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BACKGROUND PAPER

A COMPARISON OF SELECTED AND NON-SELECTED COURT SITES AND AN ANALYSIS OF REPRESENTATIVITY OF COURTS IN THE CENTRAL DIVORCE REGISTRY DATA BASE

Child Support Guidelines Statistical Analysis

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A Comparison of Selected and Non-Selected Court Sites and An Analysis of Representativity of Courts in The Central Divorce Registry Data Base

Child Support Guidelines Statistical Analysis

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Background

The Research Unit of the Child Support Team is currently involved in the collection of child support-related data from multiple court sites across Canada. A total of 32 courts are providing data from every province except Quebec. In support of this research activity, the research team has requested that supplementary statistical analysis and profiling of the Central Divorce Registry database be undertaken to show two things in particular. The first is a profile of how the selected court sites in each province compare to the court sites that were not chosen. The second is to apply a statistical technique (in this report it was cluster analysis) which will help to identify the "representativity" of the selected courts relative to the other courts within each of the provinces and territories.

Methodology

The information for this study was drawn from the Central Divorce Registry data base for 1996 which contains data originally collected by the Department of Justice Canada and provided to Statistics Canada for processing and public release. Both the adult and child data bases were included in the analysis. This data base is built from an administrative system. Therefore, the relevance of the data fields and the quality of the fields had to be determined and the design of the project built around what is possible with the amount and quality of information available.

The project was approached in two parts in order to be able to answer the two questions posed by the Child Support Team's Research Unit. For the first part of the study, data elements were chosen according to the quality and availability of information from the divorce data base. The criteria were that they had to be sufficiently robust to allow for national, provincial and territorial frequencies. These frequencies were intended to describe some of the high level differences or similarities between the courts that were included in the selected sites and those that were not. The second part of the study required additional subsetting of data, the normalization of data values and the derivation of variables. The purpose of this part of the study was to apply a cluster analysis technique in order to show the groupings of court sites according to selected variables that were considered to be important in defining the characteristics of courts at the individual record level. The use of cluster analysis is discussed in further detail in the methodology section of Section Two of this study.

The two parts of this study have some common links in that they identify the similarities and differences that exist between courts. It is important to note, however, that the type and level of analysis are very different. A frequency count of selected courts versus non-selected courts can show large differences or similarities between the two groups; however, the data are only applied in two or three dimensions. A cluster analysis, on the other hand, is a much more detailed level of analysis where each record for every court is included in the analysis and all courts are compared to each other by every variable. With a cluster analysis the data are plotted in multiple dimensions because of the linkages between the court level records, the courts themselves and the variables. Due to the

differences in the application of the analysis, the results between these two types of approaches may at times seem contradictory; however, much of this inconsistency can be explained by the different methodologies and analysis applied.

SECTION ONE: THE COMPARISON OF SELECTED AND NON-SELECTED COURT SITES

For comparative purposes, the court sites selected for the child support guidelines multiple site study are highlighted in the frequency distribution tables that follow. As well, in the second table of each provincial and territorial analysis, the comparison of frequencies between selected sites that seem especially relevant are also highlighted for easier identification. For each of the provinces and territories, some of the more notable differences between the court sites are indicated.

In order to make linkages between the comparison of frequencies and the outcome of the cluster analysis, some of the findings of the analysis are provided at the end of each provincial profile. The actual findings of the analysis can be found in greater detail in Section Two of this report.

Newfoundland

The selected court site in Newfoundland (1002, Unified Family Court, Supreme Court of Newfoundland) represents the largest court in Newfoundland in terms of volume. Nearly one-half (47 percent) of the provincial caseload is handled in this court.

COURTID	Frequency	Percent	Cumulative Frequency	Percent
1001	82	7.7	82	7.7
1002	495	46.7	577	54.4
1004	199	18.8	776	73.2
1005	90	8.5	866	81.7
1006	49	4.6	915	86.3
1007	79	7.5	994	93.8
1008	66	6.2	1060	100.0

In terms of numbers, it is more than sufficient to represent the province in a sample. However, there are some characteristics in the selected court site which differ from the other courts in the province that may, or may not, be relevant to the court site study:

- Fewer divorces without hearings and more uncontested hearings;
- Fewer dependants/children involved; and
- Considerably more joint custody awards and fewer awards to the wife only.

Variable	Court = 1002 N = 495 %	Court = all others N = 565 %
Applicants		
Husband	35.0	33.0
Wife	64.0	67.0
Joint	0.6	
Proceeding		
Divorce without hearing	2.0	14.0
Uncontested hearing	97.0	86.0
Contested hearing		
Info required (missing)	2.0	0.9
Custody of Children		
Yes	44.0	55.0
No	0.4	0.2
Info required (missing)	55.0	45.0
Not applicable		

Variable	Court = 1002 N = 495 %	Court = all others N = 565 %
Dependants		
Yes	50.0	65.0
No		
Info required (missing)	50.0	35.0
Number of Children		
0	53.0	45.0
1	19.0	22.0
2	20.0	25.0
3	7.0	6.0
4+	1.0	2.0
Custody Code		
(1) Awarded to husband	6.0	10.0
(2) Awarded to wife	52.0	71.0
(3) Joint custody	42.0	19.0
(4) Awarded to another person	0.2	0.4

Cluster Analysis Results

Although there are a small number of sites in the province, the results of the cluster analysis shows a high degree of similarity (RMS=0.31 to 0.88), particularly among four of the seven sites including 1002, 1004, 1005 and 1007, which together account for 80 percent of the provincial caseload (see Section Two for additional information).

Prince Edward Island

Both courts reporting divorce data in the province are included in the Child Support Guidelines Study.

COURTID	Frequency	Percent	Cumulative Frequency	Percent
1101	153	64.6	153	64.6
1102	84	35.4	237	100.0

The characteristics of the two sites are similar; however, there are some differences in the proportions of the responses:

- Court 1101 has a slightly higher proportion of proceedings without a hearing and a lower proportion of uncontested cases;
- Court 1102 has more cases involving children; and
- There are some differences noted in the custody awards to the parents in that joint custody is more prevalent in site 1101 resulting in custody awards to husbands and wives being proportionally lower.

Variable	Court = 1101 N = 153 %	Court = 1102 N = 84 %
Applicants		
Husband	35	35
Wife	56	59
Joint	9	7
Proceeding		
Divorce without hearing	97	92
Uncontested hearing	3	6
Contested hearing		
Info required (missing)		2
Custody of Children		
Yes	51	60
Info required (missing)	47	40
Not applicable		
Dependants		
Yes	52	63
No	1	
Info required (missing)	46	37

Variable	Court = 1101 N = 153 %	Court = 1102 N = 84 %
Number of Children		
0	50	41
1	16	27
2	26	23
3	8	10
4+	1	
Custody Code		
(1) Awarded to husband	2	6
(2) Awarded to wife	39	41
(3) Joint custody	59	53
(4) Awarded to another person		

Cluster Analysis Results

There are only two courts in the province included in the data base and both are included in the study. However, the nature of the caseloads heard in these courts seems to be somewhat different statistically, resulting in a weak grouping as indicated by an RMS of 1.48 (see Section Two for further details).

Nova Scotia

The four selected sites in Nova Scotia (1201,1205,1206,1207—Supreme Court of Nova Scotia) account for over two-thirds (68 percent) of the provincial caseload total.

COURTID	Frequency	Percent	Cumulative Frequency	Percent
1201	1004	45.1	1004	45.1
1202	67	3.0	1071	48.1
1203	122	5.5	1193	53.5
1204	189	8.5	1382	62.0
1205	117	5.3	1499	67.3
1206	265	11.9	1764	79.2
1207	136	6.1	1900	85.3
1208	123	5.5	2023	90.8
1209	72	3.2	2095	94.0
1210	46	2.1	2141	96.1
1211	5	0.2	2146	96.3
1213	10	0.4	2156	96.8
1214	8	0.4	2164	97.1
1215	9	0.4	2173	97.5
1217	22	1.0	2195	98.5
1218	10	0.4	2205	99.0
1220	23	1.0	2228	100.0

The chosen study sites are similar in a number of ways to the remaining sites; however, there are some differences noted:

- A smaller proportion of divorces without hearings in the study sites;
- Fewer cases involving children or the custody of children; and
- A slightly smaller proportion of cases resulting in sole custody to the mother and father and more cases with joint custody awards.

Variable	Court = 1201, 1205, 1206, 1207 N = 1522 %	Court = all others N = 706 %
Applicants		
Husband	28.0	27.0
Wife	60.0	59.0
Joint	12.0	13.0

Variable	Court = 1201, 1205, 1206, 1207 N = 1522 %	Court = all others N = 706 %
Proceeding		
Divorce without hearing	86.0	93.0
Uncontested hearing	6.0	7.0
Contested hearing	0.7	0
Info required (missing)	10.0	0.3
Custody of Children		
Yes	50.0	57.0
Info required (missing)	52.0	42.0
Not applicable		
Dependants		
Yes	52.0	58.0
No	0.8	1.0
Info required (missing)	49.0	41.0
Number of Children		
0	48.0	43.0
1	21.0	23.0
2	22.0	26.0
3	7.0	6.0
4+	2.0	2.0
Custody Code		
(1) Awarded to husband	6.0	9.0
(2) Awarded to wife	61.0	63.0
(3) Joint custody	33.0	28.0
(4) Awarded to another person	0.4	0.1

Cluster Analysis Results

The four selected sites were closely related (RMS less than 0.60) with six other sites that also fell below the level of association for the four selected sites. These sites in total account for well over 95 percent of the total caseload in the province (see Section Two for further details).

New Brunswick

The selected site (1301, Court of Appeal and Court of Queen's Bench) reported Fredericton divorce data only. It is estimated that this represents approximately 18 percent of the provincial caseload. During Phase Two of the survey, data from all court locations will be reported.

COURTID	Frequency	Percent	Cumulative Frequency	Cumulative Percent
1301	1450	100.0	1450	100.0

Variable	Court = 1301 N = 1450 %	Court = all others N = 0 %
Applicants		
Husband	40.0	
Wife	57.0	
Joint	3.0	
Proceeding		
Divorce without hearing	75.0	
Uncontested hearing	24.0	
Contested hearing	0.6	
Info required (missing)	0.1	
Custody of Children		
Yes	49.0	
Info required (missing)	48.0	
Not applicable		
Dependants		
Yes	53.0	
No		
Info required (missing)	46.0	
Number of Children		
0	51.0	
1	21.0	
2	21.0	
3	6.0	
4+	1.0	
Custody Code		
(1) Awarded to husband	8.0	
(2) Awarded to wife	73.0	
(3) Joint custody	20.0	
(4) Awarded to another person	0.1	

Quebec

As of writing, Quebec had not begun participating in the Survey of Child Support Awards. A separate project has been developed to collect child support data from Quebec due to the very different structure of its child support guidelines. Quebec has devised a sampling method to produce a representative sample.

COURTID	Frequency	Percent	Cumulative Frequency	Cumulative Percent
2401	2102	11.6	2102	11.6
2402	5160	28.5	7262	40.2
2403	121	0.7	7383	40.8
2404	179	1.0	7562	41.8
2405	217	1.2	7779	43.0
2406	541	3.0	8320	46.0
2407	125	0.7	8445	46.7
2408	65	0.4	8510	47.1
2409	479	2.6	8989	49.7
2410	208	1.2	9197	50.9
2411	72	0.4	9269	51.3
2412	90	0.5	9359	51.8
2413	759	4.2	10118	56.0
2414	235	1.3	10353	57.3
2415	757	4.2	11110	61.5
2416	157	0.9	11267	62.3
2417	71	0.4	11338	62.7
2418	108	0.6	11446	63.3
2419	88	0.5	11534	63.8
2420	96	0.5	11630	64.3
2421	18	0.1	11648	64.4
2422	196	1.1	11844	65.5
2423	284	1.6	12128	67.1
2424	146	0.8	12274	67.9
2425	107	0.6	12381	68.5
2426	53	0.3	12434	68.8
2427	623	3.4	13057	72.2
2428	408	2.3	13465	74.5
2429	203	1.1	13668	75.6
2430	39	0.2	13707	75.8
2431	1099	6.1	14806	81.9
2432	460	2.5	15266	84.4
2433	123	0.7	15389	85.1
2434	15	0.1	15404	85.2
2435	26	0.1	15430	85.4

COURTID	Frequency	Percent	Cumulative Frequency	Percent
2436	258	1.4	15688	86.8
2437	17	0.1	15705	86.9
2438	126	0.7	15831	87.6
2439	33	0.2	15864	87.8
2440	1291	7.1	17155	94.9
2441	31	0.2	17186	95.1
2442	890	4.9	18076	100.0
2443	2	0.0	18078	100.0

Variable	Court = %	Court = all others
Applicants		
Husband	23.0	
Wife	53.0	
Joint	24.0	
Proceeding		
Divorce without hearing	64.0	
Uncontested hearing	34.0	
Contested hearing	0.7	
Info required (missing)		
Custody of Children		
Yes	50.0	
Info required (missing)		
Not applicable		
Dependants		
Yes	53.0	
No	1.3	
Info required (missing)	46.0	
Number of Children		
0	48.0	
1	22.0	
2	23.0	
3	6.0	
4+	1.0	
Custody Code		
(1) Awarded to husband	15.0	
(2) Awarded to wife	71.0	
(3) Joint custody	13.0	
(4) Awarded to another person	0.3	

Cluster Analysis Results

A cluster analysis of Quebec's court data indicates a high degree of similarity between many of the courts in the province. Out of a total of 43 sites, only three were somewhat outside of the range (RMS greater than 1.0) of the majority of courts and their volume was insignificant, accounting for only a handful of cases in total (see Section Two for details).

Ontario

The three selected sites (3543 Toronto, 3522 London and 3528 Ottawa) account for one-third of the provincial total.

COURTID	Frequency	Percent	Cumulative Frequency	Cumulative Percent
3501	784	3.1	784	3.1
3502	310	1.2	1094	4.4
3503	134	0.5	1228	4.9
3504	1673	6.7	2901	11.6
3505	257	1.0	3158	12.6
3506	185	0.7	3343	13.4
3507	68	0.3	3411	13.6
3508	271	1.1	3682	14.7
3509	150	0.6	3832	15.3
3510	169	0.7	4001	16.0
3511	173	0.7	4174	16.7
3512	43	0.2	4217	16.8
3513	97	0.4	4314	17.2
3514	11	0.0	4325	17.3
3515	365	1.5	4690	18.7
3516	74	0.3	4764	19.0
3518	109	0.4	4873	19.5
3519	395	1.6	5268	21.0
3520	978	3.9	6246	24.9
3521	156	0.6	6402	25.6
3522	930	3.7	7332	29.3
3523	62	2.2	7394	29.5
3524	975	3.9	8369	33.4
3525	51	0.2	8420	33.6
3526	199	0.8	8619	34.4
3527	125	0.5	8744	34.9
3528	1864	7.4	10608	42.4
3529	189	0.8	10797	43.1
3530	54	0.2	10851	43.3
3531	198	0.8	11049	44.1
3532	121	0.5	11170	44.6
3533	296	1.2	11466	45.8
3534	29	0.1	11495	45.9
3535	352	1.4	11847	47.3
3536	392	1.6	12239	48.9
3537	201	0.8	12440	49.7
3538	280	1.1	12720	50.8

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COURTID	Frequency	Percent	Cumulative Frequency	Cumulative Percent
3539	306	1.2	13026	52.0
3540	108	0.4	13134	52.5
3541	107	0.4	13241	52.9
3542	418	1.7	13659	54.6
3543	6231	24.9	19890	79.4
3544	104	0.4	19994	79.9
3545	454	1.8	20448	81.7
3546	1194	4.8	21642	86.4
3547	880	3.5	22522	90.0
3548	178	0.7	22700	90.7
3549	1064	4.3	23764	94.9
3550	1169	4.7	24933	99.6
3551	102	0.4	25035	100.0

The selected court sites show characteristics that are fairly similar to the remaining sites in the province, although a few exceptions have been noted:

- There is a higher proportion of joint applications;
- The proportion of divorce cases without a hearing and uncontested hearing are less in the three sites;
- The proportion of cases involving children is smaller in the selected sites than throughout the rest of the sites; and
- There is a higher proportion of cases in which the wife received custody and a smaller proportion where joint custody was awarded.

Variable	Court = 3543, 3522, 3528 N = 9025 %	Court = all others N = 16010 %
Applicants		
Husband	36.0	38.0
Wife	52.0	55.0
Joint	12.0	7.0
Proceeding		
Divorce without hearing	84.0	92.0
Uncontested hearing	1.0	7.0
Contested hearing	0.1	0.2
Info required (missing)	15.0	0.5

Variable	Court = 3543, 3522, 3528 N = 9025 %	Court = all others N = 16010 %
Custody of Children		
Yes	9.0	13.0
Info required (missing)	89.0	81.0
Not applicable		
Dependants		
Yes	25.0	46.0
No		
Info required (missing)	73.0	51.0
Number of Children		
0	91.0	85.0
1	4.0	6.0
2	4.0	7.0
3	1.0	2.0
4+	0.2	0.5
Custody Code		
(1) Awarded to husband	9.0	8.0
(2) Awarded to wife	71.0	67.0
(3) Joint custody	20.0	25.0
(4) Awarded to another person	0.5	0.1

Cluster Analysis Results

Of the three sites in the study (3543, 3522, 3528), one site appears to be somewhat less representative (3543=0.99) than the other two. With the exception of this one chosen site and several others that are not included in the study, the courts throughout the province are fairly closely clustered together.

The two selected sites that are strongly clustered together with many other sites in the province account for two-thirds of the provincial caseload. The one study site that is not as closely clustered with many other sites in the province is a large one with approximately one-quarter of the provincial total (see Section Two for further details).

Manitoba

The selected site (4601, Winnipeg, Court of Queen's Bench) reported the largest caseload in the province (79 percent).

COURTID	Frequency	Percent	Cumulative Frequency	Percent
4601	2055	78.9	2055	78.9
4602	227	8.7	2282	87.7
4603	57	2.2	2339	89.9
4604	32	1.2	2371	91.1
4605	53	2.0	2424	93.1
4606	28	1.1	2452	94.2
4607	7	0.3	2459	94.5
4608	24	0.9	2483	95.4
4610	11	0.4	2494	95.8
4611	29	1.1	2523	96.9
4612	3	0.1	2526	97.0
4613	58	2.2	2584	99.3
4614	18	0.7	2602	100.0
4615	1	0.0	2603	100.0

Despite considerable similarity between the selected site and the rest of the courts in the province, some variances were noted:

- The selected site had a lower proportion of cases involving divorce without a hearing and a higher proportion of uncontested cases; and
- The proportion of joint custody cases was higher while the proportion awarded to husbands and wives was a little lower.

Variable	Court = 4601 N = 2055	Court = all others N = 548
Applicants		
Husband	32.0	31.0
Wife	65.0	66.0
Joint	2.0	3.0
Proceeding		
Divorce without hearing	73.0	78.0
Uncontested hearing	25.0	20.0
Contested hearing	0.6	0.4
Info required (missing)	0.5	2.0

Variable	Court = 4601 N = 2055	Court = all others N = 548
Custody of Children		
Yes	49.0	47.0
Info required (missing)		
Not applicable		
Dependants		
Yes	50.0	54.0
No		
Number of Children		
0	51.0	52.0
1	21.0	18.0
2	20.0	19.0
3	6.0	8.0
4+	1.0	3.0
Custody Code		
(1) Awarded to husband	5.0	8.0
(2) Awarded to wife	54.0	57.0
(3) Joint custody	42.0	35.0
(4) Awarded to another person	0.1	

Cluster Analysis Results

The single site in Manitoba is closely clustered (RMS=0.58) with eight other courts in the province, all of which are relatively close. There is, however, somewhat of a division between these courts and the remainder of the province which differ considerably and have a high value (RMS greater than 1.0).

Despite the diversity between the two groups of courts, the selected site in conjunction with the other sites which are comparable, account for approximately 90 percent of the provincial total (see Section Two for details).

Saskatchewan

In Saskatchewan, four court sites are included in the site study which include Regina (4713), Saskatoon (4720), Prince Albert (4712) and Battleford (4703). These four sites accounted for two-thirds of the provincial caseload. During Phase Two it is anticipated that only Regina and Saskatoon will continue to collect data. This still represents almost 60 percent of the provincial caseload.

COURTID	Frequency	Percent	Cumulative Frequency	Cumulative Percent	
4702	11	0.5	11	0.5	
4703	188	8.5	199	9.0	
4704	47	2.1	246	11.1	
4705	1	0.0	247	11.1	Closed
4706	24	1.1	271	12.2	
4707	29	1.3	300	13.5	
4708	68	3.1	368	16.6	
4709	12	0.5	380	17.1	
4710	132	6.0	512	23.1	
4712	201	9.1	713	32.2	
4713	668	30.1	1381	62.3	
4714	1	0.0	1382	62.4	Closed
4716	72	3.2	1454	65.6	
4717	38	1.7	1492	67.3	
4718	4	0.2	1496	67.5	
4719	88	4.0	1584	71.5	
4720	632	28.5	2216	100.0	

The four sites in the study were very similar proportionally to the remaining sites in the province. The only small variance noted in the comparison involved the parent receiving custody and whether there was a hearing:

- The selected sites had a slightly higher proportion of cases without a hearing; and
- The selected sites had a slightly lower proportion of custody awards to the mother with a correspondingly higher proportion of joint custody awards.

Variable	Court = 4703, 4712, 4713, 4720 N = 1689 %	Court = all others N = 527 %
Applicants		
Husband	27.0	29.0
Wife	65.0	62.0
Joint	8.0	9.0
Proceeding		
Divorce without hearing	93.0	89.0
Uncontested hearing	7.0	9.0
Contested hearing	0.2	0.8
Info required (missing)		
Custody of Children		
Yes	48.0	48.0
Info required (missing)		
Not applicable		
Dependants		
Yes	58.0	55.0
No		
Info required (missing)		
Number of Children		
0	52.0	51.0
1	16.0	20.0
2	21.0	19.0
3	9.0	8.0
4+	3.0	3.0
Custody Code		
(1) Awarded to husband	6.0	7.0
(2) Awarded to wife	67.0	72.0
(3) Joint custody	27.0	21.0
(4) Awarded to another person	0.4	0

Cluster Analysis Results

The majority of courts in the province are closely clustered together. The four selected sites all fell below the value of 0.60 and were clustered together with the majority of sites in the province that together accounted for 96 percent of the total volume (See Section Two for details).

Alberta

During Phase Two, the study will include two sites in Alberta, including Edmonton (4803) and Calgary (4801). These two sites account for over three-quarters (77 percent) of the province's total caseload.

COURTID	Frequency	Percent	Cumulative Frequency	Percent
4801	2659	35.4	2659	35.4
4802	42	0.6	2701	36.0
4803	3158	42.1	5859	78.0
4804	202	2.7	6061	80.7
4806	405	5.4	6466	86.1
4807	8	0.1	6474	86.2
4808	251	3.3	6725	89.6
4809	65	0.9	6790	90.4
4810	442	5.9	7232	96.3
4811	23	0.3	7255	96.6
4812	157	2.1	7412	98.7
4813	97	1.3	7509	100.0

The case characteristics between the two selected sites and the rest of the province are similar although some of the variances are noted below:

- There is a lower proportion of cases involving children in the selected sites than in the remaining courts; and
- The selected sites have a higher proportion of cases resulting in joint custody of children with a corresponding lower proportion of custody awards to the mother and father than is the case in the other sites in the province.

Variable	Court = 4801, 4803 N = 5817 %	Court = all others N = 1692 %
Applicants		
Husband	35.0	33.0
Wife	65.0	66.0
Joint	0.1	0.2
Proceeding		
Divorce without hearing	97.0	95.0
Uncontested hearing	2.0	2.0
Contested hearing	0.2	0.4
Info required (missing)	0.5	0.8

Variable	Court = 4801, 4803 N = 5817 %	Court = all others N = 1692 %
Custody of Children		
Yes	47.0	54.0
Info required (missing)		
Not applicable		
Dependants		
Yes	51.0	56.0
No		
Info required (missing)		
Number of Children		
0	53.0	46.0
1	19.0	20.0
2	21.0	25.0
3	6.0	8.0
4+	2.0	2.0
Custody Code		
(1) Awarded to husband	5.0	7.0
(2) Awarded to wife	52.0	59.0
(3) Joint custody	43.0	34.0
(4) Awarded to another person		

Cluster Analysis Results

The two selected court sites are clustered together with approximately half of the sites in the province that have a value less than RMS=1.0. However, there is some distance between the value of selected site 4803 (RMS=0.69) and site 4801 (RMS=0.91). Overall, there is a considerable amount of variation among groups of sites in the province.

The grouping of courts into which the two selected sites fall account for approximately 97 percent of the total provincial volume (See Section Two for details).

British Columbia

The site selected in British Columbia (5939, Victoria) accounts for 10 percent of the provincial caseload. Among all of the provinces, British Columbia has the smallest proportion of its total cases included in the study.

COURTID	Frequency	Percent	Cumulative Frequency	Cumulative Percent
5901	5	0.0	5	0.0
5904	569	5.2	574	5.3
5906	160	1.5	734	6.7
5907	107	1.0	841	7.7
5908	27	0.2	868	8.0
5909	148	1.4	1016	9.3
5910	31	0.3	1047	9.6
5911	59	0.5	1106	10.1
5912	22	0.2	1128	10.4
5913	19	0.2	1147	10.5
5914	324	3.0	1471	13.5
5916	425	3.9	1896	17.4
5917	27	0.2	1923	17.6
5918	7	0.1	1930	17.7
5919	14	0.1	1944	17.8
5920	514	4.7	2458	22.6
5921	117	1.1	2575	23.6
5922	1705	15.6	4280	39.3
5923	201	1.8	4481	41.1
5924	81	0.7	4562	41.9
5925	55	0.5	4617	42.4
5926	53	0.5	4670	42.9
5927	303	2.8	4973	45.6
5928	57	0.5	5030	46.2
5929	14	0.1	5044	46.3
5930	69	0.6	5113	46.9
5931	21	0.2	5134	47.1
5932	66	0.6	5200	47.7
5933	78	0.7	5278	48.4
5934	59	0.5	5337	49.0
5935	33	0.3	5370	49.3
5936	3817	35.0	9187	84.3
5937	15	0.1	9202	84.4
5938	216	2.0	9418	86.4
5939	1091	10.0	10509	96.4
5940	113	1.0	10622	97.5

COURTID	Frequency	Percent	Cumulative Frequency	Percent
5941	10	0.1	10632	97.6
5945	171	1.6	10803	99.1
5946	12	0.1	10815	99.2
5947	45	0.4	10860	99.7
5948	30	0.3	10890	99.9
5949	8	0.1	10898	100.0

While there are some similarities between the selected site and the rest of the province, there are some considerable differences in the proportions involved in the Victoria court relative to the other sites:

- A lower proportion of divorces without hearings in the selected sites and a higher proportion of uncontested cases;
- Considerably fewer cases involving children; and
- Considerably fewer custody awards to fathers, a higher proportion to mothers and a higher proportion of joint custody awards.

Variable	Court = 5939 N = 1089 %	Court = all others N = 9801 %
Applicants		
Husband	28.0	29.0
Wife	60.0	56.0
Joint	13.0	15.0
Proceeding		
Divorce without hearing	78.0	88.0
Uncontested hearing	22.0	11.0
Contested hearing	0.4	0.4
Info required (missing)	0.1	0.4
Custody of Children		
Yes	21.0	28.0
Info required (missing)		
Not applicable		
Dependants		
Yes	48.0	46.0
No		
Info required (missing)		

Variable	Court = 5939 N = 1089 %	Court = all others N = 9801 %
Number of Children		
0	79.0	69.0
1	8.0	12.0
2	10.0	14.0
3	2.0	4.0
4+	1.0	1.0
Custody Code		
(1) Awarded to husband	4.0	24.0
(2) Awarded to wife	61.0	49.0
(3) Joint custody	36.0	27.0
(4) Awarded to another person		0.2

Cluster Analysis Results

Approximately two-thirds of the courts in the province are fairly closely clustered together (RMS of less than 0.70), including the selected site (5939). These sites together account for approximately 90 percent of the provincial caseload (see Section Two for more detail).

Yukon

All of the cases are reported from one court.

COURTID	Frequency	Percent	Cumulative Frequency	Percent
6001	115	100.0	115	100.0

Variable	Court = 6001 N = 115 %	Court = all others
Applicants		
Husband	30	
Wife	70	
Joint		
Proceeding		
Divorce without hearing	95	
Uncontested hearing	4	
Contested hearing		
Info required (missing)	1	
Custody of Children		
Yes	45	
Info required (missing)		
Not applicable		
Dependants		
Yes	47	
No		
Info required (missing)		
Number of Children		
0	53	
1	19	
2	18	
3	9	
4+	1	
Custody Code		
(1) Awarded to husband	8	
(2) Awarded to wife	52	
(3) Joint custody	40	
(4) Awarded to another person		

Northwest Territories

All of the cases are reported from one court.

COURTID	Frequency	Percent	Cumulative Frequency	Percent
6101	99	100.0	99	100.0

Variable	Court = 6101 N = 99 %	Court = all others
Applicants		
Husband	38	
Wife	50	
Joint	12	
Proceeding		
Divorce without hearing	96	
Uncontested hearing	3	
Contested hearing	1	
Info required (missing)		
Custody of Children		
Yes	40	
Info required (missing)		
Not applicable		
Dependants		
Yes	50	
No		
Info required (missing)		
Number of Children		
0	60	
1	17	
2	14	
3	7	
4+	2	
Custody Code		
(1) Awarded to husband	7	
(2) Awarded to wife	62	
(3) Joint custody	32	
(4) Awarded to another person		

SECTION TWO: CLUSTER ANALYSIS

The second part of this project was to determine the extent to which similarities exist among the different courts in the provinces and territories and determine the "representativity" of selected courts. It was felt that a more statistically based exercise should be undertaken in order to derive a more refined picture of court categories and groupings. The previous section compared the selected sites to the sites not selected using a comparison of general frequencies to show a first cut of the differences or similarities that may exist between the two groups of courts. In order to get a more detailed view of the representativity of the different courts in the province, a cluster analysis approach was selected.

For the purposes of this report, a cluster analysis technique was chosen because of the nominal or categorical nature of most of the data elements in the data base which cannot be ranked and are not interval in nature.

Cluster analysis is a procedure which clusters or groups objects (courts) that are suggested by the data. These clusters bring together objects which tend to be similar to each other, creating groupings that identify these similar objects. The cluster analysis includes the individual records that are in the data base and uses the redefined variables as the common elements for purposes of categorization. (Source, SAS Users Guide: Statistics, Version 5).

Methodology

There were a total of four stages used to prepare the data for cluster analysis. The first stage was the running of national and provincial frequencies of every variable in the Central Divorce Registry Data Base to determine those which have sufficient responses to be included. This process also helps to eliminate the variables which are purely administrative and do not help define the characteristics of a case. The second stage was the merging of the selected variables from the Adult Master file and the Child file into one working data base. The third stage was the creation of derived variables and the normalizing of responses for these variables. The majority of variables in the base selected for analysis are nominal level data that are categorical in nature. To use these variables it was necessary to derive new variables and change the values of the responses. This stage involved the conversion of the variables, "applicant" for example, into multiple variables so that one derived variable includes applicant=husband with a binary response of 0 or 1, a second derived variable includes applicant=wife with a 0 or 1 and a third as applicant=joint with a 0 or 1 response. In the case of age of children, age of parents and duration of marriage the actual values were used as they currently stand since the values are meaningful. The fourth stage required running frequencies of these new derived variables with the results then being analyzed for the Mean (average) of the frequencies which were then output into a data base and used for the cluster analysis. This final data base was designed to provide both court level and provincial and territorial level data.

The variables used for the cluster analysis were selected on the basis that they were considered to be the most meaningful variables in defining the types of cases that were heard in the different court sites and for which data are available. The variables used for the cluster analysis include applicant, proceeding type, dependants, number of children, duration of marriage, age of children, age of parents at time of divorce and which parent obtains custody of the children .

Like the comparisons of frequencies, a cluster analysis is another technique to provide additional information to more appropriately group courts and to allow a measure of representativity between courts. There are many different ways to do cluster analysis and many different criteria that can be chosen. Each choice can have an impact on the results.

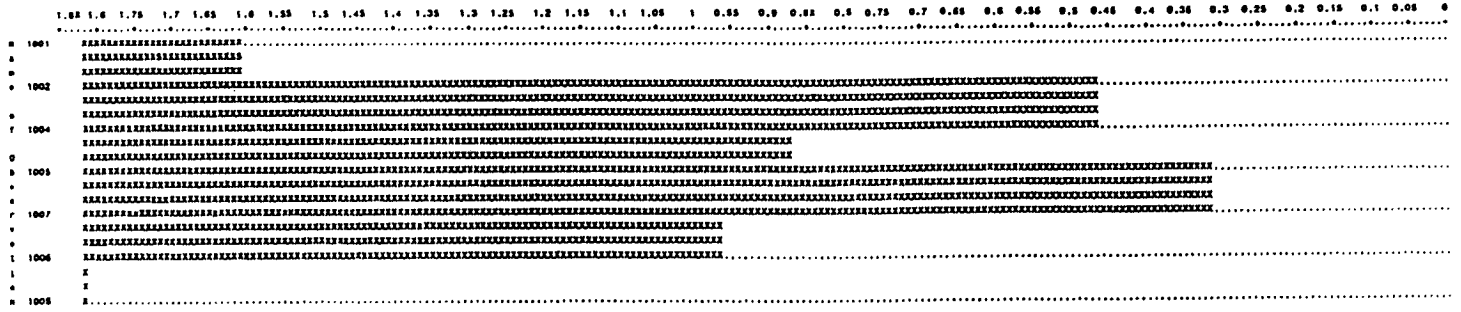
Interpretation of results

The results of the cluster analysis that follow are given in two formats. The first is the distribution of the clusters which are suggested by the data and the various courts that are included in them. With each of these groupings a Normalized Root Mean Square (RMS) Distance value is provided that indicates the distance that occurs between any two objects in the analysis. The closer the value is to 0, the more similar the objects are. There is no single cut-off value for the RMS under which the linkage is accepted or over which it is rejected. Rather, it is to be used as an indication of the strength of the commonality of the objects. The second format is a graphical representation of the distribution of the categories identified by the technique which is included in the appendix. The graphs show the distribution of the object (court) linkages by the level of the RMS. Therefore, the clustering of the bars in similar ranges of the RMS suggest common characteristics and strong linkages.

Newfoundland

Average Linkage Cluster Analysis

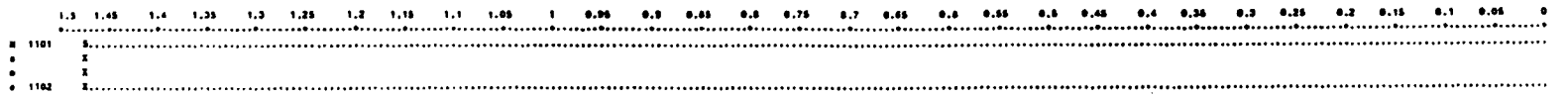
Number of Clusters	------Clusters Joined------		Frequency of New Cluster	Normalized RMS Distance	Tie
6	1005	1007	169	0.313571	
5	1002	1004	694	0.468317	
4	CL5	CL6	863	0.875447	
3	CL4	1006	912	0.969674	
2	1001	CL3	994	1.609609	
1	CL2	1008	1060	1.812684	



Prince Edward Island

Average Linkage Cluster Analysis

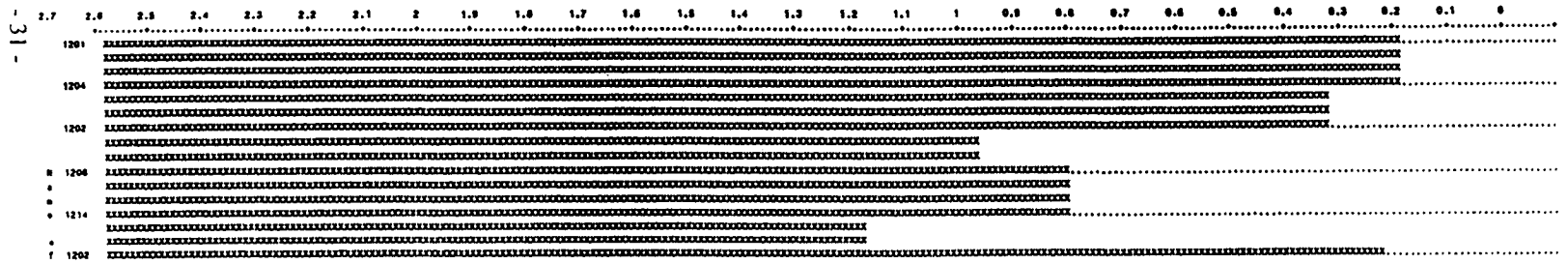
Number of Clusters	Clusters Joined		Frequency of New Cluster	Normalized RMS Distance	Tie
1	1101	1102	237	1.475128	

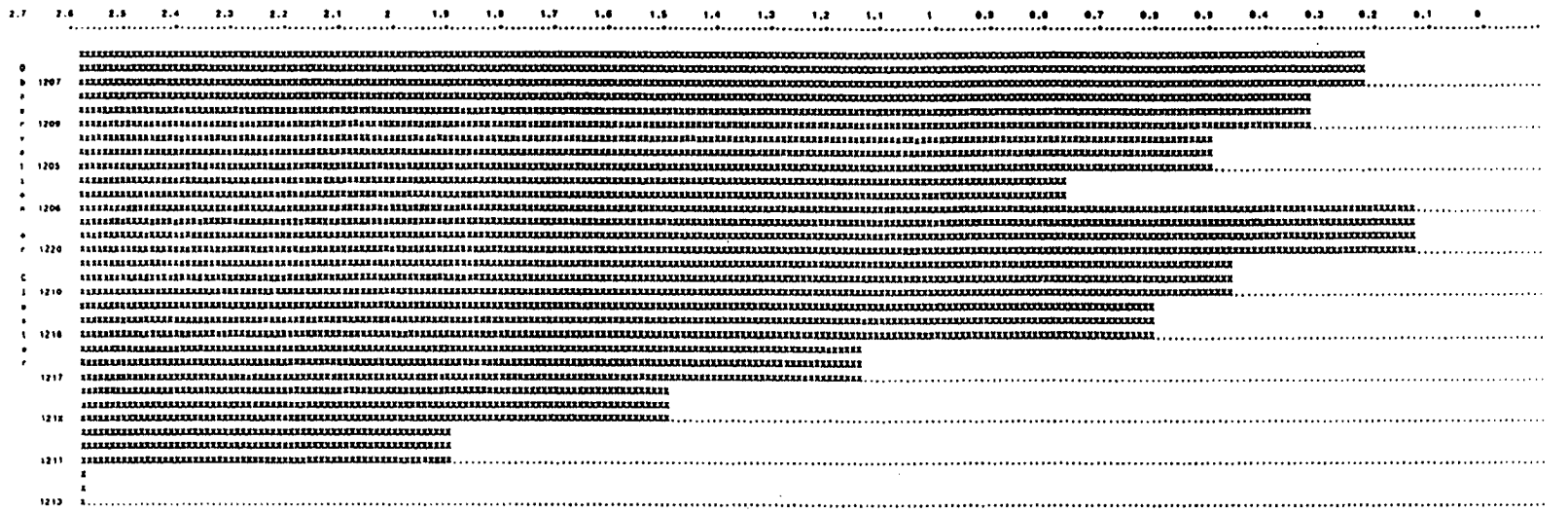


Nova Scotia

Average Linkage Cluster Analysis

Number of Clusters	Clusters Joined		Frequency of New Cluster	Normalized RMS Distance	Tie
16	1206	1220	288	0.235043	
15	1201	1204	1193	0.287613	
14	1203	1207	258	0.316876	
13	CL14	1209	330	0.416824	
12	CL15	1202	1260	0.419162	
11	CL16	1210	334	0.563410	
10	CL13	1205	447	0.604605	
9	CL11	1218	344	0.714965	
8	CL10	CL9	791	0.865898	
7	1208	1214	131	0.904826	
6	CL12	CL7	1391	1.067068	
5	CL8	1217	813	1.245641	
4	CL6	CL5	2204	1.276036	
3	CL4	1215	2213	1.597752	
2	CL3	1211	2218	2.003619	
1	CL2	1213	2228	2.672377	

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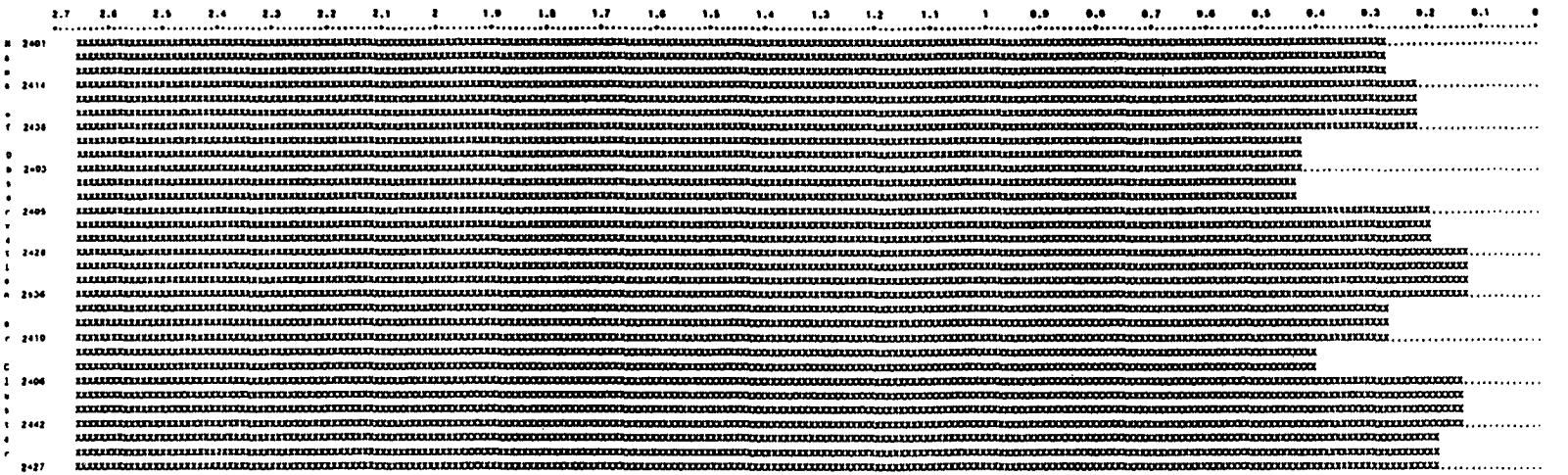
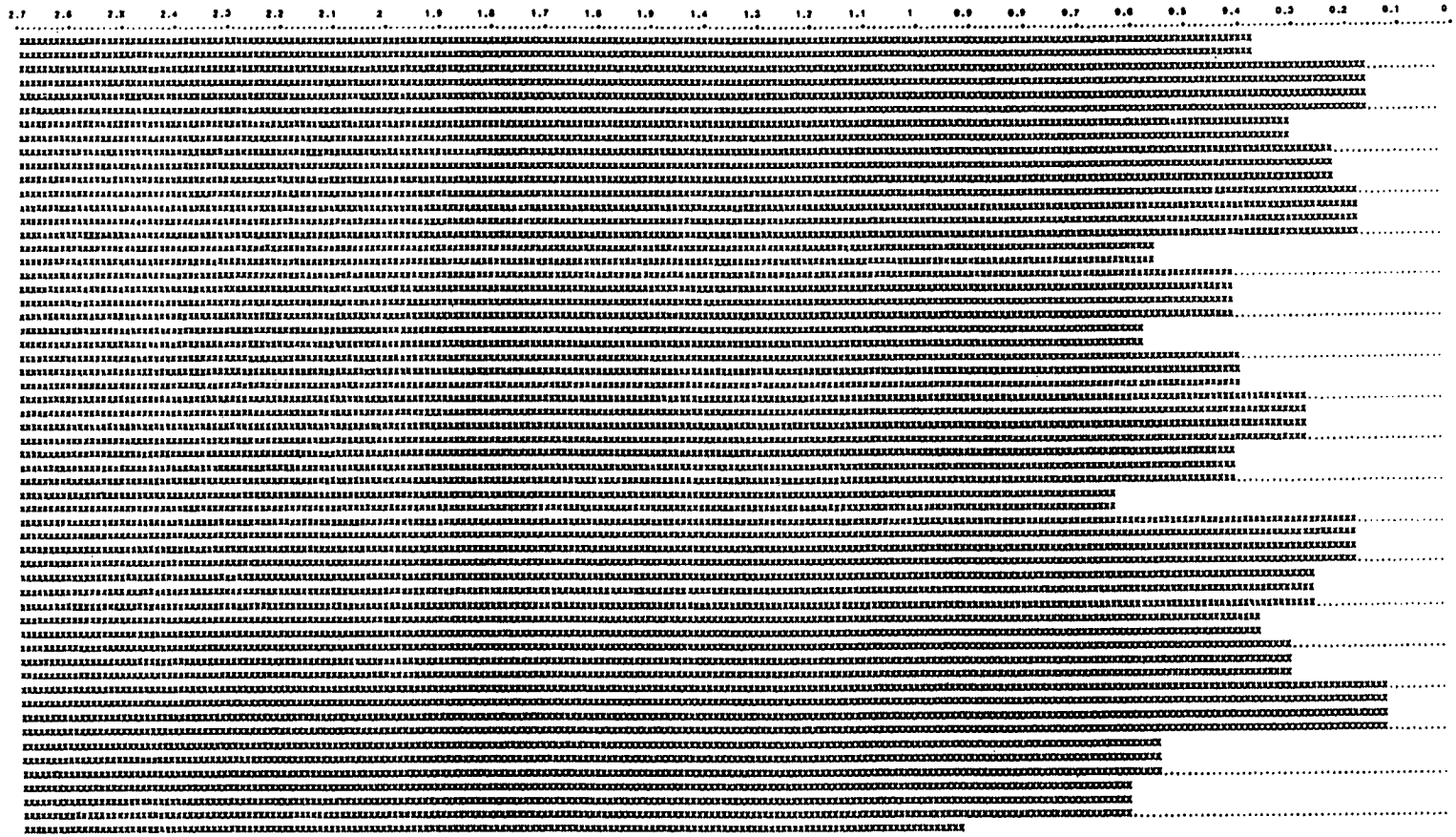
Ouebec

Average Linkage Cluster Analysis

Number of Clusters	Clusters Joined		Frequency of New Cluster	Normalized RMS Distance	Tie
42	2416	2429	360	0.115011	
41	2428	2436	666	0.128709	
40	2415	2432	1217	0.138427	
39	2406	2442	1431	0.140374	
38	2431	2440	2390	0.152975	
37	2404	2423	463	0.161529	
36	CL39	2427	2054	0.192667	
35	2405	CL41	883	0.196953	
34	2425	CL38	2497	0.203743	
33	2414	2438	361	0.217021	
32	CL37	2433	586	0.249405	
31	2409	2424	625	0.258989	
30	CL40	CL34	3714	0.274903	
29	2401	CL33	2463	0.276801	
28	CL35	2410	1091	0.281683	
27	2407	CL42	485	0.284683	
26	CL32	CL27	1071	0.339307	
25	CL36	CL30	5768	0.349989	
24	2408	CL31	690	0.374456	
23	2419	2422	284	0.393578	
22	CL24	2441	721	0.394106	
21	CL28	CL25	6859	0.408055	
20	CL29	2403	2584	0.431219	
19	CL20	CL21	9443	0.443874	
18	2417	2418	179	0.490084	
17	2421	2426	71	0.500425	
16	2430	2439	72	0.517532	
15	2402	2413	5919	0.527274	
14	CL26	2412	1161	0.528717	
13	CL19	CL23	9727	0.532210	

12	CL13		CL22		10448	0.552576
11	CL14			2420	1257	0.586236
10	CL12		CL11		11705	0.606645
9		2411	CL18		251	0.642313
8	CL15		CL17		5990	0.720607
7	CL9			2435	277	0.747436
6	CL10		CL16		11777	0.904637
5	CL6		CL8		17767	1.343604
4	CL5			2434	17782	1.727002
3		2437		2443	19	1.851667
2	CL4		CL7		18059	1.859958
1	CL2		CL3		18078	2.651111

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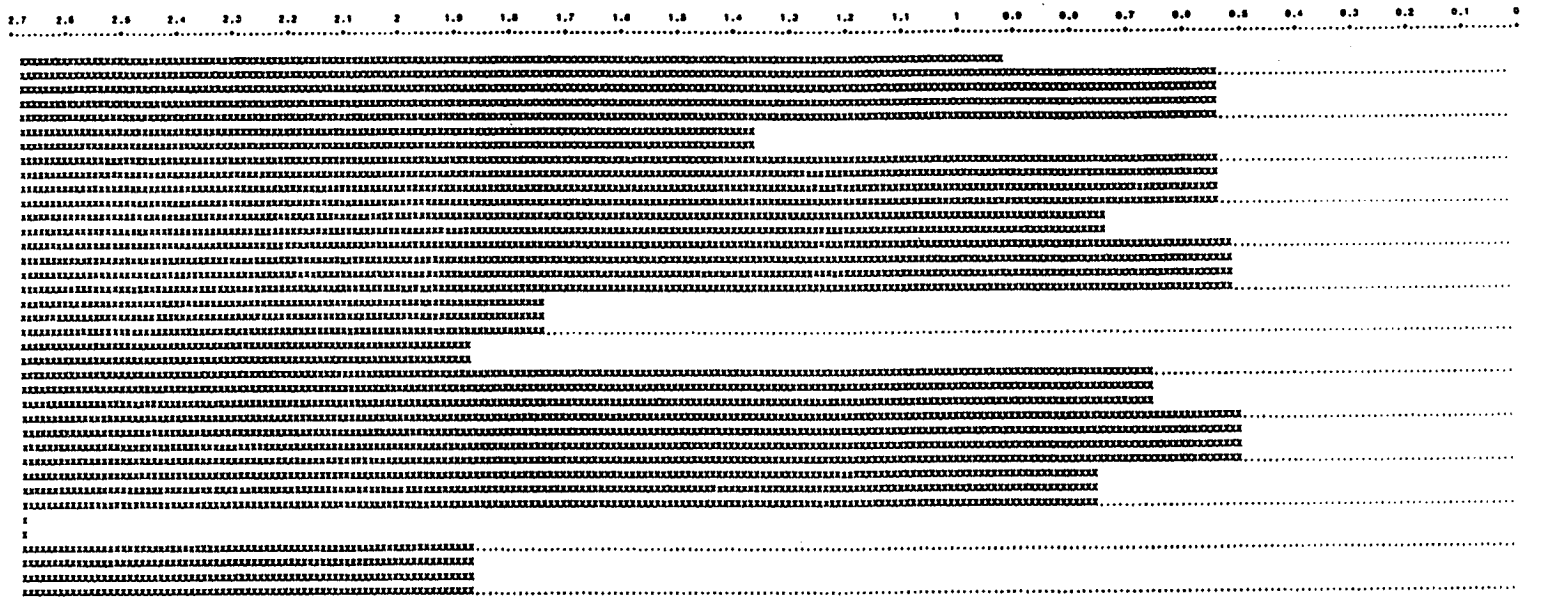
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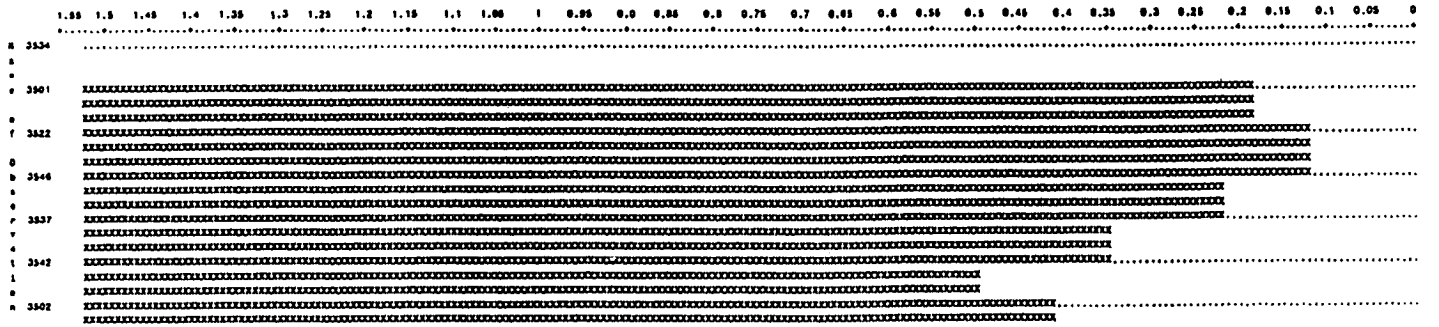
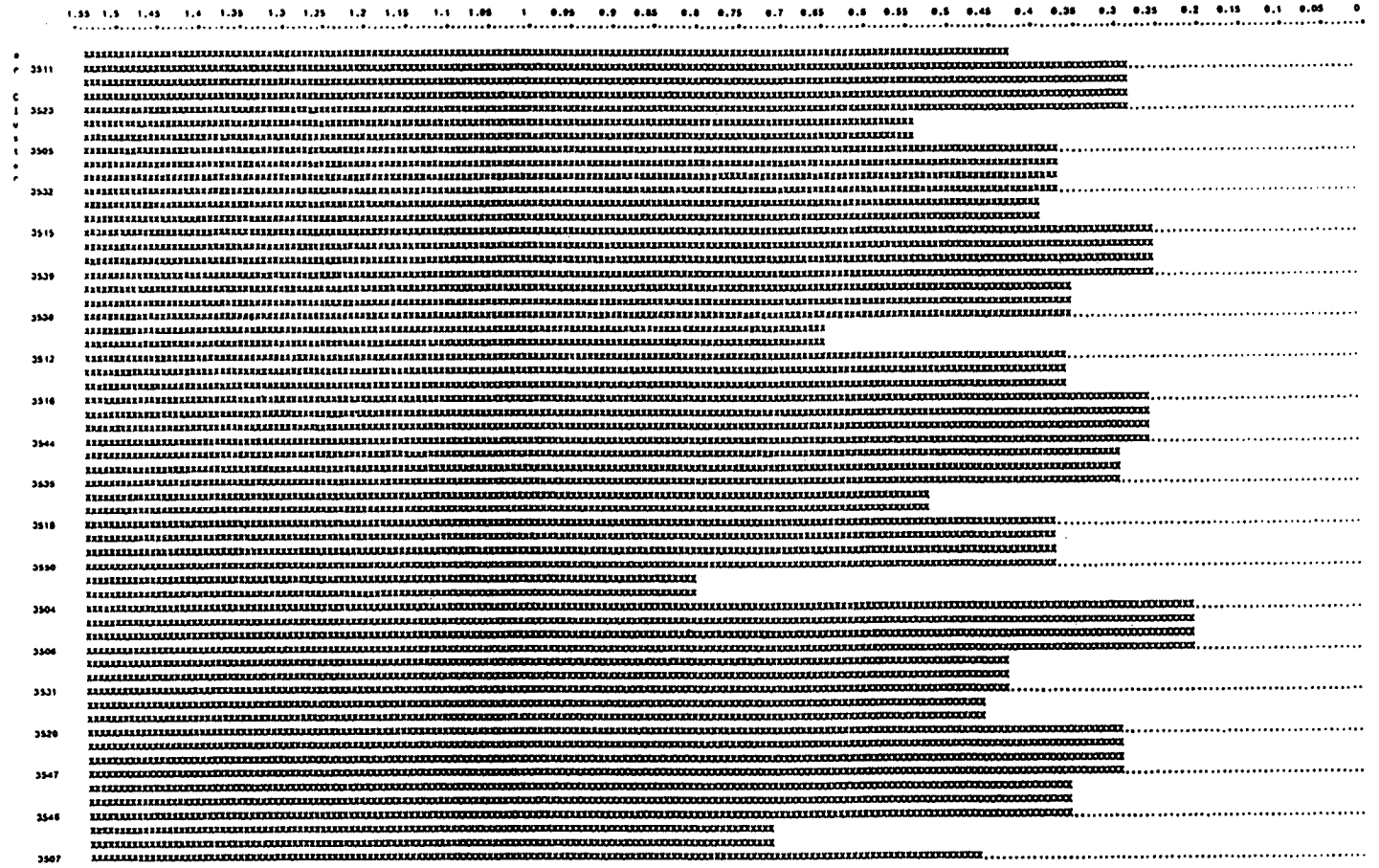
Average Linkage Cluster Analysis

Number of Clusters	Clusters Joined		Frequency of New Cluster	Normalized RMS Distance	Tie
48	3522	3546	2124	0.121434	
47	3533	3536	688	0.125731	
46	3501	CL48	2908	0.186590	
45	3504	3506	1858	0.202574	
44	CL46	3537	3109	0.218827	
43	3524	3540	1083	0.233740	
42	3515	3539	671	0.241627	
41	3518	3544	178	0.247461	
40	3528	3545	2318	0.271539	
39	3511	3523	235	0.271945	
38	3520	3547	1858	0.285428	
37	CL41	3535	530	0.285938	
36	3509	CL47	838	0.311901	
35	CL42	3538	951	0.345668	
34	3512	CL37	573	0.348718	
33	CL38	3549	2922	0.351203	
32	CL44	3542	3527	0.351845	
31	3505	3532	378	0.356929	
30	CL36	3529	1027	0.358892	
29	3518	3550	1278	0.364149	
28	CL31	CL35	1329	0.382082	
27	CL43	CL40	3401	0.383208	
28	CL30	3527	1152	0.408752	
25	3502	CL39	545	0.414483	
24	CL45	3531	2056	0.416907	
23	3508	3548	449	0.426351	
22	CL24	CL33	4978	0.450780	
21	3507	CL27	3469	0.456742	

20	CL26			3551	1254	0.467085
19	CL32		CL25		4072	0.500076
18		3503		3526	333	0.506225
17	CL34		CL29		1851	0.512837
16	CL19		CL28		5401	0.525995
15	CL18		CL23		782	0.574281
14		3513		3519	492	0.624303
13	CL16		CL17		7252	0.636195
12	CL21			3541	3576	0.693551
11	CL22		CL12		8554	0.705107
10	CL13		CL11		15806	0.792059
9	CL20			3521	1410	0.816639
8	CL15		CL14		1274	0.856213
7		3514		3543	6242	0.993225
6	CL9			3530	1464	1.015022
5	CL10			3510	15975	1.065342
4	CL5		CL7		22217	1.083888
3	CL4		CL6		23681	1.387084
2	CL3			3525	23732	1.493325
1	CL2		CL8		25006	1.519633

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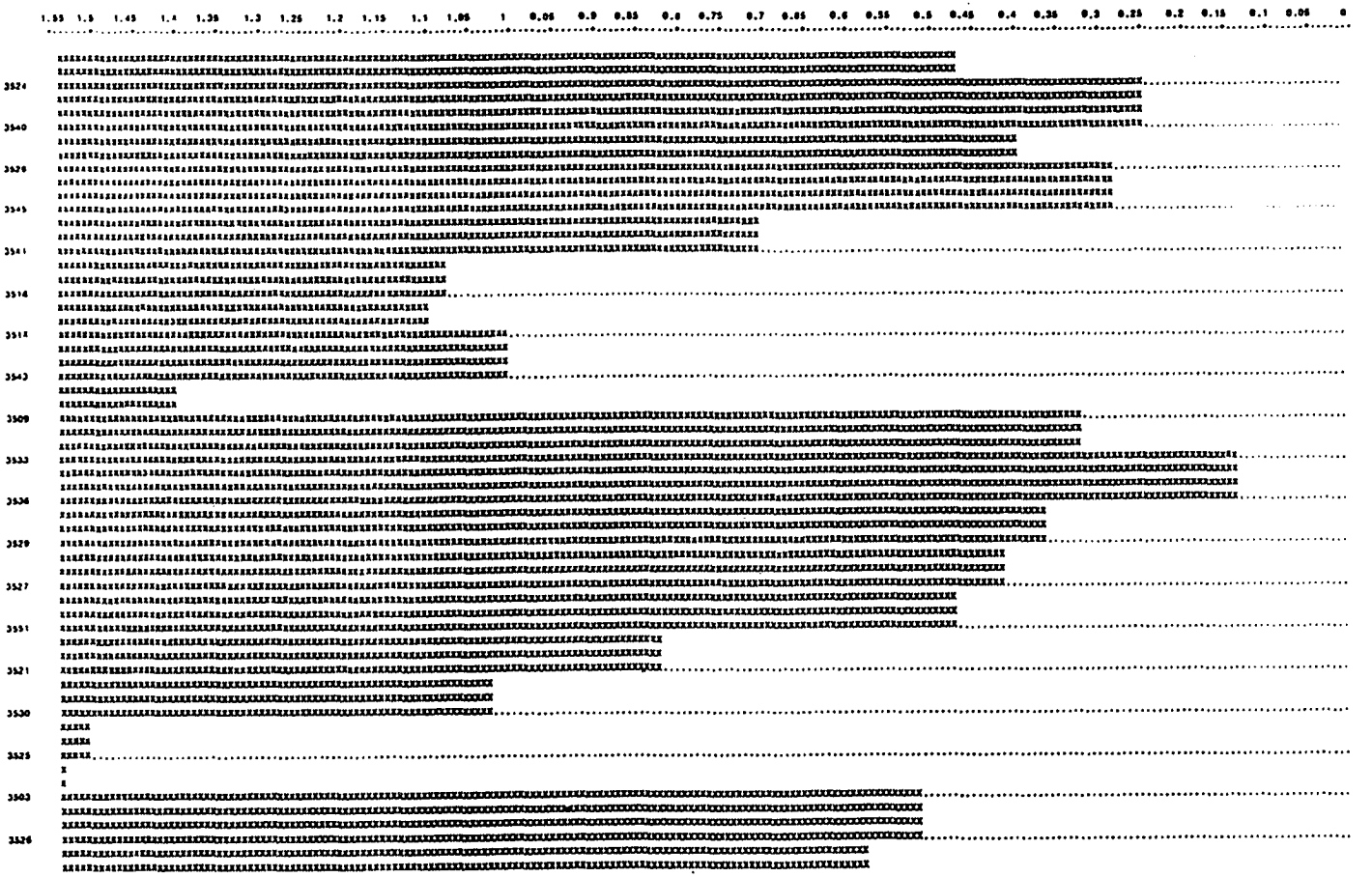
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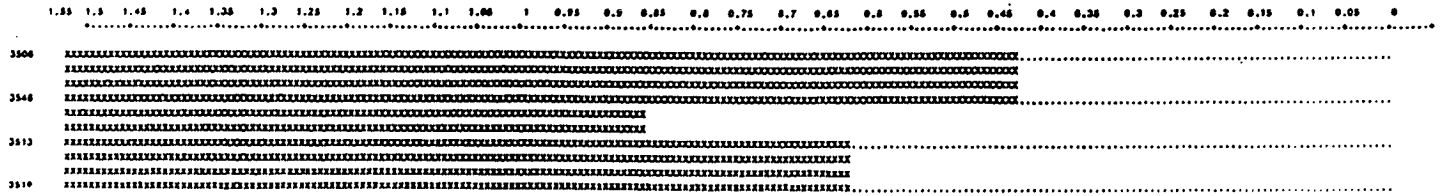
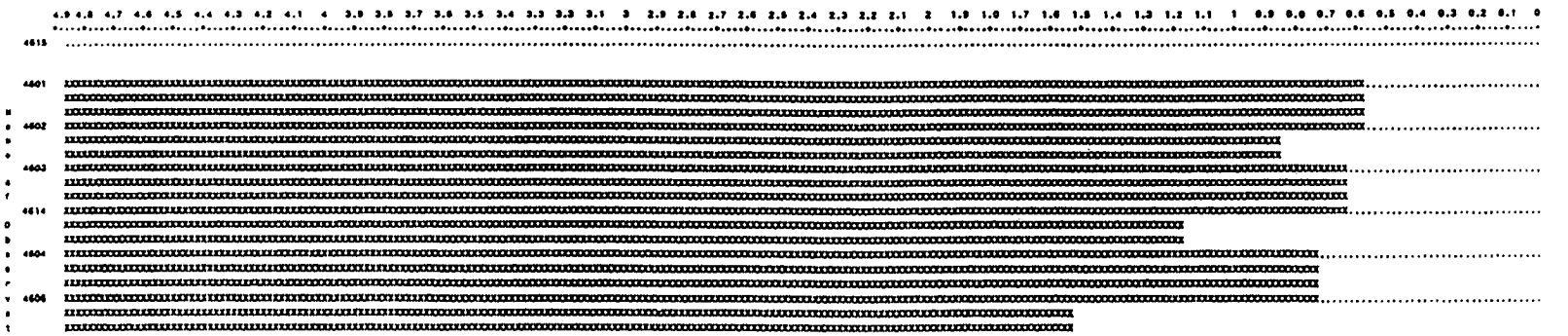
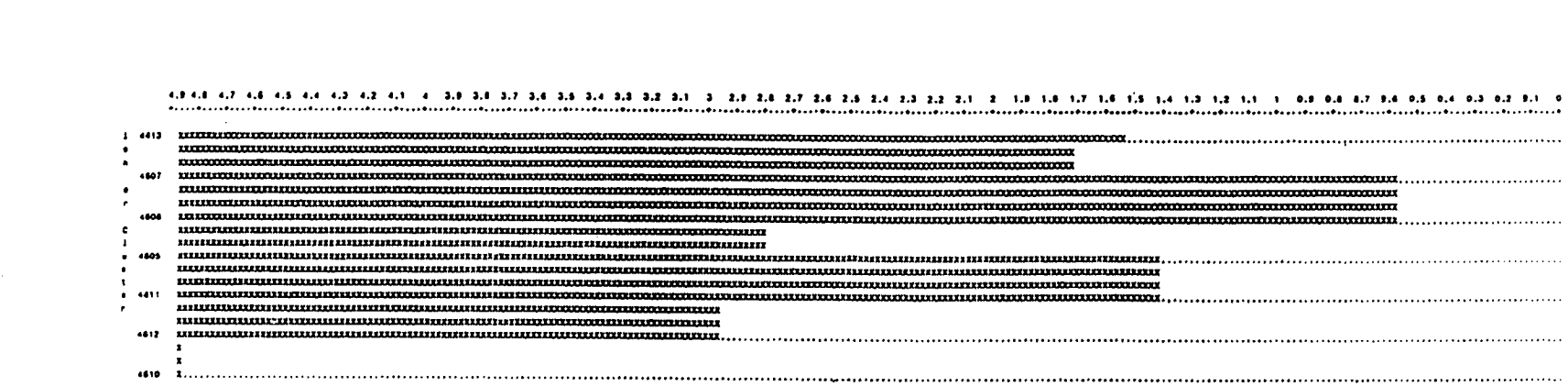

1.55 1.5 1.45 1.4 1.35 1.3 1.25 1.2 1.15 1.1 1.06 1 0.95 0.9 0.85 0.8 0.75 0.7 0.65 0.6 0.55 0.5 0.45 0.4 0.35 0.3 0.25 0.2 0.15 0.1 0.05 0
3506
3548
3513
3510

Manitoba

Average Linkage Cluster Analysis

Number of Clusters	Clusters Joined		Frequency of New Cluster	Normalized RMS Distance	Tie
12	4601	4602	2282	0.578262	
11	4607	4608	31	0.586007	
10	4603	4614	75	0.640667	
9	4604	4606	60	0.740246	
8	CL12	CL10	2357	0.863004	
7	CL8	CL9	2417	1.178097	
6	4605	4611	82	1.419312	
5	CL7	4613	2475	1.531826	
4	CL5	CL11	2506	1.710269	
3	CL4	CL6	2588	2.794550	
2	CL3	4612	2591	2.961649	
1	CL2	4610	2802	4.882359	

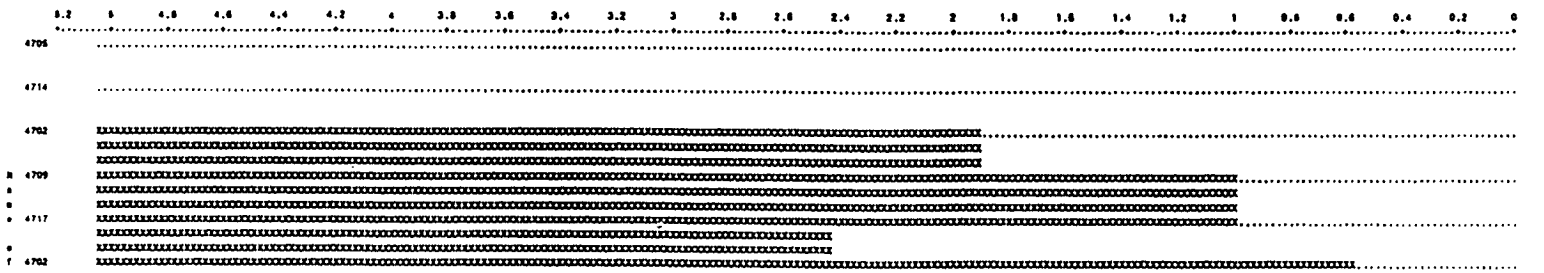


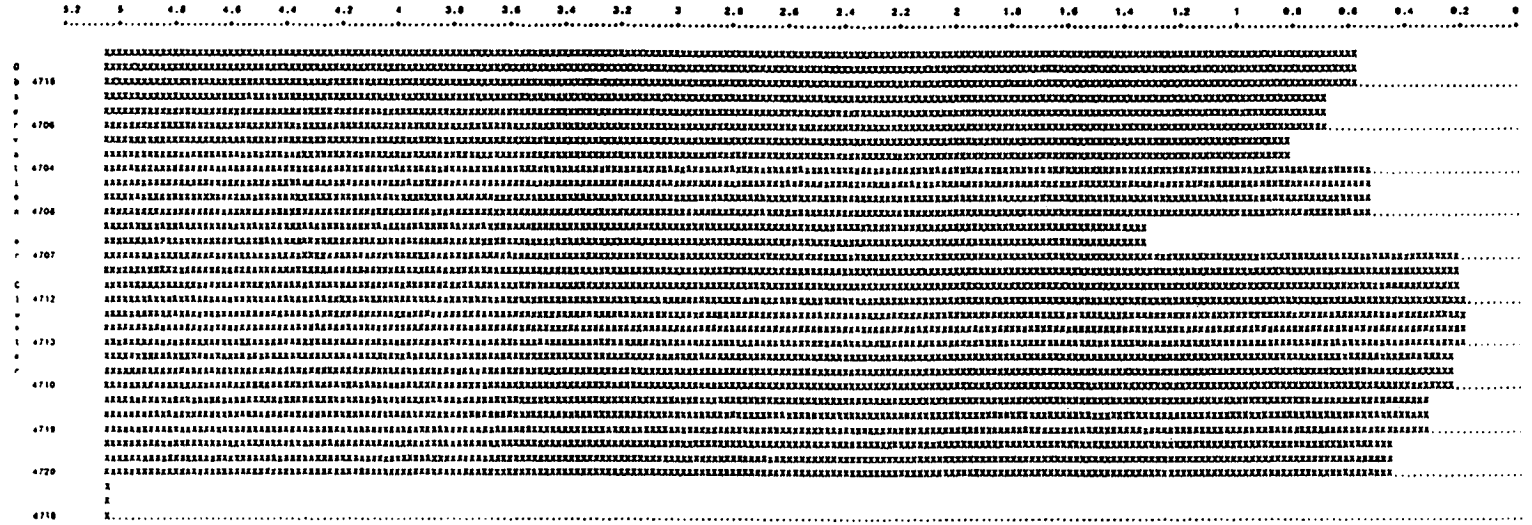

4.9 4.8 4.7 4.6 4.5 4.4 4.3 4.2 4.1 4 3.9 3.8 3.7 3.6 3.5 3.4 3.3 3.2 3.1 3 2.9 2.8 2.7 2.6 2.5 2.4 2.3 2.2 2.1 2 1.9 1.8 1.7 1.6 1.5 1.4 1.3 1.2 1.1 1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0
4613
4607
4606
4605
4611
4612
4610

Saskatchewan

Average Linkage Cluster Analysis

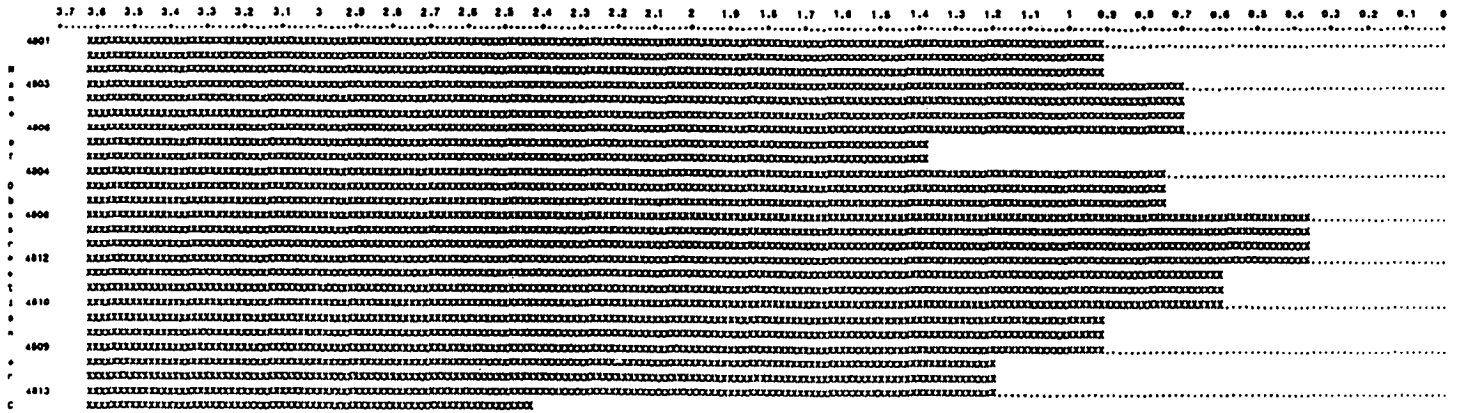
Number of Clusters	Clusters Joined		Frequency of New Cluster	Normalized RMS Distance	Tie
14	4712	4713	869	0.207938	
13	4707	CL14	898	0.212575	
12	CL13	4710	1030	0.238172	
11	CL12	4719	1118	0.326470	
10	CL11	4720	1750	0.457307	
9	4704	4708	115	0.523719	
8	4703	4716	260	0.567472	
7	CL8	4706	284	0.692362	
6	CL7	CL9	399	0.829478	
5	4709	4717	50	1.004955	
4	CL6	CL10	2149	1.331519	
3	4702	CL5	61	1.913164	
2	CL3	CL4	2210	2.443850	
1	CL2	4718	2214	5.041139	

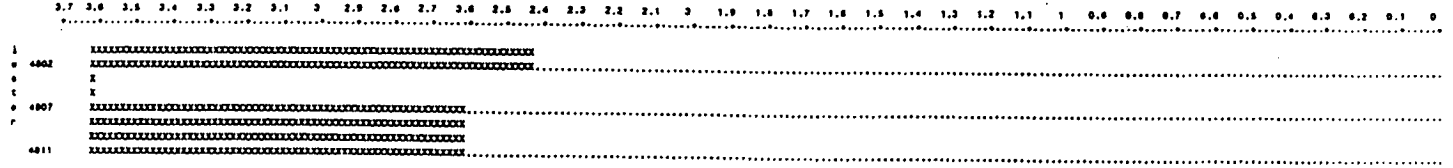



5.2
5
4.8
4.6
4.4
4.2
4
3.8
3.6
3.4
3.2
3
2.8
2.6
2.4
2.2
2
1.8
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
4716
4706
4704
4708
4707
4712
4713
4710
4719
4720
4718

Alberta

Number of Clusters	------Clusters Joined------			Frequency of New Cluster	Normalized RMS Distance	Tie
11		4808	4812	408	0.372950	
10	CL11		4810	850	0.595492	
9		4803	4806	3563	0.698657	
8		4804	CL10	1052	0.754206	
7	CL8		4809	1117	0.908401	
6		4801	CL9	6222	0.912655	
5	CL7		4813	1214	1.194486	
4	CL6		CL5	7436	1.381595	
3	CL4		4802	7478	2.432143	
2		4807	4811	31	2.617915	
1	CL3		CL2	7509	3.614273	



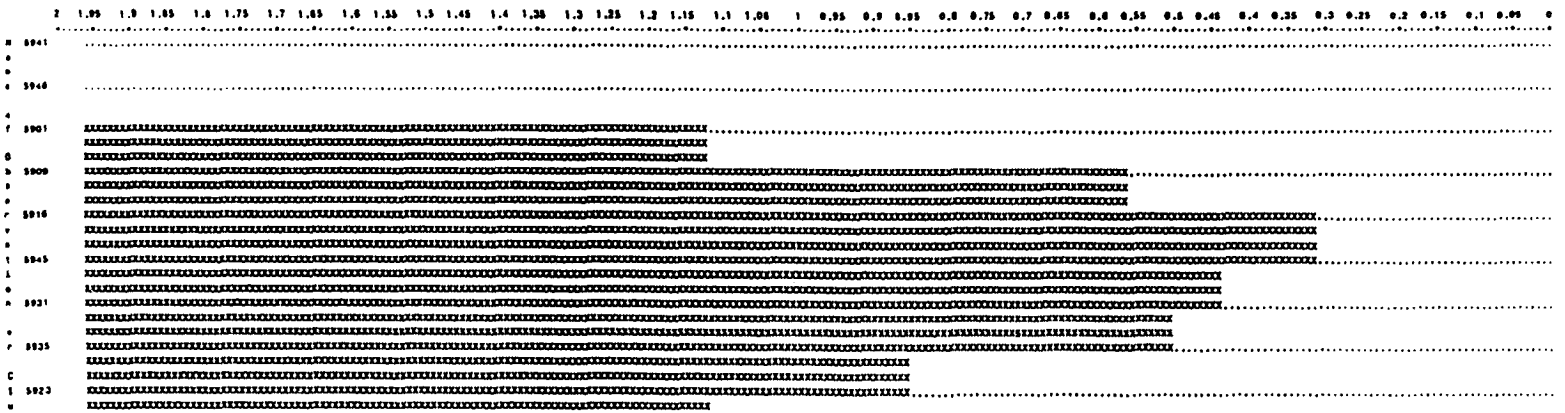

3.7 3.6 3.5 3.4 3.3 3.2 3.1 3 2.9 2.8 2.7 2.6 2.5 2.4 2.3 2.2 2.1 2 1.9 1.8 1.7 1.6 1.5 1.4 1.3 1.2 1.1 1 0.9 0.8 0.7 0.6 0.5 0.4 0.3 0.2 0.1 0
4902
4907
4911

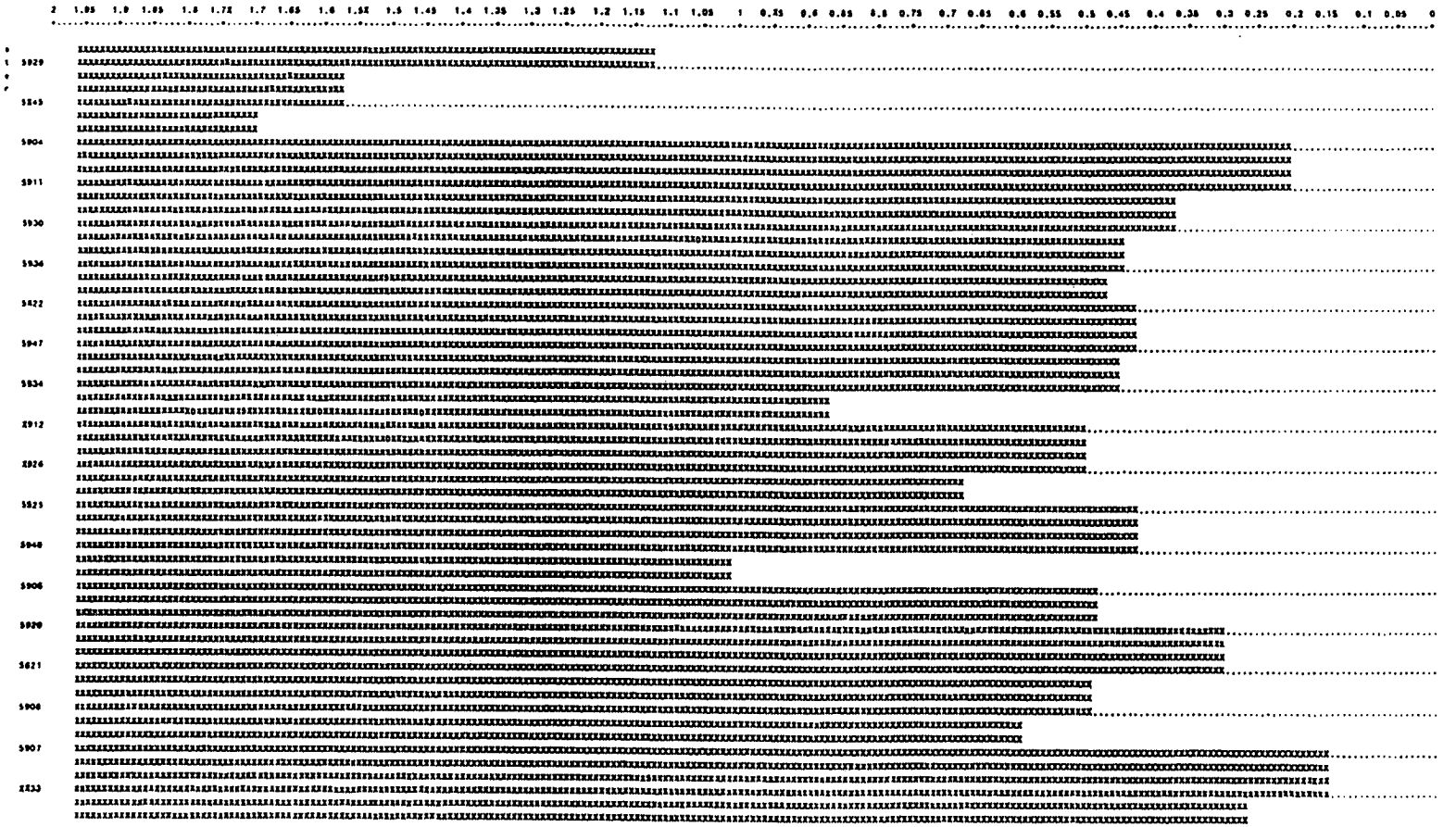
British Columbia

Average Linkage Cluster Analysis

Number of Clusters	------Clusters Joined------				Frequency of New Cluster	Normalized RMS Distance	Tie
39		5907		5933	185	0.160207	
38		5904		5911	628	0.209010	
37	CL39			5914	509	0.271866	
36		5920		5921	631	0.311585	
35		5916		5945	596	0.317633	
34		5924		5932	147	0.343697	
33	CL38			5930	697	0.377193	
32		5938		5940	329	0.378522	
31	CL37		CL32		838	0.407778	
30		5910		5919	45	0.425035	
29		5925		5948	85	0.429997	
28		5913	CL34		166	0.430157	
27		5922		5947	1750	0.433063	
26	CL35			5931	817	0.443823	
25	CL33			5936	4514	0.448361	
24	CL27			5934	1809	0.461961	
23	CL25		CL24		6323	0.477811	
22		5906	CL36		791	0.490501	
21	CL31			5939	1929	0.502253	
20	CL22			5908	816	0.502767	
19	CL26			5935	650	0.504592	
18		5912		5926	75	0.512346	
17		5909	CL19		798	0.567326	
16	CL21		CL28		2095	0.571448	
15	CL20		CL16		2913	0.600246	
14	CL30			5927	348	0.658730	
13	CL18		CL29		160	0.687409	

12	CL15		CL14		3261	0.806886
11	CL17			5923	999	0.660728
10	CL23		CL13		6483	0.878844
9	CL10		CL12		9744	1.018155
8		5901	CL11		1004	1.123337
7	CL8			5929	1018	1.126535
6		5917		5937	42	1.170776
5	CL9			5928	9801	1.323243
4	CL7			5949	1026	1.576494
3	CL4		CL5		10827	1.700697
2	CL6			5918	49	1.711164
1	CL3		CL2		10876	1.958463




2 1.95 1.9 1.85 1.8 1.75 1.7 1.65 1.6 1.55 1.5 1.45 1.4 1.35 1.3 1.25 1.2 1.15 1.1 1.05 1 0.95 0.9 0.85 0.8 0.75 0.7 0.65 0.6 0.55 0.5 0.45 0.4 0.35 0.3 0.25 0.2 0.15 0.1 0.05 0
5929
5845
5904
5911
5930
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5906
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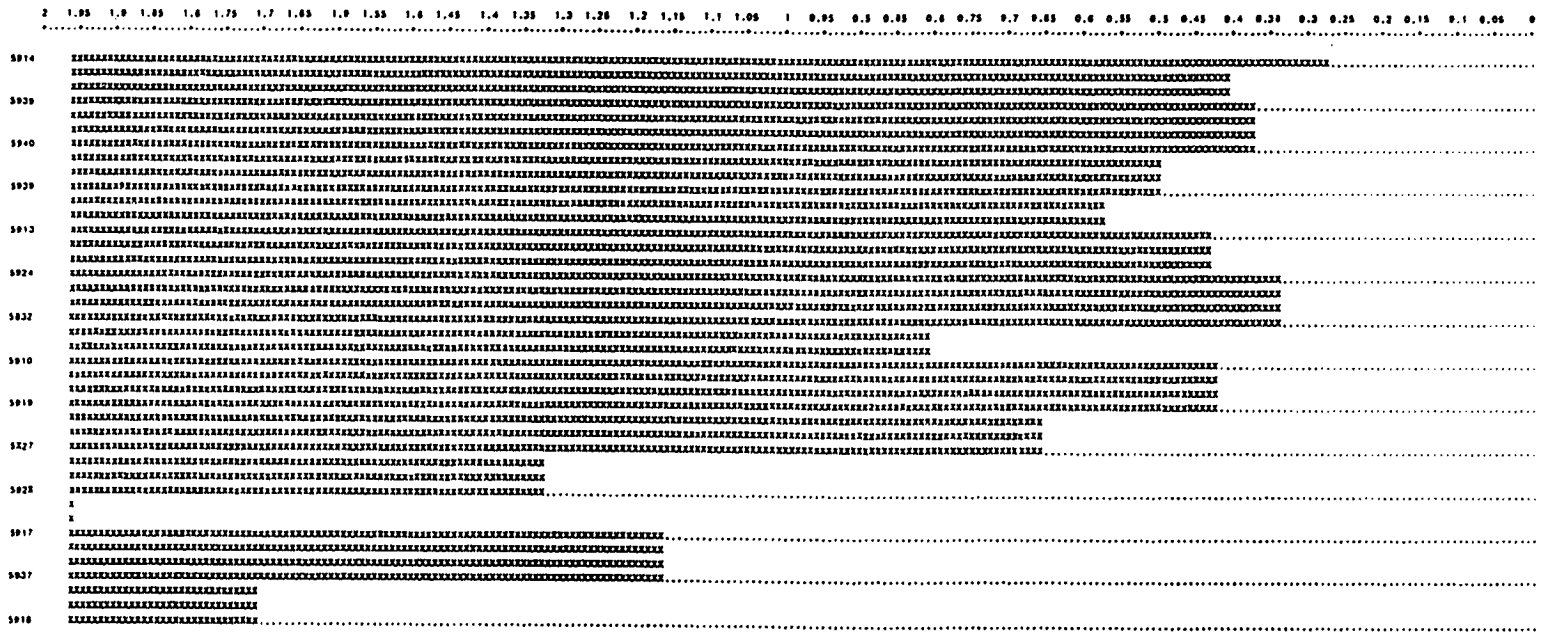
5921
5908
5907
5933


2 1.95 1.9 1.85 1.8 1.75 1.7 1.65 1.6 1.55 1.5 1.45 1.4 1.35 1.3 1.25 1.2 1.15 1.1 1.05 1 0.95 0.9 0.85 0.8 0.75 0.7 0.65 0.6 0.55 0.5 0.45 0.4 0.35 0.3 0.25 0.2 0.15 0.1 0.05 0
5014
5039
5040
5039
5013
5024
5032
5010
5019
5027
5028
5017
5037
5018