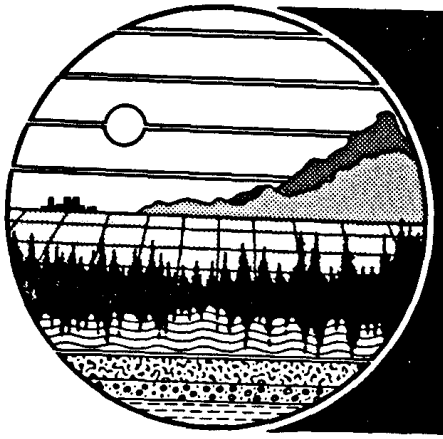

LANDS DIRECTORATE

DIRECTION GÉNÉRALE DES TERRES

THE INFLUENCE OF EXURBANITE SETTLEMENT ON RURAL AREAS : A REVIEW OF THE CANADIAN LITERATURE

WORKING PAPER No. 3

Environment Canada

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THE INFLUENCE OF EXURBANITE SETTLEMENT ON RURAL AREAS: A REVIEW OF THE CANADIAN LITERATURE

Prepared by

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ABSTRACT

The vast majority of Canadians have been concentrated into a relatively small number of cities, as have the populations of the developed world in general. There has been a tendency for these cities to grow into urban areas or axes with influence on the character of the land and life across broad rural areas. One of the most significant aspects of this influence is the result of migration of urban residents (urbanites or exurbanites) to rural areas in the forms of hobby farms and seasonal and low-density non-farm residences.

This working paper presents an overview of recent research on the subject of the settlement of rural areas and its effects upon rural and agricultural activities. The causes and nature of the phenomenon, its historical development, and its occurrence in each of the regions of Canada are described. This is followed by a discussion of the effects on: agricultural land and productivity; 'amenity' lands and ecology; and the rural economy and society. The attitudes and reactions of the rural population are briefly examined, and contemporary government responses described. Finally, some prescriptions for future research work are discussed.

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Jim McRae is a consulting geographer, specializing in rural development. He has previously worked with the Land Resource Research Institute, Agriculture Canada. Jim is currently examining exurbanite influences in rural areas between Montreal and Ottawa for the Lands Directorate.

RESUME

La grande majorité des Canadiens, et de façon générale les populations des pays industrialisés, sont maintenant concentrés dans un nombre relativement petit de villes. En s'agrandissant, ces villes sont devenues des zones urbaines ou des axes urbains modifiant le caractère et les moeurs de vastes régions rurales. La migration de citadins vers les régions rurales, où ils s'éparpillent dans des fermes de plaisance, des maisons d'été et des résidences non agricoles, est un facteur important de ce phénomène.

Le présent document de travail résume les recherches récentes effectuées sur le repeuplement des zones rurales au pays ainsi que son influence sur les activités rurales et agricoles. On y décrit les causes naturelles ainsi que le développement du processus; des recherches ont été effectuées sur différentes manifestations dans chacune des régions du Canada; on touche également aux effets sur les terres et la productivité agricole, sur les zones de loisirs, les incidences écologiques et les modifications de la structure économique et de la société rurale; on jette un bref regard sur les attitudes et les réactions des populations rurales. On y décrit également les réponses de certains gouvernements contemporains. En fin de compte, on y discute des travaux de recherche futurs.

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L'auteur:

Jim McRae est un géographe-conseil, specialisé en développement rural. Il a déjà travaillé pour l'Institut de recherche sur les terres d'Agriculture Canada. Actuellement, il étude l'influence des ex-citadins en milieu rural dans l'axe Ottawa-Montréal, pour la Direction générale des terres.

Introduction

In most of the developed world, populations have become concentrated in cities. Recent estimates by the Science Council of Canada (1977) show that by the year 2000 nearly nine-tenths of Canadians will live in cities occupying less than two percent of the nation's area. But with tremendous strides in transportation and communication, cities have grown into urban areas (Hodge, 1974; Gertler, et al. 1977), expanding at the expense of rural areas, not only in the physical sense, but also in an economic and socio-cultural sense.

This expansion occurs most directly in the 'urban fringe' which is in fact much more urban in character than rural. Between the urban fringe and truly rural areas lies the 'urban shadow', where the first signs of urban influence are occurring. It is more rural than urban and, because of its distance from urban boundaries, direct rural to urban land conversion is minimal. Full discussions of urban fringe/urban shadow relationships are provided by Gertler (1972) in Regional Planning in Canada, pp. 34-47; Russwurm (1974) in The Urban Fringe in Canada: Problems, Research Needs, Policy Implications; and Gertler, et al. (1977) in Changing Canadian Cities: The Next 25 Years, pp. 267-300.

Of key importance is that urban influences in the urban shadow are manifested in non-farm land ownership change for residential/ recreational purposes (Russwurm, 1974; Gertler, et al. 1977): the 'back to the land' movement of urbanites usually seeking residence and relaxation in the countryside within commuting distance of urban employment. Certainly there are other urban influences in urban shadow areas (e.g. the physical encroachments of sand and gravel pits, waste disposal sites, and transportation and communications facilities), but none has as far-reaching consequences (in physical, economic and socio-cultural terms) for rural and agricultural activities. Due to the restrictions of time, this review will be limited to the effects of rural land ownership change for residential/recreational purposes.

Before dealing with the subject in detail, some recent trends in rural (section 1.) and urban areas (section 2.), which have led to the movement of urbanites to the countryside, will be briefly examined.

1. Recent Trends in Rural Areas

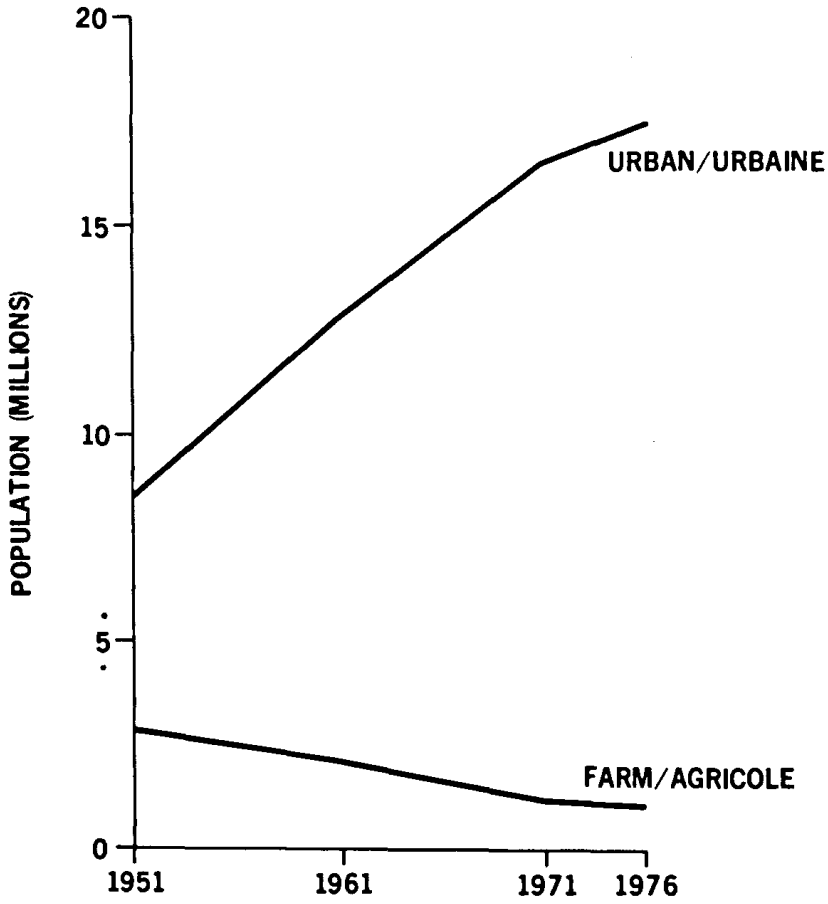
Rural/agricultural areas in North America, due to a variety of factors, have been in a continually weakening position relative to urban areas. Briefly, these factors can be summarized:

a) a continuing migration of farm populations to urban areas, primarily due to farm specialization, mechanization, and enlargement, all of which have reduced rural employment opportunities; and

b) a continuing 'cost-price' squeeze in which the cost of producing agricultural products has risen proportionately more than the prices received for those products.

As indicated in Figure 1, Canada's farm population decreased from almost three million

FIGURE 1: FARM AND URBAN POPULATION (1951 - 1976)
POPULATION RURALE AGRICOLE ET URBAINE (1951 - 1976)



SOURCE: STATISTICS CANADA/STATISTIQUE CANADA

in 1951 to just over one million in 1976; this represents a decline of almost 64%. In contrast, the urban population of the country has doubled in the same period.

Much of the dissatisfaction among farmers stems from the high costs of large-scale mechanized agriculture coupled with low returns from farm product sales. With higher education and increased job opportunities in urban areas, young people especially see little future in farming. This changing social structure can be seen to contribute to the demise of the traditional family farm enterprise.

What may be the most significant impact upon rural depopulation is the weakening of rural social and economic infrastructures. Fewer people in rural areas has meant lack of support for rural schools, churches and businesses, such as feed mills and machinery dealers. Threshold levels may be reached below which social and economic services become non-viable. This is discouraging to the remaining farm population as it must travel increasingly greater distances to reach services. The trend feeds upon itself in a pattern of circular and cumulative causation. In the United States, Clawson (1968) foresees the possible "...complete deterioration of rural infrastructures," due to continued depopulation.

2. Recent Trends in Urban Areas

2.1 Urban Growth

On the other hand, urban areas have been in a continually strengthening position relative to rural areas. Rural to urban migration has been induced by the declining importance of primary occupations in rural areas and by the growth of secondary, tertiary, and quaternary occupations in urban areas. This migration has contributed not only to the increasing socio-political influence of cities, but also to an increasing concentration of economic power in urban areas.

Economic growth in the country as a whole has meant growth of the 'micro-economies' of cities, as it were, with three notable consequences for the countryside:

a) the location in the countryside of service industries to support cities- airports, highways, electrical systems, waste disposal sites, sand and gravel pits, etc. (Rodd, 1976 b);

b) the deconcentration of population and economic activities from congested city cores to the periphery of cities (Zimmer, 1975; Yeates, 1975) has, in effect, extended the urban shadow further into rural areas; and

c) the specialization of individual city functions has increased their interdependency and therefore the importance of inter-city links such as highways, which must traverse rural areas. A fine example of this is the interdependence of Calgary and Edmonton (Zeiber, 1973).

In effect, functional interdependence may create axes of urban growth, rather than simply nodes. Doxiadis (1974) has outlined the growth of urban axes in the United States and Yeates (1975) has detailed the similar growth of the Windsor-Quebec City axis in Canada.

The aspect of these three trends in urban growth of most importance to rural areas is the growth of improved transportation and communications. This is, of course, especially relevant in Canada because of the small but widely dispersed population.

2.2 Urban Population

Of further consequence for rural areas is the parallel effect of economic growth on urban populations. Economic growth has contributed on the one hand to rising incomes and increased leisure time, and on the other, to higher costs of living (housing prices, taxes, etc.) and increasing congestion and rates of crime: altogether, an unattractive urban environment.

The countryside has been seen as an increasingly attractive alternative for living and recreation due to:

a) its inherent characteristics, among which are aesthetic attractiveness (space and natural beauty), and lower land prices and taxes; and

b) characteristics acquired from technological improvements and from general urban growth (deconcentration of functions and population; specialization of city functions): that is, near mile-a-minute transportation and improved communications which make wide rural areas accessible to urbanites (Hodge, 1974).

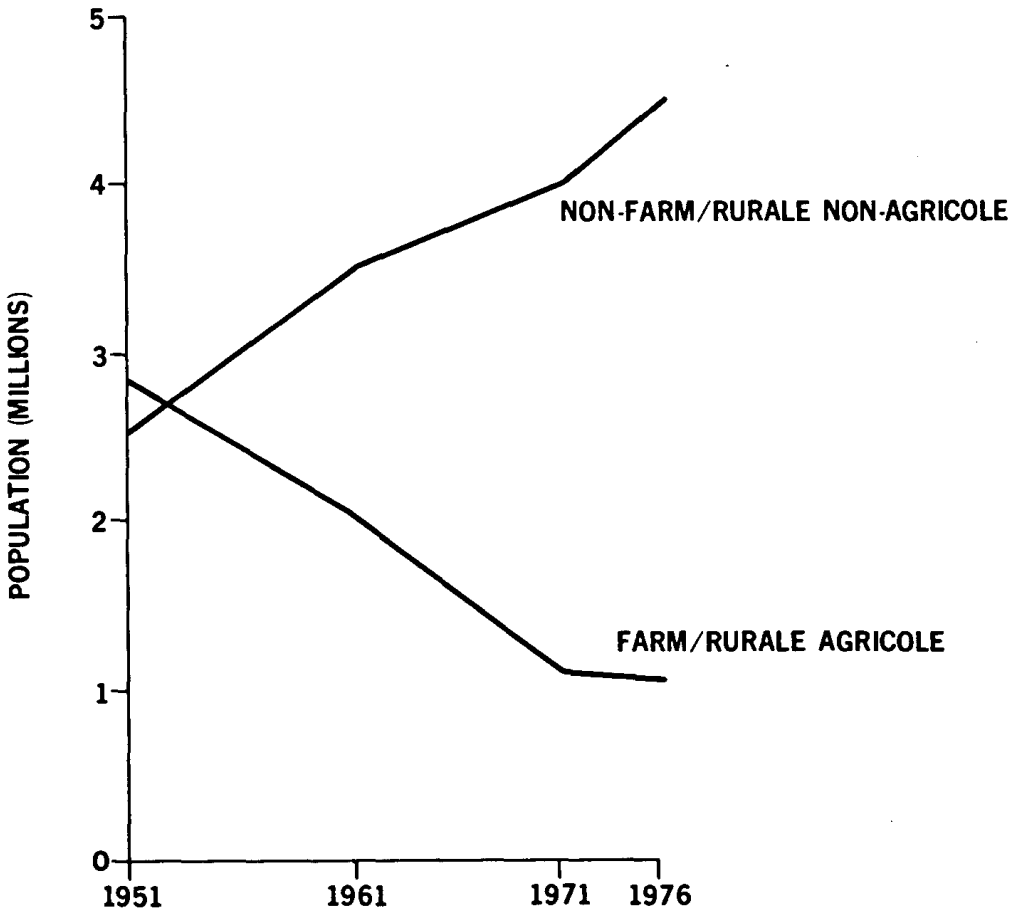
Urbanites have been able to take advantage of good roads and wider low-toll telephone rates to seek residence and relaxation in the countryside. Through limited involvement in farming, they may obtain tax write-offs and other government benefits (Moncrieff and Phillips, 1972). A recent, significant observation is that urbanites are purchasing rural land as a means of protecting their savings from depreciation (Rodd, 1976 b; Carter and Johnston, 1978), a speculation that the general rate of inflation will be lower than the rate of inflation of rural land prices.

3. The Resettlement of the Countryside

The common perception of the rural countryside as an attractive alternative for residence/recreation has led to a reverse flow of population from urban to rural areas. As indicated earlier, the total farm population in Canada declined drastically from 1951 to 1976. However, the total rural population in the same period has remained fairly stable due to the increase of non-farmers (both exurbanites and those who have left farming). As shown in Figure 2, from 1951 to 1976, the portion of non-farmers in the total rural population grew from 48% to almost 77%. In the United States, the rural non-farm population became larger than the rural farm population sometime between 1940 and 1950; by 1970, five of six members of the rural population were non-farmers (Campbell, 1975).

What has happened, as Gerald Walker (1976) aptly describes, is a scattered (or dispersed) re-population or resettlement of the countryside outside of urban areas. For the most part, the new settlers are young couples with families and good educations and jobs, who often intend to retire to their rural properties. (Social and cultural aspects of

FIGURE 2: RURAL POPULATION (1951 - 1976)
POPULATION RURALE (1951 - 1976)



SOURCE: STATISTICS CANADA/STATISTIQUE CANADA

resettlement are dealt with in Section 7., below.)

This phenomenon has been discussed in a similar manner by many writers, including Russwurm (1976) in Canada, Campbell (1975) in the United States, and Cusset (1975) in Western Europe. Resettlement around urban areas in North America will often occur from fifty to one hundred miles from large urban centres, generally related to a daily or weekend commuting distance (Hodge, 1974). The implications of this trend can be seen in that over half of Canada's best agricultural land (Canada Land Inventory Class 1) is located within fifty miles of the centre of the twenty-three largest urban centres, the Census Metropolitan Areas (Manning and McCuaig, 1977; Neimanis, 1979).

3.1 Commuting

Russwurm (1976) hypothesizes that commuting distances will vary with city population size: for example, a city of one million will have a commuting distance of about fifty miles from the centre. However, he realizes that time is also a factor. Rajotte (1973) observes that the most vital factor in the demand for recreation in the Quebec City hinterland is travel time. Improved highway transportation removes the barrier of time/distance from wide rural areas.

Daily commuting distances acceptable to rural non-farm residents have been established in many urban regions (Metropolitan Toronto and Region Transportation Study, 1966; Berry, 1973; Diemer, 1974). Russwurm (1976) observes that these distances seem to conform to his findings of thirty and forty-five minute and twenty-five and thirty mile thresholds for the London, Ontario regional system. However, much longer commuting distances may be associated with various combinations of residence/recreation demand over weekends and for vacations or holidays. Michie and Found (1976) observe that the demand for rural 'estates' in the Toronto region is affected more by environmental quality than by time/distance. A very striking example of the urban field of influence in the Quebec City recreational hinterland is shown by Rajotte (1973). She found increasing extensions of that hinterland, successively through the recreational demands of the local rural population, Quebec City residents, Montrealers and New Yorkers. While this serves to illustrate the variability of the concept of commuting distances, the current review will be restricted to the urban shadow area of single urban regions.

3.2 A Brief History

The dispersed, low density resettlement of the countryside has been observed in the urban shadow of most urban centres in North America (Hart, 1975). It has been a gradual process which has increased in popularity in the last ten to fifteen years.

Punter (1974 a, b) outlines a short history of rural resettlement in southern Ontario, which Russwurm (1976) feels could, in time, be applicable across Canada. In the 1930's, the country estate farms of the wealthy were the original hobby farms. In the 1940's, the middle class and less affluent began a resettlement on small, less attractive lots, but in the 1950's and 1960's, increasing planning controls (e.g. minimum lot sizes) began to restrict resettlement to the more wealthy. However, planning controls are not uniformly or strictly applied across southern Ontario, so that resettlement has been

available to a wide segment of the population (Brown, 1977). At present, rural residential subdivisons and estates are becoming more noticeable (Hodge, 1974; Russwurm, 1976). Due to a variety of factors, resettlement trends are not uniformly applicable. However, Punter's history provides some appreciation of the chronology of resettlement trends which might be applicable across the country.

3.3 Types of Resettlement

Before dealing with the literature describing the actual effects of resettlement, a discussion of the term is warranted. The word itself seems appropriate, because it describes the process well. There are a variety of different labels to describe what are essentially three primary types of resettlement. They are brought about by individuals or groups seeking:

a) permanent residences, which are typically up to twenty-five to thirty acres (Russwurm, 1976; Moncrieff and Phillips, 1972), and associated with aesthetically attractive land or agricultural land. These are often differentiated respectively as estates (Michie and Found, 1976; Punter, 1974 a, b) and rural non-farm residences (Rodd, 1976 a);

b) seasonal residences, which are usually associated with recreation and longer commuting distances. In Ontario, their almost exclusive occurrence on shorezones has been noted (Centre for Resources Development, 1972). For the most part, they have little effect on agricultural areas in the urban shadow; and

c) hobby farms, which are usually larger properties (greater than twenty five to thirty acres) with agricultural land of some description, but also with aesthetically attractive land (Troughton, 1976 a, b; Layton, 1976; McRae, 1977). By definition, the hobby farmers themselves (if they are to be considered as farmers) must be involved to some degree in agriculture. Thus, the identification of hobby farms in the general pattern of resettlement is more difficult.

The differences between hobby farms and permanent residences are not always made clear, for example in Troughton's (1976 a, b) and Layton's (1976) studies in the London urban fringe. Furthermore, the differences between hobby farms and part-time farms are similarly unclear. Brown (1977) feels that those farmers reporting off-farm work are hobby farmers; the Centre for Resources Development (1972) previously has equated off-farm work with part-time farming. In fact, few studies in Canada have yet made clear distinctions between hobby farms and rural non-farm residences (or estates). This will be reflected in the following review of resettlement.

4. Resettlement in the Urban Shadow

Gertler, et al. (1977) note that not all provinces have had the benefit of a detailed examination of resettlement trends; this has occurred only in the highly urbanized areas.

4.1 Ontario

Since resettlement pressures in Canada have been greatest in southern Ontario, it is

appropriate that most studies have dealt with that area. In a succinct summary of recent trends, Rodd says (1974, 23):

> It is clear that,...not only next to our cities, there is a great willingness of farmers to sell and non-farmers to buy farmland.

His comments are based largely on the results of ARDA Report No. 7, Planning for Agriculture in Southern Ontario (Centre for Resources Development, 1972), which analyzed Ontario Hydro data for rural, low density residences, both permanent and seasonal, in the period from 1960 to 1970. The analysis reveals that rural non-farm residents are becoming a feature of the whole landscape, but that the major increase occurs in urban shadow areas. Almost exclusive occurrence of seasonal residences (second homes) on shorezones indicates that their impact on agricultural land is considerably less than that of rural non-farm residences.

Smaller-scale regional studies have confirmed many of these results. In the Toronto region, it has been found that small, rural low-density residences are associated with good agricultural land (Wiltshire, 1973; Rodd, 1976 a) and estates with aesthetically attractive land (Found and Morley, 1972; Michie and Found, 1976). While the density of the more modest non-farm residences (associated with lower incomes by Found and Morley) decrease with distance from Toronto (Rodd, 1976 a, b), Michie and Found (1976) observe no such distance-decay with rural estates up to sixty miles from Toronto. Hodge (1974) argues against the continued existence of distance-decay for rural non-farm residences in the Toronto region. Studies in the London region and across south-western Ontario show that rural low-density residences are scattered across most of the area, but are more strongly associated with urban areas such as London, Windsor, Chatham, Sarnia, and Owen Sound (Russwurm, 1976; Brown, 1977). Coleman (1969) has also found rural non-farm residences associated with agricultural land in Ottawa's urban shadow.

Hobby farms in Ontario seem to be highly associated with both agricultural and aesthetically attractive land in the Toronto area (Punter, 1974a, b), in the London area (Troughton, 1976 a, b; Layton, 1976), and in that part of eastern Ontario which is located in the urban shadow of Montreal (McRae, 1977).

4.2 The Maritimes

Despite the lack of large urban agglomerations, the Maritime provinces have experienced a trend towards exurban residence and recreation, notably in the Musquodoboit valley within the urban shadow of Halifax-Dartmouth (Redpath, 1974). Concern for agriculture in urban shadow areas has been expressed in all the Maritime provinces, largely due to the limited areas of good agricultural land (Canadian Council on Urban and Regional Research, 1976).

4.3 Quebec

Due to the nature of the landscapes in the Quebec City and Montreal regions, much of the resettlement has been associated with recreation in the aesthetically attractive Laurentians (Clibbon, 1963-64; Clibbon et al., 1965-66; Rajotte, 1973). However, agricultural lands in the urban shadow have also been affected by improved transportation (particularly bridges across the St. Lawrence

River) and low-density residential developments (Dion, 1976; Gaudreau, 1976). Beyond Chung's (1969) work on land speculation, there seem to be few studies dealing specifically with rural residential development in the urban shadow of Montreal or Quebec City. This may be due to the popularity of home rental in Montreal (Yeates, 1975), which could indicate a lack of interest in rural residence.

4.4 The Prairies

The repopulation of rural areas in the urban shadow of the major Prairie cities has been observed recently. In Manitoba, the Winnipeg area has experienced the greatest resettlement pressures (Carvalho, 1974) and Brandon is a secondary source of local pressure (Manitoba Department of Municipal Affairs, 1977 a). However, most of the agricultural part of the province is now affected by this residential growth (Manitoba Department of Municipal Affairs, 1977 b). In all areas, such development is highly associated with agricultural land, primarily due to the predominance of flat, prairie farmland in the southern part of Manitoba.

In Alberta, both the Edmonton and Calgary regions have been subject to recent low density country residential developments of three to twenty acres, located within commuting distance. These have occurred primarily on aesthetically attractive landscapes, rather than on good farmland (Moncrieff and Phillips, 1972; Diemer, 1974; *THE GLOBE AND MAIL*, 1979). However, there is also some indication that resettlement is occurring over wider rural areas on agricultural land (Miller and Arthur, 1974).

4.5 British Columbia

With its large population, Vancouver has inevitably cast a distinct urban shadow over the Lower Mainland region of British Columbia. However, pronounced physical constraints have forced residential developments in the urban shadow to become more dense and form actual subdivisions which "...encroach on farmland, forest and coast." (Gibson, 1976). The expanded highway system has been most responsible for the expansion of the urban shadow and allows commuters to travel thirty to forty miles to work each day. A resettlement pattern also exists in the Victoria urban shadow, although on a smaller scale (Forward, 1969).

The main resettlement pressures in British Columbia concentrate in the more aesthetically attractive areas. These include the second home developments in the Whistler Mountain area and in parts of the lower Fraser Valley (Gibson, 1976; Gertler, 1977), both of which affect high quality agricultural lands (Manning and Eddy, 1979).

4.6 The United States

Resettlement pressures in most of Canada are not yet as great as those in the United States. There, major metropolitan urban shadows or urban fields have expanded with the completion of the interstate highway system. Large speculative/recreational/residential subdivisions are located on both high amenity lands (in terms of climate and landscape) and on agricultural lands nearer cities (American Society of Planning Officials, et al., 1976; Hart, 1975). Such resettlement patterns may be a portent of things to come in Canada, particularly in the Windsor-Quebec axis, the Lower Mainland of British Columbia, and in Alberta, where

populations are expected to continue to concentrate. Hodge (1974) and Russwurm (1976) have observed a trend towards rural subdivisions in Canada.

5. The Effects of Resettlement

5.1 'Loss' of Agricultural Land

Most authorities consider that direct losses of farmland to individual non-farm residences are minimal. The Centre for Resources Development (1972) states that, with an average size of five acres, low density residential lots would have removed, between 1960 and 1970, only three percent of the land which was in farms in southern Ontario in 1951. Losses to seasonal residences are assumed to be even less, because their incidence falls off rapidly with distance from water. Miller and Arthur (1974) concluded that concern for the loss of agricultural land to low density resettlement appeared excessive, but that there was a considerable amount of land wastage on many of the properties. In Rodd's (1976 b) more empirical work, he also concluded that actual losses were low. The significance of the losses though may be greater than the concern demonstrated by these researchers, since it is also true that a disproportionate amount of such losses takes place on good agricultural land (Wiltshire, 1973; Rodd, 1976a).

On the other hand, hobby farms may have a more significant impact, simply because they are usually larger than non-farm residences. This is indicated in the London area by Troughton (1976 a, b) and Layton (1976). However, Layton (using the same data as Troughton) found that the hobby farmers are divisible into motivated and unmotivated groups. The motivated group was in fact oriented towards commercial agriculture; the unmotivated group may have been better classified as non-farm residents. Hobby farmers have maintained their land in agricultural use in many other urban shadow areas, including Toronto (Punter, 1974), Montreal (McRae, 1977), and in the United States (Hart, 1975). They are often regarded as good stewards of their land and allies of more conventional commercial farms. At the same time, their concentration on amenity agriculture (e.g. horses and ponies) represents less intensive use of the land than conventional agriculture (Brown, 1977).

5.2 Reduced Productivity of Agricultural Land

5.2.1 Land Values

The impact of low-density resettlement is felt over much wider rural areas than the land actually occupied. The initial success in competing for rural property involves the ability to pay a higher economic rent- that is, the resettlers can outbid farmers for use of land. These higher prices are immediately translated into higher land values over a wider area. Rodd (1976 b, 166-167) explains the process and the problem well:

> The sale of a single piece of land for ...a rural non-farm house will immediately create a shadow of higher values on a surrounding area much larger than the fragment actually used for the house. Farmers will behave as if that real estate value is a true value and it will eventually become built into the cost structure of agriculture.

Munton has noted that this phenomenon occurs far into the urban shadow (1974). As a result, young farmers find it difficult to

enter agriculture, older farmers are induced leave, and those remaining cannot afford to enlarge their ownership of land.

Altogether, the farming community cannot afford to purchase farmland in active land market areas simply because the cost of the land cannot be recovered through agricultural utilization. Significant amounts of farmland may eventually change from agricultural use to an idle state or an urban-oriented use.

5.2.2 Land Rental

Often the only viable alternative for farmers is to rent land from other farmers or from the resettlers who are preoccupied with off-farm, urban employment. Russwurm (1970), in a study of the Toronto to Stratford corridor, has found that the variables correlating most closely with an increase in the rural non-farm population include rented land and the number of tenant farms. Extensive land rental from exurbanites has been noted in the London area (Troughton 1976 a, b; Layton 1976), in south-western Ontario, especially in Essex County (Brown, 1977), in the Toronto region (Punter, 1974 a, b; Parsons, 1975; Rodd 1976 b), in the Montreal region (McRae, 1977; Science Council of Canada, 1977), and in the Brandon area (Manitoba Department of Municipal Affairs, 1977 a). Layton feels that, along with custom work, the rental of land is indicative of a 'symbiotic' relationship between farmers and non-farmers. Andarawewa (1969), Timmons (1972), and Hart (1975) note that land rental (i.e. for farm enlargement) may be a good alternative means of attaining farm economic viability.

However, it has been shown that, due to a lack of absolute control over rented land, bona fide farmers are generally unlikely to farm it as intensively as their own. For the most to part, this may be due to conflicts of opinion between farmers and owners (Andarawewa, 1969; Timmons, 1972) or to lack of security in rental agreements, in terms of time and operating arrangements (Parsons, 1975; Cusset, 1975). As a result, a lack of long range planning (Timmons, 1972) and lowered labour and capital investments (Parsons, 1975) may lead to reduced productivity. In addition, the types of agricultural use on rented land may also be determined by uncertainty about the future of rented land. Andarawewa (1969), Parsons (1975), and Hart (1975) have all observed a trend towards cash cropping on rented land. This represents lower labour and capital investment, which may lead to a depletion of soil fertility.

5.2.3 Uncertainty and Anticipation

Possibly the most damaging influence of resettlement is the resulting higher value of land with its perceived threat to farms and farmland. This creates uncertainty among the farm population as to the long term future of their farm holdings and of agriculture itself. Sinclair (1967), Parsons (1975), Berry, et al. (1976), and others argue that even the 'anticipation' of non-farm land ownership change may result in lower productivity of agriculture. Alternatively, farmers may decide to sell to non-farmers and move to areas where farmland prices are still determined by agricultural use (Cusset, 1975). This latter reaction, in turn, may raise land values in areas presently outside the urban shadow (Munton, 1974).

5.2.4 Conflicts Between Newcomers and Old Timers

Resettlement of farming areas may also reduce agricultural productivity through direct

conflicts between farmers and exurbanites. Motives for moving to rural areas include fresh air, peace, and tranquility; when farm smells and noises become obvious, conflicts can and do arise (Rawson, 1976; Gertler, et al., 1977). Until recently, the Agricultural Code of Practice in Ontario made it impossible for farmers to build or expand barns within 2,000 feet of a residence; the reverse did not apply to exurbanite dwellings (Rodd, 1976 b). Farmers were forced to sell or be content without the improvement required. Some municipalities in Ontario do not allow farmers to use their machines after 10:00 p.m., even in the critical seeding or harvest seasons (Rodd, 1976 b). Farmers often complain about crop damage by exurbanites, which puts further pressure on their operations.

As suggested by Loomer (1958), property lines seem blurred to exurbanites seeking recreation in the countryside; they may perceive farmland in a different manner than property in urban areas. In Alberta, a recent survey showed that while many Albertans use agricultural land for recreation, most of this activity takes place on land owned by someone else who pays the costs (Pattison, 1974). The author notes that the potential for conflicts is increasing. Another study suggests that farmers closest to urban areas are least likely to be interested in using their farms for some form of recreation- they are likely to have already had some bad experiences with exurbanites (Klippenstein and Ironside, 1973).

5.3 'Loss' of Amenity Lands

Conflicts are likely to arise when private recreational/residential use of amenity lands (i.e., shorezones, escarpments, etc.) threatens access by the general public. For example, the private estates of the wealthy along the Niagara escarpment have threatened the continued use of the Bruce Trail by hikers and have destroyed much of the aesthetic quality of the Escarpment (Michie and Found, 1976; Brown, 1977). The Centre for Resources Development (1972) has found extensive use of shorezones in southern Ontario by private developments. In Alberta, resettlement is occurring on high amenity lands, especially near Calgary and Edmonton (Moncrieff and Phillips, 1972).

Throughout the United States, amenity lands are found to be increasingly attractive to speculative/recreational subdivisions. Real conflicts exist on a large scale in proximity to these subdivisions; these include increasing pressure on public lands (i.e. national parks) and decreasing public access (American Society of Planning Officials, et al., 1976).

In another sense of amenity, the fragmentation of the historical island of Orleans by resettlement pressures from Quebec City is proving to be a significant cultural loss (Dion, 1976).

5.4 Ecological Effects

High amenity lands are usually very sensitive to environmental change brought about by resettlement (American Society of Planning Officials, et al., 1976; Cusset, 1975). Such activity may create environmental problems related to ground and surface water pollution from septic tanks and erosion and siltation from run-off (Brown, 1977; American Society of Planning Officials, et al., 1976; Moncrieff and Phillips, 1972). Even under less intensive use, habitats of sensitive vegetation and wildlife may be threatened by

increasing pressure from exurbanites (Rodd, 1976 a).

Added to this, congestion on highways, increased solid waste and litter, and the aesthetic blight of numerous non-farm developments will eventually make urban shadow areas less attractive for resettlement. Exurbanite overuse of urban shadow areas tends to negate the very values originally sought (Gertler, 1972; Rajotte, 1974; Coleman, 1976).

6. Changes in the Rural Economy

6.1 Rural Economic Infrastructures

As noted earlier, the loss of farm population has contributed to a weakening of rural economic and social infrastructures, making farm operation more difficult for those remaining. With the gradual resettlement of the countryside, more farmers may be displaced and agricultural support services further weakened (Rawson, 1976; Berry, et al., 1976). Krueger (1978) cites an excellent example in the Niagara Peninsula, where further loss of orchards to urbanization threatens to close the last remaining fruit-processing firm. The entire fruit growing and processing industry is therefore in jeopardy. Furthermore, many agricultural support services can become reoriented towards the new and more numerous non-farm population and farmer needs may be neglected.

6.2 Influence on Taxes and Services

For rural municipalities in the urban shadow with limited tax revenues, possibly the most common problem is the provision of increased services to a scattered farm and non-farm population. Increases in revenues provided by resettlement generally do not cover related sustained costs (Diemer, 1974; Clout, 1974). The primary increases in costs are those involving demands by resettlers for schools, school busing, roads, and road maintenance. Because of the distances involved, rural municipalities have higher per capita costs for services than urban municipalities. The generally lower level of services in rural areas is of some concern to exurbanites; it is not often apparent to them until they have settled in the countryside. In addition, the costs of increased services are borne by the rural farm population as well (Rodd, 1976 b). Conflicts over taxes and services between the farm and non-farm population are often a result of the process of scattered resettlement in the urban shadow. More compact resettlement would resolve many of these problems.

6.3 General Economic Influence

The repopulation of the countryside in the urban shadow often provides a general economic stimulus to rural areas because of the increased flow of revenue (Rajotte, 1973; Hodge, 1974; American Society of Planning Officials, et al., 1976). Rural businesses profit from increased shopping demands for food, construction materials, and a limited range of farm implements (e.g. tractors and snowblowers are sometimes essential to resettlers in Canada). It may also provide new jobs in the community. Generally, rural settlements within commuting distance of large urban centres experience economic revitalization.

In France, on the other hand, Cusset (1975) finds that seasonal exurbanites spend little money in rural areas, outbid agricultural workers for rural housing, and can cause

shortages of water for farmers. Also, Kirschenbaum (1971) suggests that the youth and education of exurbanites enable them to compete effectively with the rural population for new jobs.

Thus, the net economic impact on rural areas is often a variable one, depending on the characteristics of the local economy and on planning controls as much as on resettlement characteristics (American Society of Planning Officials, et al., 1976). For example, the short-term impact of seasonal residences may be positive, but if local regulations allow their eventual permanent occupancy (e.g. through retirements) longer term effects could be negative (Clout, 1974; American Society of Planning Officials, et al., 1976).

7. Changes in Rural Society and Culture

It has already been noted that in Canada three of four rural residents are now non-farmers; in the United States this proportion has risen to five of six (Section 3.). In addition, the rural non-farm population has grown proportionately more in urban shadow areas (Centre for Resources Development, 1972; Whitney, 1960). However, the social and cultural impact of resettlers can probably be considered to be lagging in proportion to their number, since their rate of rural community participation is initially low (Walker, 1977).

The resettlers in urban shadow areas are often younger than the old-timers, and are well-educated and have high income jobs (i.e., professional/managerial) in cities (Troughton, 1976 a, b; Manitoba Department of Municipal Affairs, 1977 a). They bring with them urban values, tastes, and lifestyles which tend to influence and conflict with more traditional rural lifestyles. While fears have been expressed for the survival of a traditional rural society, several recent studies suggest that it remains quite resilient (Willits, et al., 1973, 1974; Walker, 1976, 1977).

In many cases, exurbanite motives for moving to rural areas include a desire for a return to the rural lifestyle (Hodge, 1974; Troughton, 1976 a, b; McRae, 1977; Manning and Eddy, 1979); exurbanites are likely to be protective of that rurality. However, their perception of rural life (as quiet and pastoral) often conflicts with the reality of commercial agricultural industry, complete with noises and smells.

Time and the growing numbers of resettlers ensure their increasing representation on local councils and school and planning boards. Conflicts may arise (Berry, 1976; Brown, 1977), but exurbanite participation often results in measures to protect rural landscapes and values (McKain, 1953; Graber, 1974).

8. Attitudes and Reactions of the Old Timers

As might be expected, reactions of the local population are variable (Troughton, 1976 a, b; Manitoba Department of Municipal Affairs, 1977 a). Higher values for land ensure a comfortable retirement for farmers, but may also mean greater difficulties in farm enlargement. The lack of intensive use of land by resettlers may be balanced by low costs of land rental.

Exurbanites are often seen by old timers as interfering in rural affairs, for example, by demanding increased expenditures on roads, while complaining about the cost of drainage improvements (McRae, 1977). However, exurbanites may also be able to make valuable contributions to rural society because of expertise in a variety of fields. For example, a local chapter of the Solar Energy Society of Canada was recently formed in the small community of Alexandria, Ontario, due to resettler initiative (personal observation); farmers also showed considerable interest.

9. Attitudes and Reactions of Government

Judging from their involvement, urban influences in rural areas are a source of concern to all levels of government in Canada. At the federal level, the Canada Mortgage and Housing Corporation, Environment Canada and Agriculture Canada have demonstrated interest, either directly (Gierman, 1976, 1977; Neimanis, 1979) or indirectly through support to universities (Yeates, 1975; Troughton, 1976 a, b.) Also, the emergence of the (short-lived) Ministry of State for Urban Affairs has partially ilustrated federal interest in this type of urban problem (Gertler, et al., 1977).

Under the British North America Act, provinces were granted jurisdiction over land use and land use planning. In practice, over the years, these powers have been delegated to municipalities. Unfortunately, this arrangement has been generally ineffective in dealing with the increasing pressures on wide rural areas. As a result, provinces have begun to reclaim their jurisdiction (Robinson, 1977). A similar situation has developed in the United States between state and local governments (American Society of Planning Officials, et al., 1976).

Robinson (1977) presents an excellent review of growing provincial involvement through improved planning legislation (in Alberta, Saskatchewan, Ontario, Quebec, and New Brunswick), new administrative machinery (the Ontario Ministry of Treasury, Economics and Intergovernmental Affairs and coordinating bodies in all other provinces), and public advisory bodies (Alberta Land Use Forum-Pattison, 1974; Diemer, 1974; Miller and Arthur, 1974). Ontario's Farm Classification Advisory Committee fulfilled a similar, but more limited, public advice role in 1974.

Robinson also outlines some examples of direct provincial intervention in protecting sensitive environmental areas (Alberta, British Columbia, and Ontario- the Niagara Escarpment Act) and in preserving agricultural land (Newfoundland and British Columbia- the Land Commission Act). Manning and Eddy (1979) have documented the effects of the British Columbia legislation on the owners and users of land within the protected areas. Direct provincial involvement in farmland preservation also has occurred recently (1977-79) in Ontario (Niagara) and Quebec (the St. Lawrence and Ottawa river lowlands.) In addition, urban fringe development control is being provided through municipal land banks (Alberta and Saskatchewan), restricted development areas (Alberta), and indirectly through land speculation taxes (Ontario) and anti-monopoly actions (Calgary). Gertler, et al. (1975) have analysed regional planning systems in British Columbia, Alberta, Ontario, and Quebec.

The broader concerns of the federal and provincial governments have begun to have some effect at the regional or local level, where land use policies are ultimately applied. Russwurm (1976) indicates that some measure of regional control of rural resettlement is occurring in Ontario- in Huron County (Ontario Ministry of Housing, 1974) and the Regional Municipality of York (Newmarket Planning Department, 1974)- and in Winnipeg (Manitoba Department of Municipal Affairs, 1975 b). Some specific regulations, which have been applied at the local level to deal with resettlement problems, include land use zoning, farmland reserves, preferential taxation for agricultural land, land speculation taxes, and minimum lot sizes. Prince Edward Island has introduced controls which limit non-resident ownership of farm properties and recreational sites (Prince Edward Island Land Use Service Centre and Maritime Resource Management Service, Council of Maritime Premiers, 1978).

However, ambivalence continues in local attitudes and reactions to resettlement. For example, while local governments would like to see good farmland protected, resettlement is viewed as a source of needed tax revenue (Van Vuuren, et al., 1978). Such difficulties are not easily resolved. As a result, provincial policies to control resettlement (e.g., Ontario's Green Paper on Agriculture, 1977) are neither uniformly accepted nor applied at the local level (Brown, 1977).

10. The Future of Resettlement

Researchers generally foresee continued land use problems at the rural-urban interface (Pearson, 1972; Hodge, 1974; Fisheries and Environment Canada, 1975; Robinson, 1977). It is likely that problems created by resettlement in urban shadow areas will continue because of the lack of adequate policies and regulations to deal with them.

More research is required to document the effects of resettlement in different areas and to resolve ambiguities in past research. Specifically, many researchers call for:

a) comparative analysis in urban fringe/urban shadow studies (Troughton, 1976 a, b; Russwurm, 1974; Bryant, 1976);

b) concrete evidence of, for example, the relationship between land ownership and land use change (Munton, 1974; Punter, 1974; Parsons, 1974; Bryant, 1976; McRae, 1977); and

c) more research on the effectiveness of planning instruments in the control of resettlement (Manning and Eddy, 1979).

Munton (1974) and Bryant (1976) have both criticized descriptive studies that attribute completely negative urban influences on rural and agricultural activities.

Recent and future increases in gasoline and oil prices may be indirectly effective in controlling resettlement. However, rapid growth of the phenomenon and its implications in prime agricultural areas make clear that much remains to be done in the areas of research and policy implementation.

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