SUBURBAN AFFILIATION TO URBAN CENTRES AS MEASURED BY NEWSPAPER CIRCULATION AND OTHER INDICATORS (CASE STUDY: BURLINGTON, ONTARIO)

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ABSTRACT

This research paper addresses the question of the urban affiliation of a suburban population. Social survey data on spatial interaction are used to determine the affiliation of Burlington residents with the Hamilton-Wentworth region and Metropolitan Toronto. A secondary objective is to study the role of urban newspaper circulation in the suburban community in relation to the other variables for measuring urban affiliation. Specific attention is given to spatial variations in urban affiliation for different sub-areas within Burlington.

The results show Burlington residents to be more affiliated with Hamilton-Wentworth than Metropolitan Toronto. However, within Burlington, sectoral differences in affiliation emerge. The older areas of Burlington have a strong affiliation to Hamilton-Wentworth; the later developed areas have equal levels of affiation with both urban centres. Newspaper circulation.emerges as a significant indicator of urban affiliation, but is a weaker measure than several other indicators (e.g. number of trips to urban centres and number of telephone calls to urban centres). Reasons for this are postulated in the analysis and in the conclusions.

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CHAPTER 1: INTRODUCTION

1.1 The Proposal

The spacial structure of the urban area has changed quite rapidly in the past century. As urban centres expand spacially, the affiliation of the suburb with particular urban places becomes debatable. Historians have shown how certain areas over time create economic relationships with the neighbouring employment centres. However, with rapid suburbanization of communities, these relationships become more complex and may change.

This study examines the affiliation of a suburban area (Burlington, Ontario), with the neighbouring urban centres of Hamilton and Toronto. Newspaper circulation is used as one of several indicators of affiliation. Researchers such as Park (1929) and Preston (1979) have used newspaper circulation in determining centrality and linkages within central place systems. Linkages or affiliations are seen by geographers as indicators of relationships between the suburb and the urban centre. Affiliation to the urban centre, in the context of this research, will be defined as the interaction a suburban population has with the urban centre: in other words, how often a suburban resident is involved (or not involved) in central city activity. This involvement can be measured in terms of goods purchased, services used, and travel between the suburb and the urban centre. Newspaper circulation can be included in this measurement along with

these other indicators in order to create indices of affiliation.

The research has been motivated by the general hypothesis that choice of newspapers by a suburban population reflects the affiliation that population has with one urban place over another. Three specific research questions have been derived from this general hypothesis. They are: 1) What is the affiliation of Burlington to the urban centres of Hamilton and Toronto? 2) Within Burlington, do intra-city differences of affiliation exist? 3) Are measures of newspaper circulation and other indicators reliable measures of affiliation?

1.2. The Research Area

The study for this research is the City of Burlington. Burlington was chosen as the study area for three reasons: 1) it is a suburban centre located between two urban centres (Toronto and Hamilton); 2) recent studies indicate there is a changing work orientation to urban centres by Burlington residents; and 3) annual newspaper circulation figures in Burlington for Hamilton and Toronto based newspapers is changing in terms of circulation penetration. These three factors would suggest that Burlington is dominated by the two urban centres in terms of employment opportunities and that newspaper circulation measures this degree of dominance. Is there a spacial variation in affiliation within Burlington? Is the changing orientation of the work place by Burlington residents

reflected in the changing pattern of annual newspaper circulation? These are just two of the questions to be answered in this study.

1.3 Circulation as an Indicator of Affiliation

Particual emphasis in this research is placed on newspaper circulation as an indicator of affiliation. Newspaper circulation tends to decrease as the distance from the urban centre (where the newspaper is published) increases. Newspapers serve as a dual indicator in measuring interaction and affiliation to an urban centre: 1) there is a distance decay effect associated with circulation; and 2) newspapers reflect the news of the central city. We would expect that those areas surrounding the central city receive delivery of the newspaper, and the amount of circulation for a given surrounding area reflects the degree of affiliation that place has with the central city. This is the underlying hypothesis that is to be tested. However, newspaper circulation may not reflect this link due to the changing communication networks that exist in today's urban centres.

CHAPTER 2: LITERATURE REVIEW

2.1 Suburbanization

The term "suburb", like "city", is difficult to define geographically as there is a problem in determining where it begins and ends. Johnson (1974) states that we should look at the "urban fringe" in order to geographically define what "suburban" is. Two general characteristics are found at the urban fringe that help to define the suburb. First, there is a distinct land-use mix. The suburb is predominantly residential and does not have a built-up commercial core (like the central city). Secondly, there are social characteristics of the population that associate with both rural and urban populations.¹ The suburban population interacts on a regular basis with both urban and rural populations. Suburbanites live a dual lifestyle by involving themselves on a daily basis with central city activity (e.g. employment, shopping and entertainment) while exercising a rural way of life during leisure hours (e.g.gardening, outdoor recreation and community meetings).

Chinitz (1964) states that journey to work is the prime factor in determining residential location. In addition, he states that interaction with shopping centres, recreational facilities and cultural activities also plays a significant part in the decision to locate.² Chinitz explains that once

Johnson, J.H. 1974. <u>Suburban Growth</u>. p.18.
 Chinitz, B. 1964. <u>City and Suburb</u>. pp.33-34.

a city becomes a regional centre, political conflict takes place between the suburbs and the central city. Urban policy for suburban areas tends to be quite different than for the central cities. This concept relates quite closely to political policy in Burlington. During the formation of the Hamilton-Wentworth region, Burlington politicians and residents decided not to become politically bound to that region. It is essential to take into account the regional conflict on urban affiliation by a suburban community.

James (1974) demonstrates that through the use of planning models we try to explain the reason for suburbcentral city affiliation. He states that factors such as improvements in the transportation network and lowering housing costs in the outer areas help to move people to the suburbs for better opportunity costs and cleaner environmental living, while maintaining the employment use of the central city. James shows the link between travelling time to work and land values for residence in determining the residential location. This theory, in part, helps to explain the trends of migration from urban centres such as Toronto and Hamilton to suburban communities such as Burlington.

Clark (1968) turns attention to the social aspect of why people move to the suburbs:

"For the population moving to the suburbs only one quality gave distinctiveness: the need for the kind of housing the suburbs provided. What general characteristics the suburban population possessed were related,

directly or indirectly, to the fact that it was the search for a house which determined the move to the suburbs." 3

In addition, Clark shows how socio-economic status has a significant effect on new residents' adjustment to a suburban setting. Suburban communities, like Burlington, consider themselves as independent cities, but with different functions from the central cities like Toronto or Hamilton. However, with the expansion of transportation facilities between the central city and suburb, the functions of the suburb and central city become increasingly similar.

Richardson(1972) shows that in the case of Metropolitan Toronto, "the Metropolitan population increased by 38 percent (while) the city itself declined by more than 3 percent" over a ten year period from 1953.⁴ This statement suggests that there was an increasing suburban trend during the 1960s. The city is used for daily economic and social activities; not as a place for residential location. It can be concluded, therefore, that the suburbanization trend has dominated changes in the structure of urban areas. By using measures of interaction we can better understand this relationship.

2.2 The Burlington Case

During the summer of 1977, the Halton Region Planning and Development Department conducted a survey that involved

- 3. Clark, S.D. 1968. The Suburban Society. p.83
- 4. Richardson, B. 1972. <u>The Future of Canadian Cities</u>. p.112.

Halton residents' response to transportation facilities in the region. Five thousand of the ten thousand, six-hundred questionnaires were sent to residents in Burlington, and about 23% were returned completed to the department.⁵ The questionnaire included demographic characteristics, as well as lifestyle, means of transport to work and shopping, and place of employment. In the case of place of employment "the proportion of internal work trips (within Halton) had dropped from 59% in 1971 to 40% in 1977; while work trips to Peel and Metropolitan Toronto had doubled their shares."⁶ It should be noted, however, that these results were for the region as a whole and not solely Burlington. Work trips to Hamilton-Wentworth had decreased:

> "The distributions of work place for individual municipalities are vastly different from one another because of their different geographic locations and historical economic relationships with the neighbouring employment centres. Burlington has a high percentage of work trips to Hamilton-Wentworth and it remains high in 1977; but the shift of internal work trips to eastern regions is still fairly obvious."⁷

According to the report, these trends are all indications of either "the rapid suburbanization of the communities of the region (i.e. Burlington and Oakville) by workers in the

- Halton Region, Planning and Development Department. 1978. "A Profile of Halton Residents: Results of a Transportation Questionnaire Survey in 1977". p.19.
- 6. Ibid. p.44.
- 7. Ibid. p.46.

neighbouring regions (i.e. Hamilton-Wentworth, Peel and Metropolitan Toronto) or the strong attraction of employees from Halton to these regions, or probably both."⁸ The report shows there is a significant trend of increasing local employment as one lives longer in the region, which is compensated almost exactly by the declining reliance on jobs in Toronto.⁹

It is interesting to note the work orientation differences between residents of Burlington and Oakville in the Halton Report. Sixty-six percent of Oakville residents work in Metropolitan Toronto in contrast to the majority of Burlington residents who work in the Hamilton-Wentworth region.¹⁰ However, proposals for expansion of the GO system into Burlington could encourage Toronto based workers to live in Burlington.

The Steele Commission (1969) and the Stewart Commission (1978) both studied the design of regional government in Southern Ontario. As stated earlier, the formation of the Hamilton-Wentworth region was one example of community conflict to political change. The Ontario government was to first decide on whether or not regional government would be a one-tier or two-tier structure, as well as deciding on where the regional boundaries would be. The point in question was whether or not economic units should be the same as political units, which to some degree is a question of affiliation between areas.

Burghardt (1982) suggests that factors such as place of work, shopping trends, phone calls and newspaper circulation

8. Ibid. 9. Ibid, p.79. 10. Ibid, p.46.

could be used in defining a region. He shows there is a high percentage of interaction between Burlington and Hamilton, but that Burlington residents are concerned to retain a separate identity from Hamilton. Many politicians in the Wentworth communities felt that Burlington's entry into the region would reduce the voting power of the City of Hamilton; however, Burlington politicians and residents rejected this proposal, and decided to become a part of the Halton region.¹¹

The prime reason for its decision was based on the fact that the City of Burlington had invested large amounts of money in the Halton area and that it did not want to join Hamilton and "its problems". Even though there had always been a strong economic relationship between Hamilton and Burlington, Burlington residents felt they should not be associated with the City of Hamilton on a political and regional level.

2.3. Indications of Affiliation

Affiliation measures of the interactions between Burlington and the major urban centres provide an indication of the strength of the inter-urban relationship. Of particular interest in this study are: 1) the measures of higher order goods purchased; 2) the measures of events attended; 3) the measures of direct interaction (phone calls and trips); and 4) the measures of media use. A major interest in this study is the affiliation shown through the dominance of major urban

11. Burghardt, A.F. 1982. "The Formation of Regional Government".

newspapers.

Previous researchers have used newspaper circulation to measure the degree of influence of large cities over suburban areas. Park (1929) discusses how newspaper circulation could be used in measuring urbanization. He shows how "the circulations of the newspapers, when they are plotted on a map, serve to delimit, with exceptional accuracy, the limits of the local trade area, and to measure at the same time the extent and degree of dependence of the suburbs upon the metropolis, and of the metropolis upon the larger region which it dominates."¹² His research is concerned with aggregate levels of circulation (i.e. annual circulation figures of a particular newspaper). He does not, however, associate the characteristics of the suburban population with newspaper choice. This is the key difference in this research paper compared to that of Park.

Green (1955) studies the hinterland boundaries between two urban centres. He comments on Park's work, questioning the use of newspaper circulation as a single measurement in determining the extent of the metropolitan region. However, in his work he uses newspaper circulation as one criterion with many others to determine the hinterland boundary between New York City and Boston.¹³ Green also uses aggregate values of circulation to determine the validity of this indicator, and

> Theodorson, G.A. 1961. <u>Studies in Human Ecology</u>. p. 549.
> Ibid, p.564.

finds that it closely relates to other forms of urban association indicators.

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Preston (1979) shows that the theory of Christaller's concept of centrality can be seen in southern Ontario by the use of newspaper circulation data for various centres in the province. His analysis consists of studying the distribution of newspapers (on the aggregate level) from one centre to other centres. The greater the distribution to other centres, the higher that centre is on the hierarchical scale. He states that "newspaper circulation data (is a way) of determining centrality and linkages within central place systems."¹⁴ His case study offers evidence that "daily newspaper circulations can be employed in research on developing urban systems, in a classical central place framework, to provide one interpretation of the evolving territorial and hierarchical organization of central place systems."¹⁵

A study commissioned by <u>The Spectator</u> (1982) analyses the Burlington media market. The study group consisted of 50% subscribers and 50% non-subscribers of <u>The Spectator</u>. There were two main objectives. The first was to study the readership of those who take <u>The Spectator</u> and its competitors; and the second was to look at the population characteristics of Burlington residents by studying the work place, entertainment, and

> 14. Preston, R.E. 1979. "The Recent Evolution of Ontario Central Place Systems In The Light of Christaller's Concept of Centrality". <u>Canadian Geographer</u>. XXIII.3. 1979, p.201.

15. Ibid, p.218

shopping interactions.¹⁶ The results show that The Spectator readers are more interested in the local Burlington news as well as Hamilton news. Readers of the competing newspapers tend to be more interested in world news. Toronto news, the stock market, business, editorials, and fashion coverage.¹⁷ The researchers also found that non-Spectator readers feel that The Spectator does not meet "their news information needs due to different lifestyle interests."¹⁸ In summary, the researchers concluded that non-Spectator readers tend to be:

1. Relatively new residents (under 5 years).

- 2. Have originated or lived previously in Toronto.
- 3. Work in Toronto, Mississauga or Oakville.
- 4. Dine, shop, and entertain often in Toronto. 19

The non-Spectator readers are not interested in Hamilton news, but are interested in their local news. It is felt that the local Burlington Post (a weekly newspaper) covers the interest of local news for that group.²⁰

2.4 Extensions

The theory of suburban growth together with the actual population trend in Burlington and the circulation data directs this research to three main objectives: 1) to find what the orientation of Burlington is toward urban centres; 2) to examine any intra-city differences in affiliation; and 3) to discover whether newspaper circulation measures this orientation.

> 16. The Spectator. 1982. "Burlington Media Research-Final Report." p.1.

17. Ibid, p.8. 18. Ibid. 19. Ibid. 20. Ibid.

CHAPTER 3: THE RESEARCH AREA

3.1 The Urban Hierarchy

The City of Burlington is one of five major urban places located along the Queen Elizabeth Way (QEW) in the Toronto-Hamilton sector. This area of southern Ontario has a highly developed transport network. The GO bus system, major highways, and the GO train system connect (or will be connecting) these centres. In terms of economic relationships, Burlington has traditionally been associated with the City of Hamilton, and Oakville and Mississauga have been associated with Metropolitan Toronto. Therefore, Hamilton and Toronto are the "economic weighted poles" within this urban network. (See Figure 3.1).



FIGURE 3.1 TORONTO HAMILTON URBAN NETWORK

With increasing housing costs in Toronto, many workers have located their residences in suburban places (e.g. Burlington, Oakville and Mississauga). The same can be said of Hamilton based workers, but to a lesser extent. The commuting field of Toronto is much greater than that of Hamilton. Typically, commuting fields are proportional to population size and employment opportunities of the urban centre.

In recent years, residential migration from Toronto to Burlington has been increasing. Thus, the commuting field of Toronto and Hamilton overlap in the City of Burlington. This study examines whether this influx of Toronto based workers has weakened the traditional economic link between Burlington and Hamilton. Clearly, this partial reorientation of Burlington residents towards Toronto has important economic, social and political implications for the City of Hamilton. Hamilton must maintain its urban links in order to sustain its role as a regional centre. If it does not, it may lose its position in the urban hierarchy.

The question of affiliation can now be applied to the Burlington situation. What factors can we use in order to measure the degree of affiliation Burlington has with Toronto and Hamilton and, how reliable are these factors in measuring affiliation? The choice of factors will be presented in Chapter 4. The urban hierarchy of western Lake Ontario has been examined in terms of inter-city interaction, and the reason for choosing Burlington as the research area can now be properly URDAN DECOMPANIATION GENTRE

RECEIPTION FROM STEPLES

-

understood.

3.2 Burlington's Development

Burlington is an ideal example of how a suburb has developed into an urban place. Mr. Walter Mulkewich, alderman of Ward One in Burlington, states that "Burlington, as a city, is the product of the 1950s and '60s suburban development and the idea of spread out communities without a developed core and without a history."²¹

This idea sets the stage for studying a city in relation to larger cities that surround it. The growth of centres such as Hamilton and Toronto has unplanned effects on places such as Burlington. The change of affiliation is not necessarily an internal change but an external one. By this it is meant that the development of central urban places in turn spurs development in suburban areas. The degree of growth of one centre has a direct effect on the orientation of the suburban place. However, the distance between the urban centre and the suburban centre plays a counter role in this development. With the growth of transportation networks between the suburban place and the central city, the distance decay factor becomes less important due to the fact that distance is now measured in terms of travel time rather than actual distance. Burlington is somewhat dependent on these two urban centres, but the degree of affiliation to one centre over another is

^{21.} MacPhail, W. 1983. "Field Notes From Across The Bay...Burlington". <u>Hamilton Cue Magazine</u>. August, 1983. p.17

in question.

3.3 Delimitation of the Study Area

The City of Burlington consists of the area west of Burloak Drive, east of Highway 6 and south of Highway 7. This area is predominantly rural, but since we are concerned with suburban-central city interactions, the study will be confined to "urban Burlington". For the purposes of this study, "urban Burlington" will be defined as the area south of Highway 5, west of Burloak Drive, and south of Highway 403 in Aldershot, which has regular delivery of all major Toronto and Hamilton based newspapers.

It is important to divide Burlington into geographic sectors to analyse possible spatial variations in urban affiliation. Historical, economic and social factors were taken into consideration in the process of defining sectors. Seven sectors were devised, using major routes as boundaries. (See Figure 3.2).

Sector 1 is the community of Aldershot, which borders the Hamilton-Wentworth region to the west and extends to Brant Street (a major commercial route in the city) to the east. Sector 2 is the traditional commercial area of Burlington, and has the oldest housing stock in the entire city. This sector extends from Brant Street to Walkers Line (a major route that connects the QEW to the lakeshore) and is bound on the north by the QEW. Sector 3 is adjacent to Sector 2 and continues east to Burloak Drive while being bound on the north by the

QEW. This area has older housing stock (similar to Sector 2) and tends to have strong interactions with eastern centres, particularly with Oakville. Sector 4 is the Beach Strip. It has a low population; however, it was felt that it should be geographically represented. In the analysis, Sector 4 will be amalgamated with Sector 1 due to the fact that there is only one sample from this sector, and be acause the characteristics of these sectors are similar.



North of the QEW are three other sectors comprising the newer sections of Burlington. Most of the housing stock is less than twenty years old, and it is hypothesized that most of the newspaper choice differences would be found in these

sectors. Sector 5 is considered "New Burlington" since it was developed most recently. This area is bound by the QEW on the south, Brant Street on the east, Highway 5 on the north and King Road on the west. Sector 6 consists of the area north of Upper Middle Road, east of Brant Street, south of Highway 5 and west of Burloak Drive. The final area, Sector 7, was the first of these newer areas to be developed. It is bound by Brant Street on the west, Upper Middle Road on the north, the QEW on the south and Walkers Line on the east.

3.4 Sector Differences

The City of Burlington was created as a political amalgamation of formerly separate residential communities. Since its incorporation, many more residential communities have developed. This in turn has united the original communites. Burlington has developed its own industrial base along major transportation routes (e.g. the QEW), yet most of the economic activities are service industries catering to the local residential market. Since industrial development has entered Burlington at different stages, it is not surprising that residential areas also developed at different times. This process has divided Burlington into sub-areas with different urban affiliations. For example, the Aldershot community is traditionally affiliated with the City of Hamilton due to its location near that city. Over time, families maintained that economic and social link, and as a result, we find that there still exists a high percentage of Hamilton based workers in

that area. In contrast, "New Burlington" (Sector 5) has a high percentage of new immigrants and Toronto based workers. Their roots with the City of Hamilton do not go as far back as those in Aldershot, and one would expect their affiliation to reflect Toronto based activities.

It is important to analyse these intra-city differences in affiliation. If the newer areas grow quickly, they may, in the future, play a significant role in determining the political identity of Burlington. The older sectors tend to have older residents. The newer sectors tend to attract younger residents. There are not only age composition and affiliation differences, but economic and social differences between these sectors. The newer residents will probably, over time, move into the older areas and, as a result, may change the general affiliation of Burlington from Hamilton to Toronto.

The purpose of this research is to test these general observations by means of a social survey involving newspaper circulation as one of several indicators of affiliation. The sub-area differences in affiliation, described in this Chapter, are tested in the analysis.

CHAPTER 4: RESEARCH METHODCLOGY

4.1 The Hypotheses

This research paper is concerned with three major hypotheses. Two of these focus on suburb-central city affiliation at different geographical levels. The third hypothesis studies the role of newspapers as indicators of affiliation. More formally, the hypotheses are as follows:

- H₁: The City of Burlington is more closely affiliated with the Hamilton-Wentworth region than with the Metropolitan Toronto region.
- H₂: Affiliation with Hamilton-Wentworth and Metropolitan Toronto varies significantly between sectors within Burlington.
- H₃: Newspaper circulation is a significant correlate of urban affiliation.

The results of these hypotheses will be compared with the results found in <u>The Spectator</u> survey (1982) of the Burlington media market. Given these objectives, it was important to design a questionnaire that would cover variables pertaining directly to these hypotheses.

4.2 The Questionnaire

The questionnaire was designed to obtain data on population characteristics and newspaper subscription. Four major catagories of questions were included: 1) location; 2) socio-economic status; 3) respondents' interactions and images of Hamilton-Wentworth and Metropolitan Toronto; and 4) newspaper and other media uses.

Location factors such as address, length of residence,

and dwelling type were used to group respondents into residential categories. These variables are important for analysing sectoral trends in affiliation. Socio-economic variables such as place of origin, value of dwelling, occupation, family size, and marital status, serve as a check on the socio-demographic representativeness of the sample group. The urban interaction and image data, and media use variables were used to measure affiliation to both urban centres and to test the role of newspaper circulation in this measurement.

Interaction with urban centres were determined by three sets of variables: 1) frequency of travel to these centres; 2) purpose of travelling to these centres; and 3) the degree of association with each of these centres. Purpose of travel distinguishes work, shopping and recreational trips. The last two examples include purchases of higher order goods (i.e.jewellery, automobiles and furniture) as well as the number of events attended in the urban centre (i.e. movies, stage theatre, musical concerts and CFL football games). Association variables include visits to relatives who live in each centre and number of phone calls to these places on a weekly basis.

Newspaper choice questions included both home delivery service and store purchases of the major newspapers available in Burlington (i.e. <u>The Spectator</u>, <u>The Toronto Star</u>, <u>The Toronto</u> <u>Sun</u>, and <u>The Globe & Mail</u>). Other media uses (i.e. television and radio news) are recorded in order to study the relationship between print media and the electronic media in measuring

affiliation. The questionnaire also includes detailed inquiries of why certain newspapers are chosen and why others are not. (See Appendix A).

4.3 The Sample

In order to represent the Burlington population geographically, a proportional stratified random sample was chosen by sector. The target sample size was 300 households or 1% of the total population. The survey was conducted door to door in order to maximize the response rate and minimize expenses.

The first task was to calculate the population size for each of the seven sectors in the study area. Using the 1982 population figures (by polling sub-divisions) these populations could be obtained. (See Table 4.1). TABLE 4.1

	POPULATION AND	SAMPLE SIZE				
SECTOR	POPULATION* (1982)	POPULATION%	SAMPLE SIZE			
1	21,569	19.9%	60			
2	25,761	23.7%	71			
3	27,526	25.4%	76			
4	197	0.2%	1**			
5	5,682	5.2%	16			
6	11,096	10.2%	30			
7	16,512	15.2%	46			
TOTAL	108,343	100.0%	300			
*These figures are calculated from the 1982 Burlington population by polling sub-divisions.						

**The population size of this sector is normally too small to have one sample represented.

The samples were chosen randomly by postal code for the City of Burlington. Postal codes for industries and areas

outside the study area were eliminated from the distribution. For each postal code chosen, one survey was conducted except for postal codes with more than thirty dwelling units, when two surveys were usually conducted. Once a postal code was picked, it was eliminated from the next draw. Once a sector had reached its maximum sample size, any more postal codes selected for that sector were also eliminated. This process continued until all 300 samples were chosen and allocated to the proper sector.

The choice of dwelling within a postal code was randomly selected by the surveyor. Eight surveyors were used and the sampling was conducted at various times of the day and of the week in order to lessen the bias in the choice of sample. The survey period began in late July, 1983 and was completed by early November, 1983. With the exception of a few unanswered questions, the 300 samples were considered complete and valid for use as the input data for the analysis.

CHAPTER 5: THE ANALYSIS

5.1 Descriptive Statistics

Almost two-thirds of the sample have lived at their present location for more than five years. Of the remaining, 18% lived in Burlington previously but at another location; 3.7% originated from Metropolitan Toronto and 2.3% originated from Hamilton-Wentworth. This result suggests that of those who have migrated to Burlington in recent years, more have originated from Metropolitan Toronto than from the Hamilton-Wentworth region.

The sample consists mostly of married couples (91%), with a family size of two children or less (83%). One-quarter of the sample originated from other countries for both males and females. Over 33% of the sample own dwellings valued between \$75,000 and \$90,000. The results reflect the general characteristics normally associated with a suburban population.

There is a clear difference in occupations between the sexes in this sample. One-fifth of the males are labelled as skilled labourers, followed by junior executives (13%), professional and commercial sales (12%) and professionals (8%). A majority (59%) of the females are housewives. Of those who have non-domestic careers, 12% are labelled as professionals, followed by skilled clerical (9%) and retail sales (4%). Therefore, workplace of females is not a useful measure of urban affiliation, since most (79%) of the women work in Burlington.

In the case of workplace for males, there is an even distribution of workplaces in the Toronto-Hamilton urban network. Almost 30% of the males work in Hamilton-Wentworth, followed by Burlington (23%), Metropolitan Toronto (17%), Oakville (10%) and Mississauga (7%). From these results one finds that just as many males work in Hamilton-Wentworth as work in the eastern centres (Oakville, Mississauga and Metropolitan Toronto) combined.

Higher goods purchased in the various centres are measured using three products: 1) jewellery; 2) automobiles; and 3) furniture. These variables are designed to show the interaction with each centre for major retail purchases. It is not surprising that the majority of these goods are bought in Burlington. However, there is still a substantial amount of purchases made outside of Burlington. (See Table 5.1). TABLE 5.1

9

DISTRIBU	TION OF HIGHE	R GOODS PURCHASED	
CITY CENTRE	JEWELLERY	AUTOMOB ILES	FURNITURE
Burlington	62.0%	53.7%	65.0%
Hamilton-Went.	21.7%	25.3%	35.3%
Metro. Toronto	16.3%	7.0%	17.73
Cakville	10.7%	10.0%	13.7%
Mississauga	4.0%	1.3%	6.3%
NOT PURCHASED*	24.0%	14.3%	11.7%
*Have not purchase centres.	ed goods at al	ll or were purchased	in other

The variables for Hamilton-Wentworth and Metropolitan Toronto are used later in the analysis for the affiliation index.

Three variables are used as measures of interaction for entertainment: 1) movies; 2) stage theatre; and 3) musical

concerts. The last two only apply to Hamilton-Wentworth and Metropolitan Toronto, since they are the only centres in the area that have major facilities for these events. (See Table 5.2).

TABLE 5.2

DISTRIBUTION OF EVENTS ATTENDED

CITY CENTRE	MOVIES	STAGE THEATRE	MUSICAL CONCERTS
Burlington	84.3%	-	-
Oakville	15.7%	-	-
Mississauga	3.0%	-	-
Hamilton-Went.	36.7%	47.3%	42.3%
Metro.Toronto	15.7%	35.7%	33.7%

Attendance of sporting events, specifically CFL football games, was also included as an indicator of affiliation. Three variables were used: 1) attendance; 2) team of support; and 3) stadium of regular attendance. (See Table 5.3). TABLE 5.3

DISTRIBUTION OF CFL FOOTBALL VARIABLES

CITY CENTRE	THOSE WHO HAVE ATTENDED	TEAM OF SUPPORT	STADIUM OF REGULAR ATTENDANCE
Hamilton-Went. (Ti-Cats)	42.0%	24.3%	29.0%
Metro.Toronto (Argos)	23.0%	14.0%	13.3%

Five additional measurements of interaction and affiliation are: 1) origin of males; 2) origin of females; 3) relatives; 4) number of trips; and 5) number of phone calls. These variables measure both past and present affiliation to the urban centres and will be used with workplace for males as

<u>Note</u>: The variables for Hamilton-Wentworth and Metropolitan Toronto are used later in the analysis for the affiliation index. interaction variables in the affiliation index. (See Table 5.4). TABLE 5.4

1	DISTRIBUTION	OF INTERACT	ION & RELATION	VARIABLES	
CITY CENTRE	ORIGIN OF	ORIGIN OF FEMALES	<u>RELATIVES</u>	NO. OF PHONE CALLS*	NO.OF TRIPS**
Hamilton-Went.	13.3%	17.3%	35.7%	1. 21.3% 2. 22.0% 3. 19.3% 4. 11.3% 5. 6.3%	1. 28.3% 2. 25.7% 3. 17.0% 4. 28.3%
Metro. Toronto	11.7%	11.7%	40.0%	1. 24.7% 2. 22.3% 3. 9.3% 4. 4.3% 5. 1.7%	1. 41.0% 2. 31.3% 3. 10.0% 4. 17.0%
*1 - less that 4 - call eve the City of	n l call per ryday; 5 - c Hamilton and	week; 2 - 1 all more that Metropolita	. or 2 per weel in once per day in Toronto.	k; 3 - 3 or 4 pe 7. Phone calls	r week; refer to

**1 - not very often; 2 - twice a month; 3 - once a week; 4 - everyday.

In terms of residential preference and urban images, almost one-quarter of the sample prefers to live in Burlington because of their job location. Other major reasons for living in Burlington are that Burlington is "a nice neighbourhood" (18%) and that it is "close to many activities" (10%). A commanding majority (70%) of Burlington residents feels that Metropolitan Toronto is "too congested". In comparison, almost the same proportion feels that the Hamilton-Wentworth environment is "too dirty". These are the two major image differences between these centres from the perspective of Burlington residents.

The other major section of the questionnaire deals with newspaper circulation and other media uses. Eighty-six percent of the sample has home delivery of a newspaper, and 44% buys a newspaper regularly at a store or vending box. A high proportion of the sample subscribes to or purchases a newspaper regularly. This increases the potential value of newspaper choice

as an indicator of urban affiliation. (See Table 5.5.). TABLE 5.5.

DISTRIBUTION OF NEWSPAPER CHOICE

NEWSPAPER	HOME I DAILY	DELIVERY WEEKEND	STORE BOUGHT	TOTALS
The Spectator	68.0%	1.3%	8.7%	78.0%
The Globe & Mail	12.3%	1.7%	15.3%	29.3%
The Toronto Star	5.7%	5.0%	13.3%	24.08)
The Toronto Sun	1.0%	7.7%	14.0%	22.7%)76.0%*

*Combination percentage of major Toronto based newspapers. This combination is used as the variable for Toronto newspapers.

Treating each newspaper separately, <u>The Spectator</u> has the dominant circulation. However, by combining the Toronto based newspapers, one finds that there is almost an even split between Hamilton's newspaper (<u>The Spectator</u>) and the three major Toronto based newspapers. Two measures of newspaper circulation are used in the indices: subscription to <u>The Spectator</u> and subscription to any of the three Toronto based newspapers.

The results for the electronic media (television news and radio news) are quite surprising. In the case of television news, it is found that 37.7% of the sample watches Hamilton's CHCH station, followed by Toronto's CFTO (20.7%), CBLT (15%), and CITY (7%) for local news information. The combination of the three Toronto news stations (42.7%) and CHCH are included as two additional measures of affiliation in the indices. Combinations of Hamilton radio news stations (of which 26.4% listen to) and Toronto radio news stations (of which 29.9% listen to) are also included in the indices of affiliation.

The descriptive statistics show that there is a greater

degree of interaction with Hamilton-Wentworth than with Metropolitan Toronto by Burlington residents. It is now important to analyse the relationship between these variables in order to study the affiliation of Burlington to Hamilton-Wentworth and Metropolitan Toronto.

5.2 Affiliation Indices and Results

Two indices of urban affiliation were calculated. One measures the degree of affiliation with Hamilton-Wentworth (AFFWHAM) and the other with Metropolitan Toronto (AFFWTOR). Each index uses the same set of variables. (See Table 5.6.) TABLE 5.6

VARIABLES IN AFFILIATION INDICES

	HAMILTON-WENTWORTH INDEX	METROPOLITAN TORONTO INDEX			
<u>#</u>	VARIABLE	CODE	<u>#</u>	VARIABLE	CODE
1.	Jewellery purchased	JEWHAM	1.	Jewellery purchased	JEWTOR
2.	Automobiles purchased	CARHAM	2.	Automobiles purchased	CARTOR
3.	Furniture purchased	FURHAM	3.	Furniture purchased	FURTOR
4.	Movies attended	MOVHAM	4.	Movies attended	MOVTOR
5.	Stage Theatre attended	THEHAM	5.	Stage Theatre attended	THETOR
6.	Musical Concerts	MUSHAM	6.	Musical Concerts	MUSTOR
7.	Origin of males	OR I GMHA	7.	Origin of males	ORIGMTO
8.	Origin of females	ORIGFHA	8.	Origin of females	ORIGFTC
9.	CFL games attended	CFLHAM	9.	CFL games attended	CFLTOR
10.	Support Ti-Cats	TEAMHAM	10.	Support Argos	TEAMTOR
11.	Attend Ivor-Wynn Stadium	STADHAM	11.	Attend Exhibition Stadium	STADTOR
12.	Relatives in Hamilton	RELHAM	12.	Relatives in Toronto	RELTOR
13.	Number of trips	VISHAM	13.	Number of trips	VISTOR
14.	Number of phone calls	CALLHAM	14.	Number of phone calls	CALLTCR
15.	Workplace of males	W PMHAM	15.	Workplace of males	WPMTOR
16.	The Spectator	PAPHAM	16.	Toronto newspapers	PAPTOR
17.	CHCH news (Hamilton)	CHCH	17.	CBLT, CFTO, CITY news	TVTOR
18.	Radio news (Hamilton)	RADHAM	18.	Radio news (Toronto)	RADTOR

Each household is measured by the degree of affiliation it has with each urban centre; the greater the value, the greater the affiliation one has to a particular urban centre.

Nunnally (1978) shows that reliability tests can be conducted in order to measure the strength of correlation between variables in an index. Each variable in the index is seen in terms of its contribution to measuring affiliation. Tables 5.7 and 5.8 show the reliability values for each index of affiliation, and it is from this set of results that we can measure the dependability of each index as an indicator of urban affiliation.

The relative strength of each indicator is measured by the correlations. These values show the relationship between scores of each indicator and scores on the overall scale (excluding that indicator). Given the sample size of 300, a correlation ≥ 0.10 is significant. The last column in these tables refers to the alpha value if the item is deleted from the index. According to Nunnally, the "coefficient alpha provides a good estimate of reliability in most situations, since the major source of measurement error is because of the sampling of content."²² An alpha value of .7 or greater is considered significant for the index to be reliable in measuring affiliation. (See reliability coefficients in Tables 5.7 and 5.8).

TABLE 5.7		RELIABILITY A	ANAI	YSIS	FOR AF	FIL	IATION	WITH HA	MILTON		
	RELIABILITY	COEFFICIENTS	18	ITEMS	ALPHA	=	.75288	STAND.	ALPHA	Ξ	.77824

	VARIABLES RANKED IN ORDER OF SIGNIFICANCE			
1. CALLHAM .56611	7. STADHAM .39254	13.	MOVHAM	.31065
2. VISHAM .52645	8. ORIGMHA .38024	14.	THEHAM	.29356
3. TEAMHAM .47209	9. JEWHAM .37289	15.	FURHAM	.24385
4. CFLHAM .45470	10. ORIGFHA .34520	16.	PAPHAM	.21205
5. RELHAM .45391	11. MUSHAM .32756	17.	СНСН	.16615
6. WPMHAM .43840	12. CARHAM .31504	*18.	RADHAM	.08265
*Insignificant var	iable.			

The results of Tables 5.7 and 5.8 indicate (by the overall alpha values) the variables used in each index do 22. Nunnally, J.C. 1978. Psychometric Theory. p.230.

significantly measure the degree of affiliation Burlington residents have with Hamilton-Wentworth (Table 5.7) and Metropolitan Toronto (Table 5.8). The value of .77824 for Hamilton-Wentworth in comparison to the value of .75897 for Metropolitan Toronto shows that the Hamilton index is slightly stronger. TABLE 5.8

RELIABILITY ANALYSIS FOR AFFILIATION WITH TORONTO

RELIABILITY COEFFICIENTS 18 ITEMS ALPHA = .73861 STAND. ALPHA = .75897

	VARIABLES RANKED IN ORDER OF SIGNIFICANCE			
1. CALLTOR .57357 2. VISTOR .52093 3. STADTOR .43022 4. CFLTOR .40685 5. WPMTOR .38468 6. MOVTOR .37529 *Insignificant vari	7. TEAMTOR .34268 8. ORIGMTO .33864 9. THETOR .33092 10. RELTOR .32965 11. PAPTOR .32891 12. MUSTOR .31106 able.	13. 14. 15. 16. 17. *18.	OR I GFTO CARTOR TVTOR JEWTOR FURTOR RADTOR	.30232 .27584 .27413 .25948 .24185 .02261

A T-test (Paired samples) was used to test for differences in affiliation to the two centres. The purpose of this test is to determine whether, for all residents combined, the mean on one index is larger than the mean on the other index. The result of this test will determine whether or not to reject the first hypothesis stated in Chapter 4. The results of this test are in Table 5.9.

TABLE 5.9

-TEST	RESULTS	FOR	AFFILIAT	ION OF	BURLINGTON
	T	-TEST	ANALYSI	<u>(S</u>	

VARIABLE	NC.OF CASES	MEAN	STANDARD DEVIATION	STANDARD <u>ERROR</u>	(DI <u>MEAN</u>	F F E R E STANDARD DEVIATION	N C E) STANDARD <u>ERROR</u>	2-TAIL CORR. PRCB.	T 2-TAIL VALUE DF* FROB.
AFFWHAM AFFWTOR	300	9.8200 6.9567	4.881 4.223	. 282 . 244	2.8633	7.002	. 404	179 .002	7.08 299 .000
*Degrees of freedom RESULT: .000 < .					05, .01,	.001 sign	ificance :	Levels. Rejec accer	t H ₀ and t H ₁

The T-value is positive and highly significant (p < .001).

Therefore, Burlington residents are significantly more affiliated with Hamilton-Wentworth than with Metropolitan Toronto, and we can accept the first hypothesis.

This finding follows the results described in Section 5.1. There are many more interactions and linkages with Hamilton-Wentworth than Metropolitan Toronto for almost every variable. It is important, however, to examine affiliation by sector in order to study intra-city differences, which may not be reflected in the overall affiliation test.

Burlington is divided into seven geographical sectors in order to test for intra-city differences. The purpose and procedure is the same as before, to test the difference in means of the two affiliation indices. Table 5.10 shows the results, and one must conclude from the 2-tailed probality values that there are indeed differences in affiliation.

Sectors 1, 2, 3, and 4 are labelled as the older areas of Burlington. These areas hold the majority of the Burlington population. The results show that these sectors are significantly affiliated with Hamilton-Wentworth (p<.05).

Sectors 5, 6, and 7 are labelled the newer areas of Burlington. For Sectors 5 and 6 there are no significant differences in affiliation. There are two plausible explanations for these results. Newer residents of Burlington tend to have strong interactions with both urban centres but have not established a day-to-day link with Hamilton-Wentworth. Another possibility can be that since these populations are considerably

smaller than those of the older sectors (which is proportional to the samples drawn from these sectors), they cannot be statistically more affiliated to one urban centre over another. Sector 7 is the only new area that is significantly more affiliated with Hamilton-Wentworth than Metropolitan Toronto. TABLE 5.10

SECTOR	<u>VARIABLE</u> AFFWHAM AFFWTOR	NO.OF CASES 61	<u>MEAN</u> 10.72 5.36	STANDARD DEVIATION 5.02 3.98	STANDARD <u>ERROR</u> .643 .509	(D) <u>MEAN</u> 5.36	IFFERE STANDARD <u>DEVIATION</u> 7.03	N C E) STANDARD <u>ERROR</u> .900	2-TAIL <u>CORR.</u> <u>PROB.</u> 207 .109	T <u>VALUE</u> DF 5.966(2-TAIL <u>5* PROB.</u> 0.000
2	AFFWHAM AFFWTOR	71	9.73 7.41	5.24 4.64	.622 .550	2.32	8.28	.982	402 .001	2.37 70	0.021
3	AFFWHAM AFFWTOR	76	9.32 7.82	4.60 3.61	.527 .414	1.50	5.73	. 557	.041 .728	2.28 75	5.025
5	AFFWHAM AFFWTOR	16	10.69 8.63	4.69	1.172 1.200	2.06	6.09	1.523	.175 .516	1.35 15	5.196
6	AFFWHAM AFFWTOR	30	8.90 7.17	4.72	.861 .828	1.73	6.31	1.152	.070 .713	1.51 29	9.143
7	AFFWHAM AFFWTOR	46	9.89 6.24	4.76 3.84	.701 .567	3.65	6.86	1.011	262 .078	3.61 45	5.001

T-TEST RESULTS FOR AFFILIATION OF BURLINGTON BY SECTOR T-TEST ANALYSIS

*Degrees of Freedom RESULTS: Sector 1 & 4 .000 < .05, .01, .001 significance levels. Sector 2 .021 < .05, but>.01, .001 significance levels. Sector 3 .025 < .05, but>.01, .001 significance levels. Sector 5 .196 > .05, .01, .001 significance levels. Sector 6 .143 > .05 .01, .001 significance levels. Sector 7 .001 < .05 .01, but = .001 significance levels.

This section of the analysis demonstrates the use of the variables stated earlier for measuring affiliation. The conclusion that those who are new in the area have a greater affiliation to Metropolitan Toronto than Hamilton-Wentworth cited in The Spectator report (1982) is not necessarily true.

In contrast to <u>The Spectator</u> report, this research shows that newer residents in Burlington have similar levels of affiliation with both urban centres. It is now important to look more closely at these affiliation indices in order to understand the relative contributions of the different indicators in measuring overall affiliation.

5.3 Correlation of Indicators

Tables 5.7 and 5.8 both have a list of variables ranked in order of significance; and it is these lists that will be referred to in studying the contribution of each variable to the indices. In both the Hamilton and Toronto indices, the variable CALL (number of phone calls) is the strongest indicator of affiliation with values of .56611 (for Hamilton) and .57357 (for Toronto). A major reason for these high scores is that those who telephone these centres tend to have some association with them. For example, those who interact with these centres on the basis of work, shopping, relatives, and entertainment would need to use the telephone on a regular basis because of these interactions. A plausible explanation for the lower value associated for Hamilton could be that this variable is only for the City of Hamilton (local calling); whereas Toronto is for Metropolitan Toronto (long distance calling). Number of trips (VIS) has the second highest value in both indices with values of .52645 (for Hamilton) and .52093 (for Toronto). Again, interaction variables tend to be the most reliable indicators.

The CFL variables are surprisingly much stronger indicators than initially anticipated. These variables are unique to Hamilton and Toronto, since they are the only cities in the area with professional establishments, and hence, most people would attend these events in the same place where they conduct most of their other interactions.

Workplace for males (WPM) is the last strong indicator with values of .43840 (for Hamilton) and .38468 (for Toronto). This result supports geographic theory as measuring interaction and affiliation.

The middle group of indicators are the higher order goods, events attended, and origins. The order of significance is quite different between each index, however, each of these variables in both indices have values that range from .45391 (for relatives (REL) in Hamilton) to .24185 (for jewellery (JEW) bought in Toronto). On the whole, the higher order goods are spread out through the ranks in both indices. This could be because most Burlington residents buy these goods in Burlington and therefore the contribution of each of these goods to the index is mixed. Event variables (besides CFL variables) were lower for the Hamilton index than for the Toronto index. This result shows the importance of Toronto as an entertainment centre for the area. For example, those who attend movies in Metropolitan Toronto have a strong affiliation to that centre, since many major picture shows are available in much closer centres (e.g. Burlington, Oakville and

Hamilton). Origin of males (ORIGM) is stronger in both indices in comparison with origin of females (ORIGF). A reason for this could be that males (who as a group interact at farther distances than females) maintain their daily interactions (e.g. work) in the places where they are originally from (e.g. Toronto and Hamilton).

The "media use" variables are the weakest set of variables in measuring affiliation. Newspaper circulation (in both indices) is the strongest indicator in this catagory with values of .21205 (for Hamilton) and .32891 (for Toronto). The higher value for Toronto newspapers leads to speculation about using this variable as an indicator, since most of the respondents take The Spectator; however, further explanation of this result is dealt with in the next section. Television news is also a significant indicator and is given a greater value in the Toronto index. A key reason for this could be that this variable is a combination of three Toronto stations versus the one Hamilton station. Radio news was the only indicator (in both indices) that was not significant in measuring affiliation with low values of .08265 (for Hamilton) and .02261 (for Toronto). Since it was the only insignificant variable in the indices; it was the one which lowered the overall alpha value from .75682 to .75288 (for Hamilton) and from .74670 to .73861 (for Toronto).

One conclusion that can be made from these comparisons is that the electronic media should not be used as indication

of urban affiliation. A reason for this is that not all households listen to or watch the same stations for news on a reular basis, and not all stations represent their local market. For example, CHCH television (based in Hamilton) has correspondents all over southern Ontario including Metropolitan Toronto and devotes a fair share of its air time to Toronto news as well as Hamilton news.

5.4. The Reliability of Newspaper Circulation

Newspaper circulation is shown as a significant indicator of affiliation to the urban centres, but not as strong an indicator as some of the other variables. There is a logical reason for this outcome. In many cases there are respondents who take more than one newspaper (e.g. one from Hamilton and one from Toronto) which lowers the contribution of this variable in measuring affiliation. Fortunately, enough of the respondents do take only one newspaper and as a result newspaper circulation is significant in measuring affiliation.

<u>The Spectator</u> (in comparison to the three Toronto newspapers) is the only major newspaper that includes a section on Burlington news as well as supplying advertising for Burlington businesses. Those who take <u>The Spectator</u> have a strong tie with Hamilton-Wentworth and with the City of Burlington. They are concerned with the events that take place in their local community, and <u>The Spectator</u> supplies this information. Those who have strong Toronto ties may still take <u>The Spectator</u>, since it is the only newspaper that gives daily accounts of the

news and shopping information in the Burlington area.

The results in the reliability tests lead to one important conclusion about newspaper circulation in this study Newspaper choice of Toronto based newspapers gives a area. stronger indication (.32891) of affiliation to Metropolitan Toronto than does The Spectator (.21205) as an indicator of affiliation to Hamilton-Wentworth by the Burlington residents. For example, one can say that a household subscribing to a Toronto based newspaper is quite strongly affiliated with Metropolitan Toronto. However, a household which subscribes to The Spectator is not as strongly affiliated with Hamilton-Wentworth. Those who are affiliated with Metropolitan Toronto would probably take a Toronto based newspaper and The Specta-Therefore, for Toronto affiliated households, The Spector. tator would cover the local news market and the Toronto based newspapers would cover their interests in Metropolitan Toronto.

*See Appendix B for Item Total Statistics of the Variables.

CHAPTER 6: EVALUATION AND CONCLUSIONS

6.1 Summary

This research has shown descriptively and statistically the importance of measuring suburban-central city affiliation. The first hypothesis, that the City of Burlington is more closely affiliated with the Hamilton-Wentworth region than the Metropolitan Toronto region, was confirmed. This would indicate that the traditional interaction between these two places still exists. The second hypothesis, that there are intra-city differences in affiliation, is also confirmed. This result leads to a further conclusion that intra-city differences reflect the differences in characteristics in the population. The older sectors of Burlington maintained their affiliation with Hamilton-Wentworth; while the newer sectors were equally affiliated with both of the two urban centres. The third hypothesis, that newspaper circulation is a significant indicator in measuring affiliation, was also accepted.

This research has shown how reliable certain variables are in measuring suburban-central city affiliation. Traditional spacial interaction variables (i.e. number of trips and workplace) were compared with other indicators, and the results show that they are the strongest indicators of urban affiliation. However, it would be incorrect to state that these variables are the only indicators of regional affiliation and that they should be the only ones used. The traditional variables must be supplemented by other indicators (e.g. newspaper cir-

culation) which reveal the diversity of suburban cities in terms of their various links with central cities.

6.2 Further Research

1

The overall affiliation of Burlington with Hamilton-Wentworth can be further researched by studying the co-operation of planning decisions between the two regions. The changing orientation of Burlington residents towards eastern centres has implications in many areas. Demand for transportation routes would be one obvious concern. Further analysis of the trends indicated in <u>The Spectator</u> report (1982) and in this study might reveal important inter-city characteristics such as the increasing rate of migration from Toronto to Burlington in recent years.

The use of newspaper circulation in geographical studies could also be evaluated. For example, the effects of urban re-orientation on communications media (e.g. advertising placements) and social activities, which are all of economic importance. Future studies might examine the importance of newspapers as an urban product, since an increasing majority of the population is depending on the electronic media for their information needs.

Thus, this research provides direction for further studies toward the importance of the "affiliation factor" in urban geography and the importance of certain variables in measuring this affiliation. By expanding on these subjects we can better understand the continuing growth of the urban network.

APPENDIX A

.



GEOGRAPHY 4C6 - RESEARCH PAPER - McMASTER UNIVERSITY

BY: IAN GRAHAM HONOURS GEOGRAPHY 4 8002718

<u>KEY</u>

- Lower category choice a) A) - Upper category choice [] - Space to indicate choice [278]- Written response answer Q3 - Question (i.e. Question 3) - More than one answer is possible -4-- Page number (i.e. Page 4) - Continued (i.e. continue to Page 3) •••3 - Look for star, note to this response **END**- End of questionnaire

QUESTION	1:	What type of	of dwelling do you present	ly	live	in?	?	
		a b c) HOUSE \ APARTMENT) CONDOMINIUM) OTHER]1]2]3]4	Go Go Go	to to to to	Q2 Q2 Q2 Q2
		If d), ind:	icate:					
QUESTION	2:	How long ha	ave you lived at this loca	tic	n?			
		a b c) LESS THAN 1 YEAR) BETWEEN 1 & 5 YEARS) MORE THAN 5 YEARS	[[]5]6]7	Go Go Go	to to to	Q3 Q3 Q4
QUESTION	3:	Where did g	you live before?					
		a	BURLINGTON, but at anothe:	r[]8	Go	to	Q4
		b c d) METRO TORONTO) HAMILTON-WENTWORTH) OTHER]9]10]11	Go Go Go	to to to	Q4 Q4 Q4
		If d), ind	Lcate:	<u>.</u>				<u> </u>
QUESTION	4:	Approximate you live in	ely how old is the house (and the ho	apa	irtmen	nt,	cor	ndominium)
		a b c d e) LESS THAN 1 YEAR OLD) BETWEEN 1 & 5 YEARS OLD) BETWEEN 5 & 10 YEARS OLD) MORE THAN 10 YEARS OLD) DO NOT KNOW]12]13]14]15]16	Go Go Go Go	to to to to	Q5 Q5 Q5 Q5 Q5 Q5
QUESTION	5:	Do you <u>own</u>	or rent the home in which	уc	ou nov	v li	Lveî	?
		a) b) OWN RENT	[[]17]18	Go Go	to to	ୟ6 ୟ7
QUESTION	6:	What is the today's man	e approximate value of your rket?	r h	ouse	(cc	ondo	ominium) in
		a b c d f	LESS THAN \$75,000 \$75,000 - \$90,000 \$90,000 - \$130,000 \$130,000 - \$150,000 OVER \$150,000 DO NOT WISH TO SAY]19]20]21]22]23]24	Go Go Go Go Go	てつっていたい	Q8 Q8 Q8 Q8 Q8 Q8 Q8
QUESTION	7:	How much re	ent do you pay monthly?					
		a) b) c) e) f)	UNDER \$200 PER MONTH \$200 - \$320 PER MONTH \$320 - \$440 PER MONTH \$440 - \$550 PER MONTH OVER \$550 PER MONTH DO NOT WISH TO SAY]25]26]27]28]29]30	G o G o G o G o G o G o	t t t t t t t t t t t t t t t t t t t	Q8 Q8 Q8 Q8 Q8 Q8 Q8

...2

.

QUESTION 8: What is your m	arital status	?		
a) SI b) MA c) DI d) WI	NGLE RRIED VORCED DOWED	[]31 []32 []33 []34	Go to Go to Go to Go to	Q9 M Q10 M Q9 M Q9 M
QUESTION 9: Is there more	than one adul [.]	t living here pr	esentl	y?
a) YE b) NO	S	[]35 []36	Go to Go to	Q10 Q10
QUESTION 10: Are there any	children liv:	ing here present	ly?	
a) NO b) YE	S	[]37 []38	Go to Go to	Q11 Q11
If b), indica	te how many:			-
III QUESTION 11: Where are you from? Please	and your spor indicate male	use (if applicab) and/or female.	le) or	iginally
A) BURLINGTON B) METRO TORONTO C) HAMILTON-WENTWORTH D) OAKVILLE E) MISSISSAUGA F) OTHER PLACE IN ONT G) OTH. PROVINCE H) OTH. COUNTRY	a)Male[]39 a)Male[]41 a)Male[]43 a)Male[]45 a)Male[]47 a)Male[]49 a)Male[]51 a)Male[]53	b)Female[]40 b)Female[]42 b)Female[]44 b)Female[]46 b)Female[]48 b)Female[]50 b)Female[]52 b)Female[]54	Go to Go to	Q12 Q12 Q12 Q12 Q12 Q12 Q12 Q12 Q12 Q12
IF F),G),or H) INDICATE PLACE OF ORIGIN:	a)	b)		
QUESTION 12: What is your (if applicabl a) MALE: b) FEMALE:	occupation? W e)? Please ind	nat is your spou dicate male and/ [55] [56]	se's o or fem Go to Go to	ccupation ale. Q13 Q13
c) NOT PRESENTLY	EMPLOYED	[]61	Go to	Q14
UESTION 13: Which city do in (if applic	you work in? able)? Please	Which city does indicate male as	your nd/or	spouse work female.
A) BURLINGTON B) OAKVILLE C) HAMILTON-WENTWORTH D) METRO TORONTO E) MISSISSAUGA F) OTHER	a)Male[]62 a)Male[]64 a)Male[]66 a)Male[]68 a)Male[]70 a)Male[]72	b)Female[]63 b)Female[]65 b)Female[]67 b)Female[]69 b)Female[]71 b)Female[]73	Go to Go to Go to Go to Go to Go to	Q14 Q14 Q14 Q14 Q14 Q14 Q14
IF F) , INDICATE PLACE:	a)	b)		

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QUESTION 14: Since you have lived in Burlington, have you purchased any of the following items in the places listed?

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A) JEWELERY:	 a) NOT PURCHASED b) IN BURLINGTON c) IN OAKVILLE d) IN METRO TORONTO e) IN HAMILTON-WENTWORTH f) IN MISSISSAUGA 	[]74 []75 []76 []77 []78 []79	Go to B Go to B Go to B Go to B Go to B Go to B
B)AUTOMOBILE:	 a) NOT PURCHASED b) IN BURLINGTON c) IN OAKVILLE d) IN METRO TORONTO e) IN HAMILTON-WENTWORTH f) IN MISSISSAUGA 	[]80 []81 []82 []83 []84 []85	Go to C Go to C Go to C Go to C Go to C Go to C
C) FURNITURE:	 a) NOT PURCHASED b) IN BURLINGTON c) IN OAKVILLE d) IN METRO TORONTO e) IN HAMILTON-WENTWORTH f) IN MISSISSAUGA 	[]86 []87 []88 []89 []90 []91	Go to Q15 Go to Q15 Go to Q15 Go to Q15 Go to Q15 Go to Q15 Go to Q15

QUESTION 15: Since you have lived in Burlington, have you ever attended any of the following events in the places listed?

		•							
	A)	MOVIES:	a) b) c) d) e) f)	NOT ATTENDED IN BURLINGTON IN OAKVILLE IN METRO TORONTO IN HAMILTON-WENTWORTH IN MISSISSAUGA]92]93]94]95]96]97	Go Go Go Go Go	t o o o o o o o	B B B B B B B
	B)	STAGE	、		r	100	~		-
		TREATRE:	a) b) c)	NOT ATTENDED IN METRO TORONTO IN HAMILTON-WENTWORTH	Ĺ]98]99]100	Go Go Go	to to to	C C C
	C)	MUSICAL	、		r	7404	~		_
		CONCERTS:	a) b) c)	NOT ATTENDED IN METRO TORONTO IN HAMILTON-WENTWORTH	Ĺ]101]102]103	Go Go Go	to to to	D D D
	D)	C.F.L. FOOTBALL							
		GAMES:	a) b) c)	NOT ATTENDED IN METRO TORONTO IN HAMILTON-WENTWORTH]104]105]106	Go Go Go	to to to	Q18 Q16 Q16
QUESTION	16: W	hich C.F.L.	fo	otball team do you supp	ort?	>			
			a) b) c)	THE TORONTO ARGOS THE HAMILTON TI-CATS ANOTHER C.F.L. TEAM]107]108]109	Go Go Go	to to to	Q17 Q17 Q17

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I) IN MISSISSAUGA []91

QUESTION 17: Which stadium do you most often go to watch your favorite team?

a)	EXHIBITION STADIUM IN TORONTO[]110	Go	to	Q18
Ъ)	IVOR WYNN STADIUM IN HAMILTON[]111	Go	to	Q18
c)	OTHER C.F.L. STADIUM]112	Go	to	Q18
d)	WATCH ON TELEVISION ONLY]113	Go	to	Q18

QUESTION 18: What is (are) the main reason(s) for you living in Burlington?

[114] Go to Q19

QUESTION 19: Do you have any close relatives that live presently in the cities listed?

A)	BURLINGTON:	a)	YES]115	b)	NO	Ľ]116	Go	to	В
B)	HAMILTON-WENTWORTH:	a)	YES	Ľ]117	Ъ)	NO	[]118	Go	to	С
C)	OAKVILLE:	a)	YES	Ľ]119	Ъ)	NO	[]120	Go	to	D
D)	METRO TORONTO:	a)	YES	Ľ]121	Ъ)	NO	[]122	Go	to	Е
E)	MISSISSAUGA:	a)	YES	Ē]123	b)	NO	Ē]124	Go	to	Q20

I QUESTION 20: How often, on average, do you travel to these cities?

A) METRO TORONTO: a) NOT VERY OFTEN []125 Go to B then Q21B * b) A FEW TIMES A MONTH []126 Go to B c) ONCE A WEEK]127 Go to B d) EVERYDAY 1128 Go to B ſ B) HAMILTON-WENTWORTH: a) NOT VERY OFTEN []129 Go to Q21A *]130 Go to Q21 b) A FEW TIMES A MONTH [c) ONCE A WEEK]131 Go to Q21 [[]132 Go to Q21 d) EVERYDAY

*NOTE: IF ANSWER IN A) is a) & B) is a) Go to Q22

QUESTION 21: By what means of transportation do you use to get to these cities?
A) METRO TORONTO:
b) GO TRANSIT (BUS) []133 Go to B or Q22
b) GO TRANSIT (TRAIN) []134 Go to B or Q22
c) AUTOMOBILE []135 Go to B or Q22

	If d) atota mada.	d)	d) OTHER]136	Go	to	B or	Q22
В) HAMILTON-WENTWORTH:	a) b) c) d)	GO TRANSIT (BUS) GO TRANSIT (TRAIN) AUTOMOBILE OTHER]137]138]139]140	Go Go Go	to to to to	Q22 Q22 Q22 Q22 Q22	
	If d). state mode:								

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UESTION 22: On average, how many telephone calls do you make to these places per week?

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A)	OAKVILLE:	a) b) c) d) e) f)	NEVER [LESS THAN 1 CALL A WEEK [1 or 2 CALLS PER WEEK [3 or 4 CALLS PER WEEK [CALL EVERYDAY ON AVERAGE [CALL MORE THAN ONCE A DAY[]141 Go]142 Go]143 Go]144 Go]145 Gc]146 Gc	to B to B to B to B to B to B to B	
B)	DUNDAS:	a) b) c) d) e) f)	NEVER [LESS THAN 1 CALL A WEEK [1 or 2 CALLS PER WEEK [3 or 4 CALLS PER WEEK [CALL EVERYDAY ON AVERAGE [CALL MORE THAN ONCE A DAY]]147 Go]148 Go]149 Go]150 Gc]151 Gc]152 Gc	to C to C to C to C to C to C to C	
C)	ANCASTER :	a) b) c) d) e) f)	NEVER [LESS THAN 1 CALL A WEEK [1 or 2 CALLS PER WEEK [3 or 4 CALLS PER WEEK [CALL EVERYDAY ON AVERAGE [CALL MORE THAN ONCE A DAY[]153 Go]154 Go]155 Go]156 Go]157 Gc]158 Gc	to D to D to D to D to D to D	
D)	HAMILTON:	a) b) c) d) e) f)	NEVER [LESS THAN 1 CALL A WEEK [1 or 2 CALLS PER WEEK [3 or 4 CALLS PER WEEK [CALL EVERYDAY ON AVERAGE [CALL MORE THAN ONCE A DAY]]159 Go]160 Go]161 Go]162 Go]163 Go]164 Gc	to E to E to E E E E E E E E E E E	
E)	MISSISSAUGA:	a) b) c) d) e) f)	NEVER [LESS THAN 1 CALL A WEEK [1 or 2 CALLS PER WEEK [3 or 4 CALLS PER WEEK [CALL EVERYDAY ON AVERAGE [CALL MORE THAN ONCE A DAY]]165 Go]166 Go]167 Go]168 Go]169 Go]170 Gc	ち ち ち ち ち ち 下 下 下 下 下 下 下 下 下 下 下 下 下	
F)	METRO TORONTO:	a) b) c) d) f)	NEVER [LESS THAN 1 CALL A WEEK [1 or 2 CALLS PER WEEK [3 or 4 CALLS PER WEEK [CALL EVERYDAY ON AVERAGE [CALL MORE THAN ONCE A DAY[]171 Go]172 Go]173 Go]174 Go]175 Go]176 Go	to Q23 to Q23 to Q23 to Q23 to Q23 to Q23 to Q23	

UESTION 23: What advantages do you feel Burlington has over Metro Toronto as a place to live?

[177] Go to Q24

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UESTION 24: What advantages do you feel Burlington has over Hamilton-Wentworth as a place to live?

[178] Go to Q25

-6-QUESTION 25: Do you receive home delivery of a newspaper? a) YES]179 Go to Q27]180 Go to Q26 b) NO QUESTION 26: While living at this location, have you ever had home delivery of a newspaper in the past? If YES, state which newspaper and why you guit taking home delivery service. a) NO]181 Go to Q31 1182 Go to Q31 b) YES If answer is b): QUESTION 27: Which paper(s) do you receive by home delivery? Please indicate whether you receive it by weekly subscription or by weekend subscription only. A) THE SPECTATOR (only) a)Weekly[]183 B) THE TORONTO STAR (only) a)Weekly[]185 C) THE GLOBE & MAIL (only) a)Weekly[]187 D) OTHER(S) (only) a)Weekly[]189 E) BOTH A) & B) a)Weekly[]191 b)Wkd[]184 Go to Q28 then Q31 b)Wkd[]186 Go to Q29 then Q31 b)Wkd[]188 Go to Q30 then Q31 b)Wkd[]190 Go to Q30 then Q31 _b)Wkd[]192 Go to Q28 & Q29 then Q31]193 _b)Wkd[]195 _b)Wkd[F) BOTH A) & C) or A) & D) a)Weekly[]194 Go to Q28 & Q30 then Q31 G) BOTH B) & C) or B) & D) a)Weekly[]196 Go to Q29 & Q30 then Q31 a)Weekly[]197 _b)Wkd[]198_Go to Q30 then Q31 H) BOTH C) & D) IF answer is E),F),G), or H) indicate in the blank space provided which ones are weekly and which are weekend (if both are not the same). NOTE: THE BURLINGTON GAZETTE IS DELIVERED WITH THE SPECTATOR QUESTION 28: How often do you read these sections of The Spectator?]199 b)SOMETIMES[]200 c)NEVER[]202 b)SOMETIMES[]203 c)NEVER[]205 b)SOMETIMES[]206 c)NEVER[]208 b)SOMETIMES[]209 c)NEVER[A) BURLINGTON NEWS: a) ALWAYS 201 Go to B]204 Go to C B) HAMILTON NEWS: a)ALWAYS[C) CLASSIFIED: a)ALWAYS[]206 c)NEVER[]207 Go to D D) EDITORIAL:]209 c)NEVER[a) ALWAYS[]210 Go to E E) SPORTS: a)ALWAYS[]211 b)SOMETIMES[]212 c)NEVER[]213 Go to * Go to either Q29, Q30 or Q31 depending on answers in Q27 QUESTION 29: How often do you read these sections of The Toronto Star? A) TORONTO NEWS:]214 b)SOMETIMES[a)ALWAYS[]215 c)NEVER[1216 Go to B]217 b)SOMETIMES[]220 b)SOMETIMES[B) REGIONAL NEWS: a)ALWAYS[]218 c)NEVER[219 Go to C C) CLASSIFIED: a)ALWAYS[]222 Go to D]221 c)NEVER[]223 b)SOMETIMES[]224 c)NEVER[]225 Go to E]226 b)SOMETIMES[]227 c)NEVER[]228 Go to * D) EDITORIAL: a)ALWAYS[]225 Go to E E) SPORTS: a)ALWAYS[Go to either Q30 or Q31 depending on answers in Q27 QUESTION 30: What is your main reason(s) for receiving delivery of this (these) newspaper(s)? This question is <u>NOT</u> in reference to either The Spectator or The Toronto Star.

Go to Q31

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-7-QUESTION 31: Do you buy a newspaper(s) at a store or vending machine a) YES b) NO
[]230 Go to Q32 []231 Go to Q37 QUESTION 32: Which newspaper(s) do you buy at the store or vending machine?

- a) THE GLOBE & MAIL []232 Go to Q35 b) THE TORONTO SUN []233 Go to Q35 c) THE TORONTO STAR (only) []234 Go to Q34 d) THE SPECTATOR (only) []235 Go to Q33 e) THE BURLINGTON GAZETTE []236 Go to Q35 f) OTHER(s) (only) []237 Go to Q35 g) BOTH d & a /d & b/d & e []238 Go to Q33 h) BOTH c & a /c & b/c & e []239 Go to Q34 i) BOTH c & d []240 Go to Q35
- QUESTION 33: Why do you pick The Spectator over The Toronto Star, and if you had taken The Toronto Star in the past, why did you quit picking it up?
 - [241] Go to Q35
- QUESTION 34: Why do you pick The Toronto Star over The Spectator, and if you had taken The Spectator in the past, why did you quit picking it up?

				[242] Go to Q35
QUESTION	35:	Do you A) THE B) THE C) THE D) THE	feel that any of TORONTO STAR: SPECTATOR: TORONTO SUN: GLOBE & MAIL:	<pre>these papers are politically biased? a) YES []243 Go to B,C,D then Q36A b) NO []244 Go to B,C,D a) YES []245 Go to C,D then Q36B b) NO []246 Go to C,D a) YES []247 Go to D then Q36C b) NO []248 Go to D a) YES []249 Go to Q36D b) NO []250 Go to Q37</pre>

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-8-I QUESTION 36: Which way politically do you think they are biased? A) THE TORONTO STAR: a) LIBERAL 251 Go to 0.37]252 Go to Q37 b) CONSERVATIVE c) OTH: 253 Go to Q37]254 Go]255 Go B) THE SPECTATOR: a) LIBERAL toQ37 b) CONSERVATIVE [toQ37 c) OTH:]256 Go toQ37 a) LIBERAL C) THE TORONTO SUN:]257 Go toQ37 b) CONSERVATIVE Γ 1258 Go to 037 Q37 c) OTH:]259 Go to]260 Go a) LIBERAL toQ37 D) THE GLOBE & MAIL:]261 Go to Γ b) CONSERVATIVE Q37]262 Go to Q37 c) OTH: NOTE: Answer A), B), C), or D) depending if A), B), C), or D) was answered YES in Q35 QUESTION 37: How often do you watch television news? a) AT LEAST ONCE A DAY]263 Go to Q38 [[]264 Go to Q38 b) A COUPLE OF TIMES A WEEK c) NOT VERY OFTEN 1265 Go to Q38]266 Go to Q39 d) NEVER ſ QUESTION 38: Which television station(s) do you watch mostly for news? C.B.C. (NATIONAL NEWS)]267 Go to Q39 a) ъ) C.B.C. (TORONTO REGIONAL NEWS)]268 Go to Q39 C.T.V. (NATIONAL NEWS)]269 Go to Q39 c) d) C.T.V. (TORONTO REGIONAL NEWS)]270 Go to Q39]271 Go C.H.C.H. (HAMILTON REGIONAL NEWS) to Q39 e) 1272 Go f) GLOBAL (ONTARIO REGIONAL NEWS) to Q39]273 Go to Q39]274 Go to Q39 AMERICAN NETWORKS (CBS, ABC, NBC, PBS) g) h) OTHER(s) QUESTION 39: Do you listen to radio news regularly?]275 Go to Q40 a) YES 1276 Go to Q41 Ъ) NO ſ QUESTION 40: Which radio station do you listen to most often for news? [277] Go to Q41 QUESTION 41: Do you feel your response to this questionnaire is a reflection of what your local neighbours might answer? a) YES]278 Go to END b) NO]279 Go to Q42 c) HAVE NO IDEA]280 Go to END Ĺ QUESTION 42: In what way would you say your response would be different?

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APPENDIX B

ITEM-TOTAL STATISTICS OF THE VARIABLES (HAMILTON):

VARIABLE	SCALE MEAN IF ITEM DELETED	SCALE VARIANCE IF ITEM DELETED	CORRECTED ITEM-TOTAL CORRELATION	SQUARED MULTIPLE CORRELATION	ALPHA IF ITEM DELETED
JEWHAM	9.60333	22.19999	.37289	.22818	.74124
CARHAM	9.56667	22.33333	.31504	.20351	.74408
FURHAM	9.46667	22.48384	.24385	.18555	.74808
MOVHAM	9.45333	22.17507	.31065	.22151	.74388
THEHAM	9.34667	22.18711	.29356	.33632	.74487
MUSHAM	9.39667	22.05283	.32756	.35730	.74269
OR IGMHA	9.68667	22.47674	.38024	.28143	.74262
ORIGF‼A	9.64667	22.43661	.34520	.27068	.74337
CFLHAM	9.40000	21.49164	.45470	.64770	.73431
TEAMHAM	9.57667	21.74327	.47209	.48518	.73519
STADHAM	9.53000	21.94224	.39254	.61239	.73922
RELHAM	9.46333	21.56721	.45391	.36568	.73476
VISHAM	9.38000	17.18622	.52645	. 49436	.72505
CALLHAM	7.81667	15.04654	.56611	.42196	.73353
WPMHAM	9.53000	21.75495	.43840	.37801	.73644
РАРНАМ	9.04000	22.80776	.21205	.08988	.74988
CHCH	S.44667	22.81654	.16615	.13395	75292
RADHAM	9.59000	23.30625	.08265	.07843	.75682

NOTE: See Table 5.6 for variable definitions.

ITEM-TOTAL STATISTICS OF THE VARIABLES (TORONTO):

	SCALE	SCALE			
	MEAN	VARIANCE	CORRECTED	SQUARED	ALPHA
	IF ITEM	IF ITEM	ITEM-TOTAL	MÜLTIPLE	IF ITEM
VARIABLE	DELETED	DELETED	CORRELATION	CORRELATION	DELETED
JEWTOR	6.79333	16.90698	.25948	.14464	.73217
CARTOR	6.88667	17.18444	.27584	.13770	.73306
FURTOR	6.78000	16.92803	.24185	.11997	.73313
MOVTOR	6.80000	16.58863	.37529	.22857	.72554
THETOR	6.60000	16.32107	.33092	.29601	.72637
MUSTOR	6.62000	16.41699	.31106	.27035	.72794
ORIGMTO	6.84000	16.83719	.33864	.29698	.72867
ORIGFTO	6.84000	16.93084	.30232	.31354	.73052
CFLTOR	6.72667	16.27287	.40685	.52445	.72194
TEAMTOR	6.81667	16.73885	.34268	.38455	.72781
STADTOR	6.82333	16.52721	.43022	.58336	.72322
RELTOR	6.55667	16.28775	.32965	.25795	.72637
VISTOR	4.94000	12.53819	.52093	.53969	.70887
CALLTOR	5.72667	11.38323	.57357	.41039	.70677
WPMTOR	6.78667	16.51621	.38468	.43811	.72464
PAPTOR	6.41000	16.26278	.32891	.15699	.72637
TVTOR	6.56667	16.50725	.27413	.10703	.73071
RADTOR	6.75000	17.59281	.02261	.04599	.74670

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