	12.2	12
		3.705677868	2.214364882	4.293163184	1.491309386	3.434530707	4.338354577	2.756662804	3.253763933	3.705677868	2.214364882	2.610892224	2.892236385	2.078794902		
		0.45208187	2.214364882	0.116375259	0.161881056	3.701399803	0.412873808	2.756662804	0.171144058	0.02037643	0.020752574	0.147172336	0.275249205	1.775561903		
Frequent	64	5	2	6	6	5	3	3	3	5	4	2	14	4	31.4	13
		5.818181818	3.476718404	6.740576497	<b>2.341464345</b>	5.392461197	6.811529933	4.328159645	5.10864745	5.818181818	3.476718404	4.115299325	2.767184033	4.541019956	3.263858093	
		0.115056818	0.627228608	0.08136597	<b>5.716443415</b>	0.028563171	2.132818996	0.407565383	0.8703662	0.115056818	0.07875922	1.087282093	0.212696856	<b>19.70312933</b>	0.166032006	
Infrequent	46	2	0	1	2	4	2	4	2	3	4	3	4	10	41.0	13
		4.181818182	2.498891353	4.844789357	1.682926829	3.875831486	4.89578714	3.110864745	3.671840355	4.181818182	2.498891353	2.957871397	1.988913525	3.263858093	2.345890004	
		1.138339921	2.498891353	3.05119668	3.190173206	0.907868099	0.163903082	0.396689853	1.476188181	1.138339921	0.099601202	0.00600033	2.033506614	0.166032006	<b>24.97349725</b>	

Positively significant relationships are marked by bold type, while negatively significant are marked by underlining.

Top number in each three part cell is number of actual occurrences (O), middle number is predicted frequency (F), bottom is X<sup>2</sup>

F = ab/(Σa - a) for individuals, F = ab/Σa for groups (Σa = Σb) X<sup>2</sup> = Σ((O-F)/F)



Appendix II: Recalculation of alignment of seating patterns from values from Johnson & Erting (1989).

	a	b >	R	P	L	F	SC	SU	T	J	H	D	X	Y	X2	df	
			56	51	58	28	47	47	39	53	32	23	8	2			
R	56			10	10	4	14	7	6	6	3	5	1	0			
			7.360824742	8.371134021	4.041237113	<b>6.783505155</b>	6.783505155	5.628865979	7.649484536	4.618556701	3.319587629	1.154639175	0.288659794				
			0.946258916	0.316946829	0.000420787	7.6771212176	0.00690941	0.024470375	0.355683997	0.567217415	0.850643529	0.020710604	0.288659794	11.05504383	10		
P	51			10	10	3	7	11	1	2	1	5	1	0			
			7.267175573	7.526717557	3.633587786	6.099236641	<b>6.099236641</b>	5.061068702	6.877862595	4.152671756	2.984732824	1.038167939	0.259541985				
			1.027679774	0.812721614	0.110478543	0.133028882	<b>3.937784826</b>	3.258655429	3.459438622	2.393480579	1.360691904	0.001403233	0.259541985	16.75490539	10		
L	58			10	10	8	1	5	1	13	4	3	2	1			
			8.414507772	7.663212435		4.207253886	7.062176166	7.062176166	5.860103627	7.96373057	4.808290155	3.459585549	1.202072739	0.300518135			
			0.298744225	0.712570109		3.419076546	<u>5.203775579</u>	0.602161492	<u>4.030749073</u>	3.18494072	0.135876362	0.06015645	0.529658746	1.628104342	<b>19.80581364</b>	10	
F	28			4	3	8		3	2	2	2	0	1	0			
			3.769230769	3.432692308	<b>3.903846154</b>		3.163461538	3.163461538	2.625	3.567307692	2.153846154	1.548076923	0.538461538	0.134615385			
			0.014128728	0.054541047	<b>4.297934824</b>		0.008446341	0.008446341	0.148809524	0.688601493	0.010989011	1.548076923	0.395604396	0.134615385	7.310194012	10	
SC	47			14	7	1	3	6	4	8	1	2	1	0			
			6.629721922	6.037783375	6.866498741	3.314861461		5.564231738	4.617128463	6.274559194	3.788413098	2.722921914	0.947103275	0.236775819			
			8.193552709	0.153344493	<u>5.01213337</u>	0.029907054	0.034127619	0.082485801	0.474478905	2.052375864	0.19193209	0.002954338	0.236775819	16.46406806	10		
SU	47			7	11	5	3	6	3	3	6	1	2	0			
			6.629721922	6.037783375	6.866498741	3.314861461	5.564231738		4.617128463	6.274559194	3.788413098	2.722921914	0.947103275	0.236775819			
			0.020680369	<b>4.078250626</b>	0.507364478	0.029907054	0.034127619	0.566391966	1.708922903	1.291072673	1.090174458	1.17050753	0.236775819	10.73417549	10		
T	39			6	1	1	2	4	3	9	9	4	0	0			
			5.392592593	4.911111111	5.585185185	2.696296296	4.525925926	4.525925926	5.103703704	<b>3.081481481</b>	2.214814815	0.77037037	0.192592593				
			0.068416768	3.114731021	3.764230278	0.17981278	0.061114142	0.514469297	2.97453099	<b>11.36753917</b>	1.438895082	0.77037037	0.192592593	<b>24.4467025</b>	10		
J	53			6	2	13	2	8	3	9	6	3	0	1			
			7.590792839	6.913043478	7.861892583	3.795396419	6.37084399	6.37084399	5.286445013	4.337595908	3.117647059	1.084398977	0.271099744				
			0.33338044	3.49165983	3.357988875	0.849304775	0.416608743	1.783529658	2.608651109	0.63712421	0.004439512	1.084398977	1.95977899	16.52686512	10		
H	32			3	1	4	2	1	6	9	6	0	0	0			
			4.349514563	3.961165049	4.504854369	2.174757282	3.650485437	3.650485437	<b>3.029126214</b>	4.116504854	1.786407767	0.621359223	0.155339806				
			0.418710992	2.213616029	0.056578507	0.014042996	1.924421607	1.512187565	<b>11.76951083</b>	0.861787873	1.786407767	0.621359223	0.155339806	<b>21.33396319</b>	10		
D	23			5	5	3	0	2	1	4	3	0	0	0			
			3.059382423	2.786223278	3.168646081	1.529691211	2.567695962	2.567695962	2.13064123	2.895486936	1.748218527	0.437054632	0.109263658				
			1.230966274	1.758942801	0.008975916	1.529691211	0.125512798	0.957150171	1.640117361	0.003772416	1.748218527	0.437054632	0.109263658	9.549665765	10		
X	8			1	1	2	1	1	2	0	0	0	0	0			
			1.027522936	0.935779817	1.064220183	0.513761468	0.862385321	0.862385321	0.71559633	0.972477064	0.587155963	<b>0.422018349</b>	0.036697248				
			0.000737221	0.004407267	0.822840873	0.460190039	0.021959789	1.500683193	0.71559633	0.972477064	0.587155963	<b>0.422018349</b>	0.036697248	5.544763338	10		
Y	2			0	0	1	0	0	1	0	0	0	0	0			
			0.253393665	0.230769231	0.262443439	0.126696833	0.212669683	0.212669683	0.176470588	0.239819005	0.14479638	0.104072398	0.036199095				
			0.253393665	0.230769231	0.272788267	0.126696833	0.212669683	0.212669683	3.843137255	0.239819005	0.14479638	0.104072398	0.036199095	7.223617829	10		
																166.7497782	100

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Positively significant relationships are marked by bold type, while negatively significant are marked by underlining.

Top number in each three part cell is number of actual occurrences (I), middle number is predicted frequency (F), bottom is X2  
 $F = ab/(\Sigma a - a)$  for individuals,  $F = ab/\Sigma a$  for groups ( $\Sigma a = \Sigma b$ )  $X^2 = \Sigma(I-F)^2/F$  Numbers used were from the body of the chart

## NOTES

<sup>1</sup> These are pseudonyms. Each member mentioned has been given a name starting with a different letter of the alphabet to make reading the tables easier.

<sup>2</sup> As Lee Munroe (personal communication) points out, arguments that read importance into randomness (what is expected, after all) are not particularly sound. My hypothesis, however, is that compared to hearing subjects' patterns, Deaf signers have access to communication in a broader physical space than the average speaker of American English and this is part of the creation of a Deaf focus on a general group rather than one on one relationships. More specific comparisons with hearing groups are needed to test this.

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