

**COMMUNITY ATTACHMENT IN
VEGREVILLE, ALBERTA**

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COMMUNITY ATTACHMENT IN VEGREVILLE, ALBERTA

1. INTRODUCTION

In the process of social change communities are impacted by internal and external forces which may threaten their existence as social entities. In an attempt to understand these processes much of the research into community attachment has focused on the relationship between social bonds and local sentiments in urban communities. Goudy (1990) used these variables and examined community attachment in relation to 27 communities in rural Iowa. His findings suggested that the prevalent model for community attachment, the *systemic model*, was also applicable to rural communities. Iowa data suggested that survival of the rural community as a social entity was dependent on residential stability and the existence of social bonds in the community. Implicit in this is that disruptions to a community due to sudden population change pose a temporary threat to the local social structure. Following a period of social disruption a new social structure evolves which includes both long-term residents and newcomers.

This research examines social bonds and local sentiments in a small, rural community located in south central Alberta ten years after a boom in its population occurred. The case differs from other research on boomtowns for several reasons. The first is that Vegreville is located within commuting distance (90 km) of the provincial capital of Edmonton, on a major divided highway. Secondly, population growth was stimulated by the establishment of a government research facility which brought highly skilled new residents into a small town which had served predominantly as a retirement community for agricultural people from the surrounding rural areas. The circumstances provided an opportunity to examine the long-term effects of a large scale in-migration on a small community with respect to social bonds and local sentiments.

1.1 Community Attachment Models

Numerous authors have examined community attachment, most notably, Toennies (1887), Durkheim (1893), Simmel (1902), and Wirth (1938). Their writings provided a foundation for what is referred to in literature as the *linear-development model* (Kasarda and Janowitz, 1974). The linear-development model assumes that population size and density are the main determinants of social behaviour. According to the proponents of this model, social changes

which occur are due to the disruptive effects of an increased population base and density. As a consequence, ties to kin and friends are expected to weaken as increased population and density increase urbanization. Kasarda and Janowitz (1974) refuted this and stated that population size and density were not significant measures for community attachment because they neglected the influence of social position, length of residence and life cycle factors (Park, 1921; Burgess, 1925; Stinner et al. 1990). They went on to describe what is now referred to as the *systemic model of community attachment*.

The systemic model minimizes the influence of community size (Stinner et al., 1990) and emphasizes the length of residence, social position and life cycle factors as the primary indicators of community attachment (Kasarda and Janowitz, 1974). This is now the most commonly used model for research into community attachment because of its flexibility (Goudy, 1990; Laedwig and McCann, 1980; Stinner et al., 1990).

Kasarda and Janowitz (1974) identified length of residence in a community as the most important variable for community attachment with other contributing variables being occupation or social status and age. They stated that:

The local community is viewed as an ongoing system of social networks into which new generations and new residents are assimilated, while the community itself passes through its own life-cycle. Since assimilation of newcomers into the social fabric of local communities is necessarily a temporal process, residential mobility operates as a barrier to the development of extensive friendship and kinship bonds and widespread associational ties. Once established, though such bonds strengthen community sentiments. (Kasarda and Janowitz, 1974:330)

Using this research into community attachment as a basis, the case of Vegreville, Alberta examines the social bonds and community sentiments expressed by residents in relation to length of residence.

1.2 Social Bonds in Rural Communities

Social bonds usually include interaction with local friends, local relatives, work associates and social contacts gained through organizational membership. Of these, the number of local friendships are the most strongly related to the length of residence in a community and life cycle factors. The size and number of social networks the individual participates in depends upon the nature of the contacts and accessibility of varied social contacts. Fischer (1982) acknowledges

the importance of social bonds in terms of the type of people an individual associates with, suggesting that social opportunities are affected by the size of the community.

When comparing the urban and non-urban residents Fischer (1982:91) stated that the size of "community influences the kinds of non-kin people become involved with rather than the total number of non-kin." The implication is that as the local population decreases, the potential for appropriate or suitable non-kin social contacts declines. This suggests that large community size, rather than hindering the development of close non-kin relationships, facilitates them through the diversity of the population base. Thus in a small community individuals with personal characteristics different from those of other residents may have relatively small local friendship networks and larger distant friendship networks.

Fischer (1982) also stated that urban people rather than being socially isolated, were more involved with their friends than residents of small towns. The reason given was the tendency to build personal networks composed of people who share common characteristics and/or interests. A larger community offers a better environment for this, because as the number of potential contacts increases, the probability of finding people with like interests and backgrounds increases. The difference Fischer observed between the friendship networks of urban and rural residents was in terms of the nature of the relationships. These were examined in relation to their density and the multistrandedness of the relationships¹. In general, the network density decreased as urbanization increased due to large population size providing more opportunities for forming social relationships with non-kin.

2. THE SOCIAL ENVIRONMENT

Between 1976 and 1981 Vegreville, Alberta experienced a rapid growth in its population due to the construction and opening of the Alberta Environmental Centre. During this period the

¹ Multistrandedness refers to the number of different ways one individual is involved with another. Community size is a factor, because as the number of people the individual associates with declines, each person becomes better known. Fisher notes that "multi-strandedness and density are not the causes, but the consequences of intense involvement" (1982:141). This suggests that the more activities individuals share in different social contexts the more likely it will be that people they know will also know one another.

population increased from 4,209 (1976) to 5,251 (1981). Not only did the community increase in size, but demographic composition changed in relation to age, education and income. A comparison of the population of Vegreville in 1976 and 1986 suggested that the age distribution in the community changed (Table 1).

TABLE 1. AGE DISTRIBUTION OF VEGREVILLE, 1976-1986

Age of Group	1976 n = 4,160	1981 n = 5,255	1986 n = 5,276
0 - 9 years	12.86%	13.60%	13.26%
10 - 19 years	16.95%	15.89%	13.17%
20 - 34 years	16.20%	21.03%	23.12%
35 - 54 years	18.87%	18.55%	23.41%
55 - 64 years	13.30%	10.75%	9.66%
65 + years	21.50%	20.26%	21.98%

Data indicated that change was most evident among younger adults, with the number of individuals in the 20 through 34 year age group increasing by 6.9 percent. The most significant increase, which occurred between 1976 and 1981 (4.9 percent) may have been due to the aging of the local baby boom cohort combined with an influx of young adults associated with the Alberta Environmental Centre. The age 35 through 54 group also experienced a noticeable increase between 1976 and 1986 (4.5 percent).

A decline in the population was evident among those in the later stages of their middle years (ages 55 through 65). While some of this may be attributed to mortality, out-migration would also be a contributing factor. The only segment of the population which retained a relatively constant proportion were the seniors (individuals over the age of 65), with little change indicated between 1976 and 1981.

There was a noticeable increase in the number of individuals with post secondary educational certificates between 1976 and 1981 (Table 2). The number of individuals without a post-secondary education may be attributed to both the mean age of the population in 1976 and the number of semi-skilled labourer residing in Vegreville during the construction of the Alberta

Environmental Centre. By 1981 the number of individuals who had completed post-secondary educational programs had increased, indicating that labour demands in the community had changed between 1976 and 1981.

TABLE 2. EDUCATIONAL ATTAINMENT OF VEGREVILLE RESIDENTS, 1976 & 1981

Schooling Completed	1976	1981
< Grade 9	1,335	1,135
Grades 9-13 no certificate	945	1,240
Grades 9-13 secondary certificate	1,240	325
Post secondary no certificate	365	275
Post secondary trade certificate	255	320
University degree	165	275
Total	4,305	3,570

Total income was compared for 1981 and 1986. The data indicated that overall, the average income of Vegreville residents increased. The change reflects not only inflation, but an increased number of local employment opportunities available at the higher end of the wage scale. It was worth noting that mean income nearly doubled for male residents, while the mean income for women increased by less than 50%.

TABLE 3. TOTAL INCOME FOR VEGREVILLE RESIDENTS, 1981 and 1986

Household Income	1981	1986
Less than \$10,000	56.9%	36.9%
\$10,001 - 15,000	13.1%	13.3%
\$15,001 - 25,000	16.1%	18.9%
Greater than \$25,001	13.8%	23.6%
Mean income (male)	16,700	32,810
Mean income (female)	7,618	12,113

3. RESEARCH PROCEDURE

An examination of research into community attachment and social networks noted that certain lines of inquiry predominated. To allow this research to be compared with existing research the questions in the self-administered questionnaire were patterned after those in existing studies. Questions were patterned after questions used by Goudy (1990) in his research into community attachment in rural Iowa to allow for a comparison of the data on rural communities. The independent variables of length of residence, income, age, density and size were used for this research. Education was added as an independent variable, as secondary data suggested it would be an indicator of socio-economic status in the community. This was supported by research by O'Brien and Hassinger (1992). The dependent variables selected dealt with local social bonds or sentiments. The variables used to measure local social bonds were the number of local relatives, the number of local friends and organizational membership. Variables measuring local sentiments were social fit, attitude toward moving and interest in the community.

Quantitative data were obtained using a stratified random sample from the community. The self-administered questionnaires were sent to 213 households in Vegreville. Two mailing-outs resulted in the return of 119 completed forms (a return rate of 55.9 percent). Qualitative data, obtained through interviews of Vegreville residents were used to substantiate the quantitative data.

4. RESEARCH FINDINGS

Data from Vegreville suggest the social structure has changed as a result of economic development which attracted new residents. The most notable changes observed were to the local friendship networks. As many of the newcomers have urban origins, they introduced their social forms and values when they relocated in Vegreville. This has contributed to the community exhibiting the social characteristics of "a dispersed city where behaviour patterns and values are fundamentally similar to those in cities" (Beesley and Bowles, 1991).

4.1 Local Friendship Networks

Fischer (1982) states that small communities influence the development and maintenance of friendships because people tend to become more involved in local activities (and

organizations) than people in larger centres. This affects the social structure of the community as there are fewer people available for community service and volunteer work. As people come into contact with one another more frequently and given common interests, friendships develop. In general friendship networks in small communities are dense², with many activities shared with a small number of people. The small population increases the number of times individuals come into contact and consequently limits the potential for the development of new friendship networks.

Patterns of interaction change as the size of the community increases, with the density of the friendship networks decreasing. This occurs because individuals have more choices regarding who they socialize with and the circumstances under which the interaction will occur. On an individual basis, it is possible for a person to belong to many friendship networks, as contact with each network fulfils different personal and social needs. These friendship networks may or may not be interconnected.

Kasarda and Janowitz's research indicated that length of residence was an important indicator for local social attachment because the number of friends and family members within the community (and nearby) increases over time. Goudy (1990) concurred with this in his research into community attachment in 27 rural Iowa towns and added that length of residence was the most important variable in the systemic model. "In rural areas, time spent in the locale remains a way to integrate within the local social system, one that may transcend social position in the value systems of small communities" (Goudy, 1990:181).

Analysis of the Vegreville data indicated that the respondents had extensive local friendship networks, with most respondents indicating many, rather than few local social contacts. When the size of local friendship networks was compared to the number of years of residence no significant difference was noted between long-term residents and newcomers. Despite that, qualitative data suggested that some people established large networks of friends in a relatively short time, while others who have been in the community for a longer period of time still had

² Network density refers to the interconnectedness of individuals within the social context. Multistrandedness, which is often mentioned in conjunction with density looks at the number of different ways one person becomes involved with another.

small friendship networks. The difference may be explained in part by the number of local kin or by the intensity of friendship networks maintained outside of Vegreville. Personal differences, which are not measurable quantitatively, may also contribute to the size of the local friendship networks. Individuals with small local friendship networks indicated that the number of friends they had in Vegreville was similar in size to social networks they had in the previous community of residence.

4.1.1 Local Kin and the Development of Friendship Networks

The number of people known in the community is affected by the presence of persons related by kin residing locally. This affects both the diversity and the density of local friendship networks. Rieger and Beegle (1974) observed that as the number of local kin increased, the number of social interactions with non-kin decreased. Fischer's (1982) explanation for this was that kinship ties were maintained out of a sense of obligation at the expense of other social contacts.

There is an inverse relationship between the number of kin living locally and higher socio-economic status. In general, as the socio-economic status of the individual increases, the likelihood of having kin residing in the same community declines, as persons of this status are more likely to migrate to take advantage of employment opportunities elsewhere. Taking this into consideration, it was expected that long-term residents of Vegreville would have more kin residing in the community (or the surrounding area) than newcomers. Results of the Vegreville study (Table 4) indicated that 72.9 percent of respondents indicated that they had very few family members (0-25 percent) living in or near Vegreville.

4.2 Length of Residence and Community Attachment

According to Goudy (1990) length of residence was a key factor affecting community attachment. The longer the individual lived in the community, the greater the attachment was likely to be. Goudy saw this as a cyclical process with longer residency leading to the development of more selective social relationships, which in turn would enhance social attachment to the community. These feelings were expressed in terms of how comfortable the individual felt as a member of that community and sentiments on leaving the community.

TABLE 4. PROPORTION OF VEGREVILLE RESPONDENTS WITH KIN LIVING IN THE COMMUNITY

Proportion of Kin Living in Vegreville	Proportion of Respondents (n = 107)
0 - 25%	72.9%
26 - 50%	9.3%
51 - 75%	13.1%
76 - 100%	1.8%
No Response	2.8%

4.2.1 Residential Factors

Literature suggests that length of residence in a community is associated with sentimental attachment to the community. This being the case, it would be assumed that older community residents would have more intense feelings of attachment to the community, suggesting a positive relationship between years of residence, age and indicators of community attachment.

When length of residence was compared to age, data indicated that seniors were the most likely to have lived in Vegreville for 20 years or more. Of interest was the increase in the number of younger adults (less than 40 years). The change reflects both the retention of young adults in the community and the in-migration of other young adults (Table 5). Employment related directly or indirectly to the expansion of government services in Vegreville would be the most likely explanation for this as the Alberta Environmental Research Centre was phasing in its operations (1977-1982).

4.2.2 Interest in Community Affairs

An interest in community affairs is one indicator of community attachment. It is not restricted to rural communities, but occurs in places of all sizes. Interest can be expressed through involvement in politics, home and school associations, special interest groups, recreational activities, and service organizational membership. Participation in these activities in the community of residence provides social contact with other local residents. While

TABLE 5. THE RELATIONSHIP BETWEEN AGE AND YEARS OF RESIDENCE IN VEGREVILLE (N=107)

Years of Residence	Age Category		
	18 - 40 (n = 37)	41 - 60 (n = 41)	61 + (n = 23)
0 - 5 years	7	2	0
6 - 10 years	8	14	2
11 - 15 years	5	12	2
16 - 20 years	2	4	2
> 21 years	16	9	17

No response (n = 6)

participation in local activities does not affect the outcome of social interaction, they provide a physical or social setting for the initiation of social integration. Through this process integration occurs and the individual develops a sentimental attachment to the community.

TABLE 6. RELATIONSHIP BETWEEN YEARS OF RESIDENCE IN VEGREVILLE AND COMMUNITY INTEREST (N=107)

Years of Residence	No Interest (n = 1)	Neutral (n = 34)	Slight Interest (n = 9)	Moderate Interest (n = 38)	Very Interested (n = 19)
1 - 5 years	0	4	2	4	0
6 - 10 years	0	10	3	9	2
11 - 15 years	0	9	2	7	1
16 - 20 years	0	1	0	6	0
21 - 25 years	0	0	1	1	4
> 26 years	1	10	1	11	12

No response (n = 6)

Vegreville respondents were asked to rate their interest in local affairs on a scale of one (no interest) to five (very interested). This was then compared to the years of residence as temporal effects are considered indicative of community attachment. The data indicated that 31.8 percent of respondents were neutral with respect to community interest. Nearly two thirds (61.7 percent) of respondents expressed at least a slight interest in the community.

4.2.3 Social Interaction and Community Attachment

Social interaction in the community is indicative of the involvement of the individual in the local social structure. The data indicated that respondents did much of the socializing in Vegreville, with 34.6 percent of respondents doing some socializing locally, 50.5 percent indicating most, and 8.4 percent indicating all their socializing occurred in Vegreville. Only .9 percent of respondents indicated they did no socializing locally.

4.2.4 Organizational Membership

Through data analysis the frequency, duration and intensity of organizational membership were examined. Data indicated that 73.8 percent of respondents belonged to organizations in Vegreville. A comparison of organizational membership and respondents age indicated that organization members were likely to be less than 50 years of age (65.3 percent). Despite this, 82 percent of the respondents in the sample over 50 years of age were organization members (Table 7). Particularly noteworthy in the sample were the number of respondents over the age of 70 years who indicated that they were active in local organizations.

Age related factors work both for and against organizational membership as they affect time available for social activities and the physical ability to participate. The lack of participation by individuals less than 30 years of age may be due to involvement in family related activities or that their social needs are not being met by organizations available in the community.

The situation differs for senior respondents who appeared to be more active in local organizations than not. Literature suggests that older women tend to be more active in organizations, but this was not apparent in Vegreville data because of the low number of female participants.

TABLE 7. DISTRIBUTION OF ORGANIZATIONAL MEMBERSHIP BY RESPONDENTS' AGE (N=107)

Respondent's Age	Organization Members (n = 78)		Non-Members (n = 23)	
	Frequency	%	Frequency	%
18 - 30 years	10	12.8	6	26.1
31 - 40 years	19	24.3	4	17.4
41 - 50 years	22	28.2	7	30.4
51 - 60 years	7	8.9	5	21.7
61 - 70 years	8	10.3	0	0.0
> 70 years	12	15.4	1	4.3
Total		99.9		99.9

No response (n = 6)

The number of positions held in local organizations was also considered. The higher socio-economic status of newcomers in Vegreville suggested that they would become leaders in community organizations and would be seen as assets to the community. Data, indicated that higher income, higher status individuals were more likely to hold an elected position in a local organization.

4.2.5 Comparison of Variables Measuring Community Attachment

Goudy's research (1990) was used as a basis for measuring community attachment by defining social bonds and sentiments that tie the individual psychologically to the community. Consequently a multiple regression analysis was performed to compare the effects of personal characteristics of the respondents to social bonds and sentiments.

Goudy's (1990) modified multiple regression (Appendix A) examined social bonds in relation to independent variables that were considered important to the systemic model of community attachment. The independent variables identified were length of residence, income, and age. Goudy stated that these social bonds were related to sentiments regarding the

community, with friends and acquaintances being indicators for the sense of community and the sorrow felt on leaving the community. In relation to this, organizational memberships and people identified as indicators of community interest. "These relationships generally are positive, indicating that greater attachment through social bonds leads to greater attachment through sentiments toward the local community" (Goudy, 1990:183). The exception to this was the relationship between the presence of local relatives and community interest, with individuals having more local relatives being less active in the community.

The dependent variables were subdivided into two categories. The first of these were social bonds which included the number of friends and relatives the respondent had living in Vegreville and their organizational affiliations. These variables measure the intensity of local social interaction. The second group of variables dealt with community sentiments. Respondents were asked to rate their attitudes toward different aspects of community attachment (social fit, sorrow on leaving and community interest).

Table 8 provides a summary of the multiple regressions performed on the Vegreville data. Information from each of the independent variables will be discussed individually. The Vegreville data indicated greater support for the systemic model of community attachment than for the linear-development model. This model stresses the importance of length of residence, social position and life cycle stage with respect to psychological attachment of the individual to the community of residence. Of these variables, length of residence is considered the most important (Kasarda and Janowitz, 1974; Goudy, 1990).

4.2.5.1 Local Social Bonds

Table 8 provides information regarding the relationships between local social bonds and three independent variables identified by Goudy. The independent variable "education" was included in the analysis of the Vegreville data as it is an indicator of socio-economic status. Local social bonds include the three dependent variables; number of local friends, number of local relatives and organizational membership. These will be discussed in relation to the independent variables; length of residence, income, age and education.

TABLE 8. MODIFIED MULTIPLE REGRESSION EFFECT PARAMETERS AND STANDARD ERROR OF INDEPENDENT VARIABLES ON LOCAL SOCIAL BONDS*

Independent Variables	Dependent Variables (Local Social Bonds)					
	Local Friends		Local Relatives		Organization Membership	
	B	SE	B	SE	B	SE
Length of residence	.028	.013	.014	.005	-.005	.002
Income	-.018	.031	-.008	.011	-.006	.005
Age	.014	.014	-.008	.005	-.004	.002
Education	-.012	.024	-.001	.008	-.004	.004

R Square .025

Adjusted R Square .015

Sample Size n = 107

* Effect parameters are considered significant at the .05 level.

4.2.5.2 Length of Residence and Social Bonds

Length of residence was positively related to two of the three social bonds measured (local friends and relatives). The strongest relationship was between the length of residence and the number of local friends, as residential stability is important in the development of local friendship networks. Residential stability is necessary to provide a social environment which facilitates the development of social bonds that promote positive sentiments toward the community (Sampson, 1988). The rapid growth in Vegreville's population between 1976 and 1982 temporarily disrupted residential stability, but the number of entries and exits stabilized in the ten years following this disruptive period and has provided newcomers and long-term residents with the opportunity to establish stable friendship networks in the community (Rank & Voss, 1982). Data on friendship networks indicated that both newcomers and long-term residents had extensive local friendship networks supporting the premise that temporal factors were important.

The relationship between length of residence and local relatives in Vegreville was proportionally weaker than the one described by Goudy (1990) suggesting that other variables

were influencing the relationship. In Vegreville intervening variables would include age of the resident, education and income. The number of newcomers who have moved to the community since 1976 has affected the proportion of residents who have extended family members residing in or near Vegreville. One reason for this is that higher status newcomers moved to Vegreville from other communities because of occupational opportunities.

The Vegreville data also differed from Goudy's (1990) with respect to the relationship between length of residence and organizational membership. Vegreville data indicated that lengthy residence was negatively related to organizational membership. The implication was that the longer the individual lived in the community, the less likely they were to belong to local organizations. When age was considered as an intervening variable, the Vegreville data indicated that younger residents who had lived in the community for a fewer years were the most likely to be actively involved in local organizations. One explanation from this was that newcomers utilized organizational membership as a means for the identifying potential friends. Young adults with children also were active in local organizations, but were more likely to participate in organizations which focused on educational, social and/or recreational opportunities for their children. By comparison, older (long-term) residents tended to be less active in local organizations. The number of senior respondents over 80 years of age suggested that physical mobility may limit participation. Church membership was the most common organizational membership to be retained by seniors. During the interview process seniors also indicated that individual preferences determine the organizations they have retained membership in.

4.2.5.3 Income and Social Bonds

Income was negatively related to all three social bonds in Vegreville included in the Vegreville research. This differs from Goudy's (1990) results which only indicated negative relationships between income and the number of local friends and relatives. These relationships were expected as newcomers to Vegreville were of higher socio-economic status, and tended to be economically motivated. Economic motivation for migration also suggested that kin would not reside in the receiving community.

The data in Table 8 differs from Goudy's (1990) with respect to the relationship between income and organizational membership. Other research (Kasarda & Janowitz, 1974; Goudy,

1990) indicated a positive relationship between income and organizational membership. The negative relationship in Vegreville suggests the existence of intervening variables. The variable which would have had the most potential for this was "education." Data from Vegreville indicated that educational attainment and income were related, with well educated newcomers indicating the highest household incomes. It is likely that these individuals devote most of their time and effort to career advancement rather than volunteering time to local organizations. As these individuals have strong social networks outside the community they would be less likely to become involved in community organizations because their social needs and interest can be met elsewhere. The combination of these factors suggests that newcomers with skills to offer the community would be unlikely to participate in local organizations because their income allows them the freedom to meet their social needs outside of Vegreville. Sub-cultural differences between the newcomers and oldtimers may also prevent organizational involvement of newcomers.

4.2.5.4 Age and Social Bonds

Age was negatively related to the number of local relatives and organizational membership. Goudy (1990) also noted a negative relationship between age and the number of local relatives. In this the relationship would be attributed to the dual role played by Vegreville. One is the role of Vegreville as a retirement centre for rural people from the surrounding agricultural communities and the other is its new role as a centre for technology. The number of kin seniors have living in the community has been affected by the out-migration of younger family members who leave the community to establish careers, leaving them behind.

The role of Vegreville as a centre for technology brought a number of young adults and their families' to Vegreville. These newcomers also have few kin living in the community as many of them moved to Vegreville from other communities (where they have kin). Consequently, many seniors and young adults residing in Vegreville have few kin living in or near Vegreville.

The negative relationship between age and organizational membership indicated that advanced age was an important independent variable in Vegreville. Goudy (1990:184) stated "involvement in informal community life declines in the later stages of the life cycle." This

being the case, Vegreville data supported the premise that advanced age had limited the ability of many seniors to participate in local organizations.

4.2.5.5 Education and Social Bonds

The analysis of the Vegreville data included one additional variable, "education" which, when combined with "income" reflects the socio-economic status of the respondents. As the two independent variables are considered indicators of socio-economic status it was expected that their relationship to the dependent variables would be similar. Data indicated that both variables were negatively related to all three indicators for social bonds. Research by O'Brien & Hassinger (1992) supports this relationship.

4.3 Effect of Sentiment on Community Attachment

Table 9 compares the independent variables of length of residence, income, age and education with three measures of local sentiments; social fit, attitude toward leaving and interest in the community. The relationships which proved noteworthy were; age and social fit, age and interest in the community, income and the attitude toward leaving, education and attitude toward moving.

TABLE 9. MODIFIED MULTIPLE REGRESSION EFFECT PARAMETERS AND STANDARD ERROR OF INDEPENDENT VARIABLES ON LOCAL SENTIMENTS*

Independent Variables	Dependent Variables (Local Sentiments)					
	Social Fit		Move Attitude		Community Interest	
	B	SE	B	SE	B	SE
Length of residence	.012	.005	.018	.005	.017	.005
Income	.006	.011	5.178	.012	.007	.012
Age	-.002	.005	.007	.005	1.945	.006
Education	.014	.009	-.003	.009	.019	.010

R Square .015

Adjusted R Square .015

Sample Size n = 107

* Effect parameters are considered significant at the .05 level.

4.3.1 Age and Sentiment Toward the Community

Data indicated that the advanced age of respondents influenced affected social fit and interest in the community. The relationship between age and social fit was negative suggesting that as Vegreville residents aged their sense of belonging in the community declined. This was expressed by the development of social networks and social activities dominated by seniors.

The second variable, community interest, indicated a strong positive relationship. The relationship suggests that senior (long-term) residents are still very interested in community affairs. The implication is that Vegreville seniors have a strong informal influence on decisions made in the community. It is worth noting that numerous seniors remain active in formal organizations in the community and due to their numbers in the community have retained a strong political power base which has ensured that their needs are met.

4.3.2 Attitude Toward Leaving Vegreville

The second measure of community sentiment of importance was the attitude of respondents toward leaving Vegreville (out-migration). The results were of particular interest because together, the independent variables are a measure of socio-economic status. It would have been expected that the results would be similar, but they were not. Instead, the data indicated that as income increased there was a greater incentive to move away from the Vegreville. This may be attributed to higher income residents having acquired additional skills or experience in Vegreville that made it easier to obtain employment in a more attractive location or that commuting from Edmonton became economically feasible. Data did not provide a plausible explanation for the negative relationship between attitude toward leaving the community and education.

4.3.3 Effect of Social Bonds on Community Sentiment

A second regression table prepared by Goudy (1990) examined the effect of local social bonds on local sentiments (Appendix A). His findings indicated that friends were particularly important indicators of sentiments on leaving the community and interest in the community. He stated that,

Organizational memberships and people known are most strongly related to interest in the community. These relationships generally are positive, indicating greater attachment through social bonds leads to greater attachment through sentiments toward the local community. (Goudy, 1990:183)

The exception to this was the presence of local relatives which was negatively related to interest in the community and produced the weakest positive relationships overall.

Table 10 presents a modified multiple regression table that examines the effect of social bonds on local sentiments in Vegreville using independent and dependent variables which are comparable to those used by Goudy. An omission from the Vegreville data was the lack of an independent variable which could be equated to Goudy's "people known in the community." The measures of social bonds used for the independent variables were local friends, local relatives and organizational membership. The dependent variables were social fit (equates to Goudy's "sense of community"), attitude toward leaving and community interest.

TABLE 10. MODIFIED MULTIPLE REGRESSION EFFECT PARAMETERS AND STANDARD ERRORS OF SOCIAL BONDS ON LOCAL SENTIMENTS

Independent Variables	Dependent Variables					
	Social Fit		Sorrow on Leaving		Interest in Community	
	B	SE	B	SE	B	SE
Social Bonds						
Local friends	.102	.037	.069	.038	.058	.040
Local relatives	.142	.108	.064	.113	.132	.118
Organizational membership	.081	.200	-.397	.200	-.667	.212

R Square .032

Adjusted R Square .022

Sample Size n = 107

*Effect parameters are considered significant at the .05 level.

4.3.4 Effect of the Presence of Local Friends on Local Sentiments

Data from Vegreville supported Goudy's findings regarding the importance of local friends on local sentiments with local friends being important to the individual's perception of

"sense of community" (social fit). This was supported by other data from Vegreville which indicated that individuals associate with small social networks operating within the community which contribute to the development of a sense of belonging in the community.

Data from the other two measures of local sentiments (sorrow on leaving and community interest) indicated weaker, positive relationships. Of the two, the sentiments regarding the sorrow on leaving is the most interesting. The presence of local friends usually psychologically binds people to the community. According to Goudy (1990) it was indicative of a sense of belonging and was expected to have a positive relationship with the presence of local friends. Instead, Vegreville data indicated that the presence of local friends had relatively less effect on sorrow on leaving than it did on the individual's sense of belonging.

Intervening variables for "sorrow on leaving" would include socio-economic status, education and age of the respondent. The number of high status individuals in the sample provides a plausible explanation, as these individuals are more geographically mobile. Their ability to move and establish new social contacts (Rieger & Beegle, 1974) would reduce their dependency on friends living in a specific community, thus sorrow on leaving does not measure attachment to Vegreville, but rather to the people. This being the case, place of residence is not critical for retention of social relationships.

The sentiments on "sorrow on leaving" suggest an explanation for the level of "interest in the community," with high status individuals contributing to the weakness of the relationship. These individuals would have high expectations of the community (Stinner, 1990) although they may not actively participate in its development. Consequently, they would not perceive interest in the community as related to having local friends.

4.3.5 Local Relatives and Local Sentiment

Analysis indicated that the presence of relatives was the most important independent variable affecting the strength of local sentiments held by residents. The results from the Vegreville data differ from the results obtained in Goudy's research (1990), with all of the Vegreville relationships being positive. Data suggests that having local relatives contributes to sentimental attachment. Information provided in the interviews supported this, with individuals having extended family members living in the community having more opportunities to interact

with other residents. Newcomers indicated that having relatives living in Vegreville contributed to the development of friendships and a sense of belonging.

In Goudy's research (1990) a negative relationship existed between the number of relatives residing in the community and the interest in the community. In comparison the relationship between having relatives living in the community and interest in the community provided a substantially different result. The Vegreville data exhibited its second strong relationship between these two variables (Table 10). It was evident that having relatives locally in Vegreville contributes to interest in the community. This may be attributed to the relationship between the proportion of relatives living in Vegreville and lengthy residence in the community.

The relationship between local relatives and sentiments on leaving were similar to the relationship with local friends. Having family living in Vegreville, although significant, would not be a deterrent to out-migration.

4.3.6 Organizational Membership and Community Sentiment

Two of the three dependent variables on local sentiment were negatively related to organizational membership. These two were "sorrow on leaving" and "interest in the community." The results were supported by research by Stinner (1990) and Rank and Voss (1982). Research on higher status individuals (which made up a sizeable proportion of the respondents) suggests these individuals have different patterns of social interaction than other residents. High expectations of the community contributes to high status individuals being active in community affairs; however, this involvement does not contribute to sentimental attachment to the community. An interest in community affairs and subsequent involvement in the social power base serves as a means of ensuring that their needs are met while they are residing in the community. While the objective is unlikely to be altruistic in nature, all residents benefit.

The second negative relationship, sorrow on leaving, relates to the objectives of the individual. As high status individuals frequently join organizations for social reasons, organizational membership does not psychologically tie the person to the community. Once membership achieves its purpose it is likely that the individual will refocus interests in another direction.

The one positive relationship in this group was between organizational membership and

social fit. Vegreville data indicated that organizational membership was particularly important for newcomers as a source of social contact. In comparison, long-term members belonged to local organizations because of lengthy commitments to the organizations. Consequently in Vegreville while organizational membership produces a sense of belonging it serves different purposes for newcomers and long-term residents.

5. SUMMARY AND CONCLUSIONS

The research into community attachment in Vegreville indicates that although it has survived as a small rural community, its social structure is becoming more urban in nature. While these changes are difficult to measure, data from Vegreville examined changes in the increased diversity of the resident population with variables linked to the long-term well being of the community as an entity. The importance of this is that changes to the characteristics of the resident population affects attitudes toward the community as a social entity.

In Vegreville urbanization has occurred as a result of an influx of professionally employed people moving to the community when the provincial government established a decentralized research facility. By initiating this research ten years after the in-migration of newcomers occurred information provided insights into the long-term impact of population growth on the community. Data indicated that the length of residence in the community was important variable related to community attachment, supporting research by Goudy (1990) and Kasarda and Janowitz (1974). When sentiments were compared to independent variables it was noted that social ties through local friends or kin were the most important indicators for local sentiments. Individuals with local friends and kin not only felt they fit well socially in the community, but they also exhibited greater interest in, and attachment to the community.

Comparing data from newcomers and long-term residents with respect to community attachment it was evident that newcomers had a lower level of attachment to the community because they lack temporal and social linkages. This suggests that when structural changes occur in the economy of a small community thus leads to the in-migration of new residents. Efforts need to be made to ease the adjustment of these individuals into the social structure of the community to minimize disruptive effects of population growth. As population stability is critical for community attachment, rapid absorption of newcomers into the social structure is necessary

to reduce out-migration by newcomers. By doing this, newcomers will become socially attached to the community in a shorter time and will be more likely to remain in the community and contribute to its future development.

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APPENDIX A

TABLE 1. MODIFIED MULTIPLE REGRESSION, PARAMETERS AND STANDARD ERROR OF INDEPENDENT VARIABLES ON LOCAL SOCIAL BONDS AND SENTIMENTS

Independent Variables	Local Friends		Local Relatives		Organization Membership		Sense of Community		Sorrow on Leaving		Community Interest	
	B	SE	B	SE	B	SE	B	SE	B	SE	B	SE
Length of residence	.39	.014	.381	.018	.065	.013	.210	.013	.171	.014	.094	.013
Income	-.030	.015	-.051	.015	.271	.014	.029	.014	.098	.014	.174	.013
Age	-.003	.015	-.050	.016	.123	.014	.138	.014	.120	.015	.087	.013

Condensed from: Goudy, Willis J. 1990. "Community Attachment in a Rural Community," *Rural Sociology* 55(2):185.

TABLE 2. MODIFIED MULTIPLE REGRESSION EFFECT PARAMETERS AND STANDARD ERRORS OF LOCAL SOCIAL BONDS ON LOCAL SENTIMENTS

	Sense of Community		Sorrow on Leaving		Interest in Community	
	B	SE	B	SE	B	SE
Friends in the community	.225	.013	.219	.014	.054	.013
Relatives in the community	.059	.015	.023	.017	-.046	.015
People known in the community	.525	.021	.240	.020	.303	.022
Organizational membership	.138	.013	.208	.013	.287	.012

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