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Activity Theory and Local Travel Behavior: A Case Study of the Elderly in Atascosa County, Texas

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Activity theory suggests that elderly persons are happiest when they maintain an active lifestyle – including local travel for social and life maintenance purposes – as opposed to when they are disengaging from society. Empirical research generally supports this theory. However, recent research in gerontology and geography suggests that the barriers to such an active lifestyle are indeed complex. This study poses two basic questions: (1) Do high levels and variety of daily travel lead to greater happiness among the elderly? and (2) How do physical barriers (disability and geographic inaccessibility) and social/cultural barriers (income, education, religious beliefs, or ethnicity) inhibit this travel? The results of a survey of 101 elderly residents in Atascosa County (south of San Antonio, Texas) in the summer of 2001 support the contention that the number and variety of local trips are directly related to happiness. Regarding barriers, the number of social trips among the elderly is lower if they live in rural areas and are married or not living alone. Contrary to expectations, social trips are actually higher for Hispanics and those of low income and educational levels. These relationships are explained in terms of the notions of social fulfillment and cultural solidarity. Medical trips, in contrast to social trips, are less frequent among low socio-economic status individuals and Hispanics, suggesting that social networking and cultural solidarity cannot overcome distance in the case of this vital life-maintenance function. *Key Words: elderly, rural transportation, local travel, activity theory, social trips, happiness and aging, Texas.*

> *Because of the diffuse nature of our society… very few individuals live within short, easily accessible distances to such places as hospitals, churches, shopping centers, theaters, or the homes of friends and relatives. The lack of adequate transportation may force individuals to limit health care… Furthermore, the lack of transportation can force aged individuals to disengage and to become socially isolated (Crandall 1980: 292).*

For some elderly in the United States, retirement has brought an idealized lifestyle of social engagements, travel, hobbies, and independent living. This "ideal" has been spawned, in part, by modern societal norms. The elderly are no longer accorded their historical position

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of centrality in family and society (Fischer 1977). Instead, they have been encouraged to defer to younger persons on matters of leadership and decision making, but otherwise to remain active. The "ideal" elderly lifestyle – maintaining middle age levels of activity into old age – suggests a rather high level of local, periodic travel for life-maintenance and social purposes.

Are the high levels of local travel implied by this lifestyle "ideal" from the point of view of the elderly, and is such travel realized for some groups of elderly and not others? These are the questions addressed in this study. Specifically, (1) Do high levels and variety of daily travel lead to happiness among the elderly? (2) Are there social and cultural barriers (income, education, religious beliefs, or ethnicity) that inhibit this travel? (3) Are there physical barriers (disability and geographic inaccessibility) to such travel? A case study (directed by the author) of a sample of elderly residents 60 years of age and older in Atascosa County, just south of Bexar County (San Antonio), Texas, allows us to speak to these questions. The study reveals the relationships between attitudes, travel behavior, and demographics for a sample of elderly residents living in small towns and rural areas adjacent to a large southwestern metropolis.

Theory

"Disengagement" and "activity" are concepts frequently used in the gerontology literature. Disengagement theory was one of two major theories, developed in the 1950s, addressing the determinants of life satisfaction among the elderly. Basically, it holds that a mutual withdrawal between the aging person and society leads to happiness on the part of the person (who doesn't wish to continue the demands and anxieties of prior roles), and to a more efficient society (in that more competent individuals can now move into these roles). The disengaged person reduces the number and intensity of his or her former roles, and as a result also reduces the level and variety of activities. This view has also been referred to as the "role strain hypothesis" (Adelmann 1994; Cochran et al. 1999). The antithesis of disengagement theory is activity theory. In this theory, happiness depends on maintaining prior activity levels, not relinquishing them; the more roles lost, the greater the drop in life satisfaction, unless one is able to replace them with equally fulfilling roles – a point of view more recently referred to as the "role enhancement hypothesis"

(Crandall 1980; Hong and Seltzer 1995; Marshall 1999; Cochran et al. 1999). The activities referred to in these theories are commonly referred to as ADLs (activities of daily living), as opposed to more episodic, infrequent activities. ADLs include regular, localized undertakings such as personal maintenance, chores and life maintenance (which are referred to as IADLs – "instrumental activities of daily living"), leisure activities, social activities, work, resting, etc. Trips to medical checkups and treatment are usually included in ADLs. More than half of the ADLs of an average person involve travel away from the home (see Horgas et al. 1998).

Much of the recent literature appears to support activity theory and discredit disengagement theory (Marshall 1999; Achenbaum and Bengtson 1994) – including studies by geographers (Peace 1982; Meyer and Cromley 1989; Leinbach et al. 1994; Everitt and Gfellner 1996; Smith 2001). The original concepts of activity theory have been significantly elaborated with the addition of intervening or mediating variables such as the stress-reduction function of multiple roles (Cochran et al. 1999), and antecedent variables such as the size of his/her social support network (Antonucci et al. 1997; Bienenfeld et al. 1997), and the intensity of his/her intimate relationship with one other individual, in particular a spouse (Cochran et al. 1999; Lemon et al. 1972).

I will refer to the antecedent demographic factors that influence activity in the elderly as predisposition toward activity factors. There is an extensive literature on these factors. Physical mobility plays a strong role in elderly activity levels (Bull and Bane 1993; Horgas et al. 1998). In this study, mobility is treated as a control, to allow the unencumbered examination of the role of other factors (see below). Advancing-age plays a role in limiting many types of activities, independent of the more specific limitations presented by physical disability. As suggested above, one's living arrangement – i.e., whether living alone, with a spouse, or with a family member or friend – is also important. A person living alone, interestingly, has a stronger motivation for socially interactive activities outside the home, but at the same time, may lack someone to take her to such activities. Income and education, similarly, have an ambiguous effect on social activities outside the home. In some studies higher income and educational levels have been associated with more social contacts (Cochran et al. 1999; Krause and Borawski-Clark 1995). Higher

education and income expand one's role-horizons and provide more funds for maintaining a vehicle. Others have appeared to arrive at the opposite conclusion (Williams and Wilson 2001; Krause 2001). In at least one study, income and education have negligible or ambiguous effects from one analysis to the next (Horgas et al. 1998). In the cases where income and education relate inversely to social contacts, ethnicity appears to interact with socio-economic status (SES), the components of which are education, income, and occupation. For example Mexican Americans, who tend to have lower income and education, for cultural reasons tend to have larger social networks than "Anglos" (Williams and Wilson 2001), and their minority status may reinforce these networks. In addition, religion is a more crucial social activity in the lives of minority than non-minority elderly (Krause 2001; Williams and Wilson 2001). This activity is deeply ingrained in Mexican Americans' ability to manage fear and anxiety, and it involves travel away from home for regular church attendance as well as participation in religious celebrations and community projects.

Another set of factors – dealing with spatial access – is generally ignored in the gerontological literature. Geographers, however, see distance and access to transportation as major constraints on activity levels of the elderly (Peace 1982; Robson 1982; Skelton 1982; Meyer and Cromley 1989; Hanson and Hanson 1993; Leinbach et al. 1994; Everitt and Gfellner 1996; Gant 1997; Golledge and Stimson 1997: 550-552). In our dispersed, automobile-dependent society, many activities require travel away from home. If someone lives in a rural area, social activities such as visits to senior citizens centers, churches, restaurants, and stores may be precluded because they require travel to a city. It is precisely such activities that help the older person exercise multiple roles and maintain a positive mental state, as posited by activity theory. However, geographers are equally concerned with life-maintenance travel activity – purchasing food, going to the bank or post office, and keeping medical appointments. Lack of access to medical care may be life-threatening for patients needing dialysis or chemotherapy treatments. [Barbara Rasin Price, the deputy director of the Community Transportation Association of America, cites the case of an elderly Illinois woman who wrote thanking her for establishing a volunteer-driver program in her community. The woman

wrote: "Oh, Thank goodness someone's doing this, because I was supposed to have chemotherapy a year ago, but I couldn't afford to get to Rockford" (cited in Phillips 1993)].

This study investigates the relationships between four sets of factors extracted from this literature – happiness, local travel to ADLs, spatial access to these activities, and predisposition toward the activities (Figure 1). The concerns of disengagement theory and activity theory are subsumed in relationship "a". Relations "b" and "c" represent the respective influences of spatial access and predisposition toward (particular) activities on the frequency and variety of travel to these activities. Relation "d" represents the physical condition of the person (specifically, the mobility of the person), which influences activity through its role as a control on both spatial access and predisposition toward activity. With this in mind, I advance the following three conceptual hypotheses for testing: (1) Happiness among the elderly is directly related to the frequency and variety of their local travel for social and life-maintenance purposes. (2) The frequency and variety of local travel for social reasons are directly related to the predisposition toward activity. Specifically, social trips are hypothesized to be more numerous and varied for the unmarried, those living alone, those of higher income and educational levels, and for Anglos as opposed to Hispanics. (3) The frequency and variety of local travel for social reasons are directly related to spatial access. Specifically, social trips are hypothesized to be more numerous and varied for those living in urban places (as opposed to rural), and for those who drive a car;

Study Design: Transportation and the Elderly in Atascosa County

Atascosa County, the focus of the case study, is chiefly a resource-dependent county of 39,000 just south of San Antonio. Its economic base revolves around oil extraction and agriculture (peanuts, strawberries, feed, and cattle grazing). Pleasanton, the largest city and having a population of about 8000, is 35 miles from downtown San Antonio. The county is somewhat over 50% rural, with the urban population living in the three towns of Pleasanton, Jourdanton, and Poteet (Figure 2). A substantial proportion of the workforce in the northern part of the county commutes to San Antonio to work (Jones et al. 1990; 1987). Approximately 12% of Atascosa County's

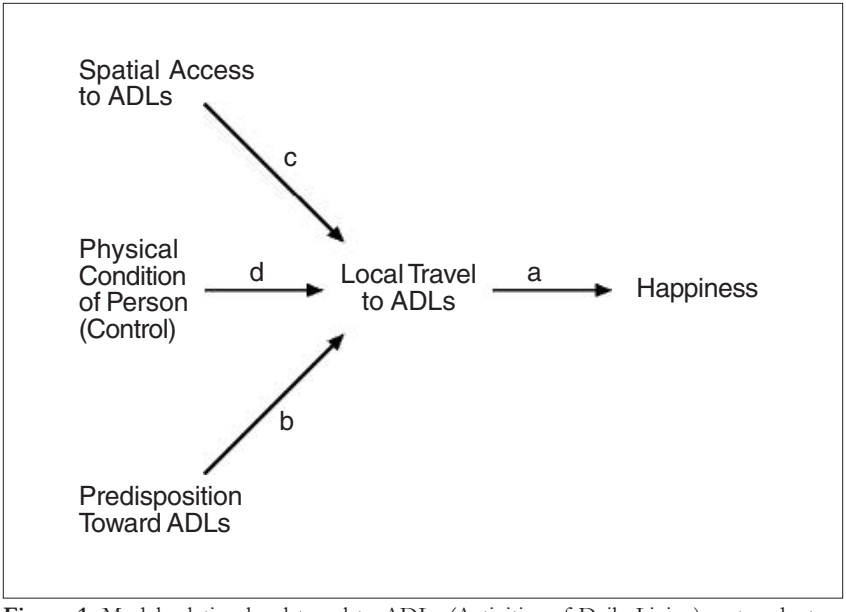

Figure 1. Model relating local travel to ADLs (Activities of Daily Living), antecedent factors, and happiness, for and elderly person.

population is 65 years of age and more, compared to 10% in Texas. Unlike the scenic cornice of Hill Country counties just north of San Antonio, Atascosa lacks the attractions and amenities for wealthy retirees or summer-home residents. However, its lower land costs, peaceful landscape, and friendly people make the county attractive for older persons of limited means – many of whom have lived there all their lives. Social life for county residents is centered on churches, schools, restaurants and shopping establishments.

The design of this research follows that of other studies of travel behavior and needs of the rural elderly (notably, Leinbach et al. 1994). In June, 2001, I was awarded a small grant by the Alamo Area Council of Governments (AACOG) in San Antonio to evaluate the transport use and needs of elderly Atascosa County residents. A prime concern of AACOG was to evaluate the perception and use of its rural public transport program in the county (subcontracted to a non-profit corporation operating out of Seguin). Rather than rely on interviews with a few officials and opinion leaders – a selective process that can lead to bias – I elected to survey a representative sample of

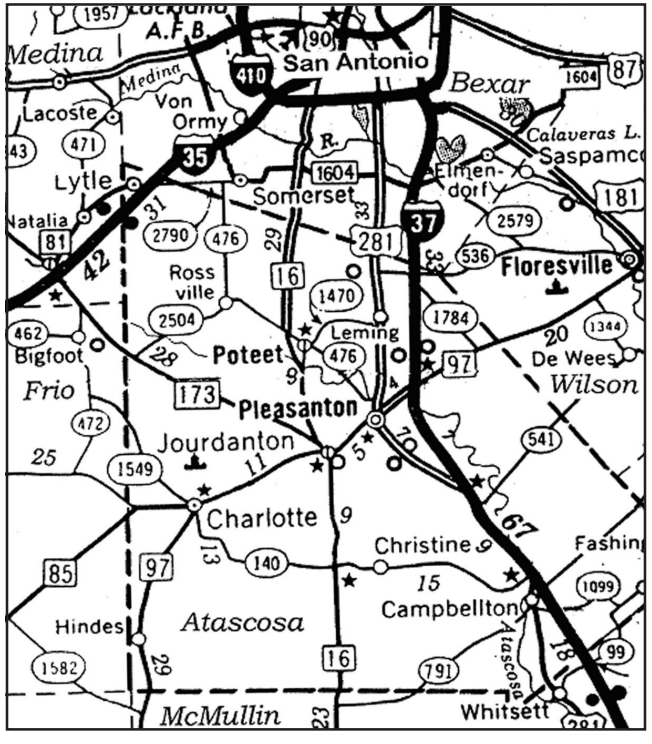

Figure 2. Atascosa County and its surroundings.

elderly county residents. In this, I was assisted by ten bilingual students concurrently taking my Geography of Texas summer term class at the University of Texas at San Antonio (they received an hourly stipend in addition to a grade on their summary of knowledge gained from their interviews).

During visits to the county I discovered that the community-run senior citizens centers, located in five different towns, offered salient advantages for the interviews. Here, elderly visitors could be interviewed in a fixed block of time before and after the noon meal. Even more important from the standpoint of representative sampling was the fact that the "Meals on Wheels" programs were run from these same centers: my students could accompany the home-delivered meal drivers to obtain interviews with the more dispersed,

immobile residents whom they would otherwise have missed. I allocated students to senior citizen centers and home-delivery routes based on their bilingual skills and on a predetermined sampling frame. This frame also included interviews with a limited number of senior citizens in private and public-housing apartments in the county. With this sampling procedure, I endeavored to obtain a representative sample of elderly residents living inside and outside the urban places of Pleasanton, Poteet, and Jourdanton. The interviews were carried out on several days in late June and early July, 2001. The students and I dispersed to the different sites and interviewed visitors to the senior citizens centers in Poteet, Pleasanton, Charlotte, Christine, and Lytle, in addition to residents who were on the home-delivered meal routes and in apartments. The survey questionnaire was two pages long and was administered in either its English or Spanish versions, depending on the wishes of the respondent. Students were given copies of letters from me, the Atascosa County Judge, and the AACOG Rural Aging Programs Manager, explaining the purpose and conduct of the study – for the perusal of anyone who was interested. Just after our first day of interviews, an article about the project appeared in *The Pleasanton Express*.

As a result of the survey, we obtained 101 completed questionnaires on the needs and perceptions of residents 60 years old and above – 54 questionnaires (53.5%) from the three urban places of Pleasanton, Poteet, and Jourdanton, and 47 (46.5%) from elsewhere in the county. These proportions are close to the actual (1990 Census) proportions for residents ^{3} 60 (50.5% and 49.5%, respectively), even though the population of the county as a whole was (and is) somewhat more rural than urban. While representative regarding rurality, our procedure over-sampled Hispanics (65% of our sample, versus approximately 50% in the total population of the county), and women (64% of our sample, versus 56% among those ^{3} 60 in the population). This is partly an artifact of the large proportion of senior citizen center visitors and meal recipients in the sample, whose clientele include many Hispanic women (This should be noted in the analysis below). Although it hinders our inference to the total elderly population of the county, this over-sampling does serve the larger purposes of the study, since lack of mobility is a particular problem of elderly women and Hispanics in the county.

A Profile of the Atascosa Sample

The demographics of the Atascosa sample echo a litany of ill health, income deficiency, and isolation. The conclusions below are based on both Table 1, and on further analyses of the data not represented in the table. Some two thirds (63%) of the respondents classified their health as fair to very poor. Three out of four (74%) stated that they were being treated for some medical condition, including 33% for a single condition and 41% for multiple conditions. A finer breakdown of medical problems (not shown in the table) reveals that nearly one in four (23%) of the respondents were being treated for diabetes – 27% among Hispanics and 18% among Anglos. In addition, high blood pressure was a serious problem for one third (32%), and a heart condition for one sixth (17%) of the respondents. These are all conditions that require regular monitoring by a physician. The existence of so many people with medical problems in the sample implies both personal immobility and the need to travel to a doctor's office – and the data support both implications. Two thirds reported their physical ability to get around as "difficult at times, always difficult, or impossible;" some 55% have a car, but only 43% both have and drive a car. When asked to give reasons why better public transportation is needed in Atascosa County, 59% of those who responded gave "medical checkups" as their first reason (the next closest was grocery shopping at 23%). One of the most riveting statistics is the median annual income – $6211 – a bit more than $500 per month. In fact, four out of five in the sample report that they live on less than $10,000 per year. Almost half (48%) of Hispanic respondents live on less than $5000, compared to one fifth (19%) of others (predominantly Anglos). In our affluent society, these are sad and sobering facts. The sample has minimal schooling – averaging little more than primary school. Although not shown in the table, it should be noted that Hispanic ethnicity, education, and income are related: 50% of the Hispanics rely on less than $5000 per year, whereas only 17% of non-Hispanics do; and 75% of Hispanics had completed no more than 6 years of education, compared to 12% of non-Hispanics. These are quite strong and significant relationships. Almost two thirds (64.4%) of the sample are female. Nearly as many (61.6%) are not currently married (68.3% for women, 50% for men). Finally, more than half (55.4%) of the sample lives

Table 1. Profile of the sample of Atascosa elderly (overall n=101)

Characteristic		n
Median age, in years	75	99
Percent living outside Pleasanton, Poteet, & Jourdanton (% urban)	46.5	101
Percent female	64.4	101
Percent Hispanic	64.6	99
Percent characterizing health as "fair, poor, or very poor"	63.0	100
Percent being treated for a medical condition	74.3	101
Percent stating physical ability to get around		
Percent stating physical ability to get around as "easy"	34.7	95
Percent possessing a car	54.5	101
Percent driving a car	50.0	100
Percent possessing and driving a car	43.0	100
Median annual income (calculated from categorical data)	$6,211	86
Median number of school years completed	7	96
Percent evaluating their English-speaking ability as "fair to very poor"	52.5	99
Percent currently married	38.4	99
Percent who live alone	55.4	101
Percent rating themselves as "happy or very happy"	80.0	100
Percent rating their life satisfaction as "satisfied or completely satisfied"	85.0	100
Percent stating they feel "optimistic or very optimistic" about the future	65.6	96

alone (60% of women and 50% of men). It is apparent that these last two variables are related; in fact, 80% of the unmarried live alone, versus only 16% of the married. Given this portrait of sickness, scarcity of resources, and solitude, it comes as a surprise that the respondents report themselves to be happy, satisfied, and optimistic. This may mark (in part) an interviewer effect: the impact of young, vibrant interviewers on the responses of our elderly sample (see Babbie 1989: 245).

Having described both the predictors of trip activity and the levels of contentment of the Atascosa sample, it remains to examine trip activity itself. It is first necessary to define "trip." Following activity-theory conventions, a

trip is defined as a visit to a particular activity point such as a grocer, doctor's office, restaurant, senior citizens center, etc. This differs from the geographic definition – a journey away from one's home that may include visits to several different activity points. In the following sections, I consider trips to be separate visits in the activity sense, whether they are made as part of single-purpose or multiple-purpose journeys. I classify trips as either "social" or "life maintenance," following activity-theory conventions, although in some cases (e.g., visiting a beauty or barber shop, or a senior citizens center) they could conceivably be placed in either or both categories.

Residents in our sample took an average of 1.3 trips per day during June 2001 – a figure somewhat below the figure of 2.4 trips per day for all U.S. residents over 65 years of age (Kirasic 2000: 160). However, the distribution was unequal; ranked from most to fewest trips, the top 20% of respondents averaged 3½ trips per day, while the bottom 20% averaged one trip every 8 days. Certain trips occupied a regular place in the monthly schedule of sampled residents (Table 2) – including shopping for groceries (82 of the 101 respondents went at least once a month), going for a medical checkup (68), visiting the senior citizens center (59), eating at a restaurant (59), and attending church (57). It is evident that both life maintenance activities (the first two) and social activities (the latter three) were important, and in fact in terms of the 3515 total trips taken by all respondents in June 2001, the percentages are nearly equal (50.8% life maintenance, 49.2% social). Visits to the senior citizens centers dominate the total trip statistics, with 20.4% (Table 2), which is in part an artifact of the sample selection procedure, followed by picking up mail at the post office (16.3%), shopping for groceries (11.1%), and exercise (10.0%). It appears that social activities are as important numerically as life maintenance activities among our sample. In the absence of regular visits with family (a bit more than one third of respondents visited with family in the past month), the social life of the Atascosa County sample revolves around interaction and meals with friends at the senior citizens centers, attending church, eating out, and occasionally going shopping. Despite evidence of travel activity, its incidence among our sample is only a fraction of what would be common among (say) middle-aged residents of San Antonio, and considerably less than the U.S. average for local trips (Kirasic 2000). Consider that of the 101

Table 2. Incidence and frequency of trips in June, 2001, by purpose (n = 101).

Purpose of Trip	Number of respondents who took trip in June 2001	Percentage of respondents' total trips (total = 100%)	Type of trip (L = Life mainentance; S = Social)[a]
Shop for groceries	82	11.1	L
Medical checkup	68	3.0	L
Visit senior citizens' center	59	20.4	S
Eat at restaurant	59	7.2	S
Attend church	57	9.1	S
Go to bank	54	3.2	L
Drugstore	54	3.2	L
Shopping (other than grocery)	46	4.3	S
Post office	45	16.3	L
Beauty/ barber shop	38	1.5	L
Visit with family	37	4.6	S
Medical treatment	30	1.1	L
Exercise	24	10.0	L
Committee meeting	17	1.0	S
Special church activity	16	1.0	S
Volunteer work	11	1.3	S
Laundry or cleaners	10	1.0	L
Dentist office visit	8	.3	L
Visit library	3	.3	S
Go to movie	1	.03	S

[a] Based on principal function of trip.

respondents, only 1 went to a movie during the month and only 3 visited a library. Forty one didn't eat out, 43 didn't go to church, and 54 didn't shop except for groceries. This is a rather sad picture in a society in which mobility is considered a god-given right.

Happiness and Local Trips among the Atascosa Elderly

Activity theory suggests that happiness will be associated with more local trips and a greater variety of local trips. Disengagement theory suggests the opposite. Which theory explains the attitudes and behavior of our Atascosa sample?

The results uniformly support activity theory. Consider first trip frequency. Those respondents with fewer than 24 total trips per month (the median) were happy at 84% the rate of those with 24 or more trips – i.e., the "happiness index," represented by the ratio between the percent happy for those below and above the trip median, respectively, is .84 (Table 3). Conversely, and more graphically, those respondents with fewer than 24 trips tended to be unhappy at twice the rate of those who had 24 or more trips – i.e., the "unhappiness index" is approximately 2 (1.98). The strength of relationship (phi) for this cross-tabulation is statistically significant at 0.10. When life-maintenance trips and social trips are considered separately, the same conclusion holds (although the relationships are not statistically significant at .10). Rather than a refuge from pressures of the outside world, as disengagement theorists suggest, these results confirm that staying home leads to more unhappiness than traveling about.

Now consider trip variety. Those with fewer than 7 different types of trips per month (the median) were again unhappy at twice the rate of those with 7 or above (the unhappiness index is 1.95). The table also reveals the much more important role of variety of social trips, compared to variety of life-maintenance trips, in one's happiness. The respective unhappiness indices are 2.30 and 1.11. I interpret this as follows. With life maintenance trips, variety does not matter as much because the trips are not intrinsically interesting other than their role in meeting basic needs and getting the person away from the home. With social trips, different types are associated with different life roles and learning experiences, and so variety does matter. The importance

Table 3. "Happiness" and "Unhappiness" in relation to trip frequency and variety in June, 2001

		Percent happy or unhappy for respondents whose number of trips are:				Index: Ratio of percentages,	Sig. of
		Below the median[a] (n		Above the median[a] (		below to above	phi
TRIP FREQUENCY: Number of trips last month							
Total trips (median = 24)	Percent happy	72.9	(35)	86.3	(44)	.84[b]	
	Percent unhappy	27.1	(13)	13.7	(7)	1.98[c]	.098[e]
	Total	100.0	(48)	100.0	(51)		
Life maintenance trips (median = 11)	Percent happy	74.5		(35)	84.6	(44)	.88[b]
	Percent unhappy	25.5	(12)	15.4	(8)	1.66[c]	.209
	Total	100.0	(47)	100.0	(52)		
Social trips (median = 9.5)	Percent happy	75.5	(37)	84.0	(42)	.89[b]	
	Percent unhappy	24.5	(12)	16.0	(8)	1.53[c]	.293
	Total	100.0	(49)	100.0	(50)		
TRIP VARIETY[b]: No. of types of trips last month							
Total trips (median = 7)	Percent happy	72.1	(31)	85.7	(48)	.84[b]	
	Percent unhappy	27.9	(12)	14.3	(8)	1.95[c]	.094[e]
	Total	100.0	(43)	100.0	(56)		
Life maintenance trips (median = 4)	Percent happy	78.9		(45)	81.0	(34)	.97[b]
	Percent unhappy	21.1	(12)	19.0	(8)	1.11[c]	.806
	Total	100.0	(57)	100.0	(42)		
Social trips (median = 2.5)	Percent happy	72.0	(36)	87.8	(43)	.82[b]	
	Percent unhappy	28.0	(14)	12.2	(6)	2.30[c]	.050[d]
	Total	100.0	(50)	100.0	(49)		

[a] - Number of cases in crosstabular subcell included in parentheses; median refers to median of entire sample
[b] - "Happiness Index" [c] - "Unhappiness Index" [d] - Significance at .05 [e] - Significance at .10

of maintaining different social roles and of staying active in several social arenas is in fact a pivotal contention of activity theory.

Spatial and Demographic Determinants of Social Trips

We now arrive at the crux of the analysis. How do social trip frequencies respond to spatial barriers and demographic factors? Are the roles of these spatial and demographic factors explicable in terms of theory as well as the lives of the sample of Atascosa elderly? In these analyses, mean number of social trips is used as the indicator for trip frequency, and mean number of types of social trips (of the 10 possible; see Table 2) as the indicator of trip variety. These indicators reflect several key dimensions of the concept of ADLs in gerontology.

Table 4 examines the relationship between mean number of social trips of different types – in addition to mean trip variety – and a series of explanatory variables chosen to test notions derived from the literature. The use of mean trips by subcategories of these variables immediately brings the question of dispersion about the subcategory means. Therefore, I have calculated the F statistic (most often used to test for significance in analyses of variance: Blalock 1979: 346), which adjusts the difference of means by the within-category dispersion. The significance of F (those pairs of means significantly different from each other at .10) is indicated in Table 4. Four subtypes of social trips are given: visits to a senior citizen's center, attendance at church, eating at a restaurant, and visiting family. These subtypes, in this order, accounted for more social trips than any others (Table 2). In the table, only those respondents who declared their mobility as "fair to good" are considered (i.e., mobility is a control rather than a variable to be evaluated). The reason for eliminating cases in this manner is straightforward. The literature on ADLs of the elderly has established that physical disability is a major factor limiting social trips (Horgas et al. 1998; Baltes and Baltes 1990; Bull and Bane 1993). As one study puts it, "discretionary activities are usually the first ones to be selected out when impairments strike" (Horgas et al.: 556). If this is the case, disability will exert a strong but obvious influence on social trips that may cloud or mask the influence of other factors in this study – the spatial and demographic factors that are the foci of my hypotheses.

Table 4. Mean Numbers of Trips for Different Purposes, June 2001, by Explanatory Attributes

Explanatory Variables and Attributes		n	Mean Number of Social Trips, by Trip Purpose[a]						Mean Number of Medical Check-up Trips[b]
			Social Trips	Senior Center	Attend Church	Eat at Rest.	Visit Family	Total Types, Social Trips	
Overall sample means			21.4	9.0	3.9	3.1	1.9	3.3	1.22
Age:	60 to 75	33	21.6	7.7	3.8	3.4	2.8	3.6	1.29
	76 +	38	21.3	10.5	4.0	2.8	1.1	3.1	1.14
Residence:	Urban	40	24.6	9.7	**5.0**	**4.2**	1.5	3.5	1.40
	Rural	33	16.8	8.0	**2.4**	**1.6**	2.3	3.1	1.13
Owns and drives a car:									
	Yes	48	20.3	7.5	3.9	2.9	1.9	3.4	1.34
	No	25	22.7	11.8	3.6	3.2	1.9	3.1	1.15
Lives alone:	Yes	40	22.4	10.2	3.9	2.4	2.2	3.5	**1.49**
	No	33	19.5	7.4	3.7	3.8	1.5	3.1	**.96**
Married:	No	44	24.3	10.7	4.7	3.6	1.9	3.5	**1.48**
	Yes	27	16.7	6.0	2.7	2.3	2.0	3.3	**.90**
Annual personal income:									
	$5000 >	36	**14.6**	**5.6**	**2.9**	**2.1**	**1.1**	**2.7**	1.35
	< $5000	26	**34.3**	**14.9**	**6.1**	**4.9**	**3.5**	**4.5**	1.23
School years completed:									
	7 or more	34	18.4	7.4	**2.4**	2.6	2.4	3.5	1.39
	6 or fewer	36	24.4	10.4	**5.4**	3.6	1.5	3.3	1.14
Ethnicity:	Non-Hispanic	26	15.4	5.7	**1.8**	2.2	2.0	3.2	1.43
	Hispanic	45	23.6	9.9	**5.0**	3.6	1.8	3.3	1.18

[a] - Considers only those respondents with fair to good mobility. [b] - Considers only those respondents characterizing their health as fair, poor, or very poor (overall n=63). Note: Mean comparisons for which F statistic is significant at .10 are shown in bold.

Controlling for mobility eliminates 21 respondents who are immobile, but still leaves four fifths of the cases for further analysis. [It should be noted that mobility shows a significant relationship (at .005) with social trips, but fails to obtain a significant relationship with any of the explanatory variables in Table 4 – the highest being significant only at .153].

Age plays a surprisingly weak role in social trips; those above 75 are just as likely to take these trips as those below. These results vary by purpose of trip. Visits to the senior centers are more prevalent among the older (Table 4), who (separate analyses reveal) tend to not be married and tend to live alone, both of which are factors that promote more visits to these centers. Counterbalancing this trend, visits to family are more than two times as frequent for the younger as for the "aged elderly," and eating at a restaurant is noticeably higher for the younger cohort as well.

Two spatial access indicators are considered. Rural residence, I have argued, makes social trips more problematical and this study supports that argument (Table 4). Rural residents have only two-thirds the level of social trips of urban dwellers (16.8 compared to 24.6 trips in a month). Again, this varies by trip purpose. The difference is hardly noticeable for senior center visits – this may relate to the fact that public transportation is available for transport to the centers (parenthetically, this is one of the very few examples of use of public transportation in the county, where overall, only 1 in 5 elderly have ever used the county's public transportation vans). It may also relate to the fact that some of the "rural" towns (Christine, Charlotte, and Lytle, for instance) have senior centers of their own. However, rural residence is quite important in limiting church attendance and restaurant meals; churches and restaurants do exist in small towns but they do not offer much choice of denomination or food, respectively, so older residents seek out these activities in the larger towns. Not owning and driving a car, although it logically should lead to fewer trips, has an influence that is the just the opposite! One reason for this may be that not owning or driving a car is strongly associated with Hispanic ethnicity, and being Hispanic is associated with more social trips. Another reason may be that non-drivers, lacking the ability to engage in social travel "on demand," find it necessary to forge a relationship with someone, and/or some institution that meets this need. Support for this

assertion is found in the relationship between not owning or driving a car and visiting a senior citizen's center (Table 4). These centers offer an especially attractive solution, because (1) public transportation is often available to drive seniors to the center; and (2) the center offers the opportunity for fulfilling several social needs on one trip – recreation, exercise, conversation, friendship, role playing, etc. Once the person begins visiting the center, the trips become formalized and regularized, resulting in more social trips than for those who are free to drive.

In summary, rural residence limits social trips, but not lack of a car. Interestingly, further breakdowns of the data show that rural respondents who lack a car make more social trips than rural respondents who have one – for the same reasons cited above for the overall sample. However, even these rural respondents make only 20 trips per month, compared to 25 trips per month for urban respondents without a car.

Demographic factors play pivotal roles as well. Living alone does not deter one from local social travel; as hypothesized, it promotes such travel – although the results do not quite meet the standards of statistical significance. Note that for travel to senior citizens centers, living alone has a similar effect to not being married – it results in 3 to 4 additional senior-center trips per month. As noted earlier, not being married and living alone are strongly related, the death of a spouse often being a direct cause of living alone. The literature is clear on the role of an intimate, primary relationship as a substitute for secondary group interaction. Death of a spouse leaves a void that social interaction can help fill. Notice that trips both to church and to senior centers are far more prevalent among the non-married than among the married. Regarding church attendance, fully 70% of the non-married are widows or widowers who may find in religion a means of coping with their loss of spouse. Regarding senior center visits, they apparently provide secondary group interaction that fulfills their need for companionship. To summarize, in the case of one's living arrangement the degree of social fulfillment provided by that arrangement appears to offer a salient (inverse) explanation for the number of social trips.

The other demographic variables suggest a very different explanatory force. Based on the ambiguities in the literature, no clear-cut hypotheses were

possible, but I hypothesized that low SES coupled with Hispanic ethnicity should limit social trips based on the preponderance of evidence. In further support of this hypothesis, there is a literature in geography suggesting that minority groups have both limited mental maps and limited activity spaces in cities and larger regions (Saarinen 1984; Jones and Kauffman 1995).

The results (Table 4) completely refute this sub-hypothesis. In terms of annual personal income, low-income elderly took more than twice as many social trips as their better-off counterparts. All types of trips – senior center trips, attending church, eating at a restaurant, and visiting family – illustrate this relationship. Furthermore, unlike the other variables, annual income was a significant factor in mean variety of trips: social trip variety was significantly more prevalent among the poor. School years completed illustrates analogous relationships, with the less-educated engaging in more social trips of all types (although technically, the only relationship that is significant is that for attending church). Ethnicity shows the same trends as the other two variables. Rather than adding to the bewilderment, however, it provides the key to an explanation: we may have not three separate and independent forces, but just one—Hispanic ethnicity (or more to the point, Mexican origin). As noted earlier, being Hispanic is strongly related to low education and income among our sample. Thus, SES and ethnicity may be bound together in a single "cultural" dimension. The Hispanic population of this sample fits other studies of first-generation migrants from Mexico to south Texas; they are at the base of the social and employment pyramid – limited in education, working in the secondary labor market in jobs with low wages and limited mobility potential. They have not assimilated local (largely "Anglo") cultural norms. Note that church attendance emerges as the single most important differentiator of trip frequencies for income, schooling, and ethnicity (Table 4). The elderly, who had low-income, were relatively uneducated, and who were Hispanic, attended church more than twice as frequently as others. My own experience in, and knowledge of, South Texas suggest several reasons for this. The Catholic Church espouses the cause of the downtrodden and assists newly-arrived Mexican immigrants in many ways. It also showcases Mexican cultural icons and ceremonies such as the Virgin of Guadalupe, the *Posadas*, and the *Pastorela*. But visiting a Catholic church is only one way of

maintaining Mexican cultural ties. The senior citizens centers and even the restaurants have assumed important roles as well. Because the senior centers serve the poorer population of the county, who tend to be Hispanic, they are a gathering place for people who speak Spanish and have some of the same goals and problems. Finally, Mexican restaurants – often run by emigrants – specialize in foods from particular regions of Mexico and are embellished with Mexican accouterments such as pre-Columbian and revolutionary art, Mexican dress, and traditional Mexican music. Eating there can be a quite-Mexican cultural experience.

In summary, Hispanic ethnicity and its correlates (low income and educational levels) generate more social travel rather than less. This seeming anomaly is supported in the literature on Hispanic social networks in the United States, which tend to be larger than those of Anglos. These networks and the social travel that sustains them can be explained by the concept of cultural solidarity. This solidarity is strong enough to neutralize constraints on social travel such as lack of money for a car, the lack of good English speaking skills, and ethnic prejudice and discrimination on the part of the "majority" Anglo population.

Cultural solidarity is not the only possible explanation for the relationship between low SES and more frequent social trips. I also calculated the relationship between income and social trips, controlling for ethnicity. For Hispanics and non-Hispanics taken separately, lower incomes are significantly associated (at .05) with greater frequency of social trips. The relationships are in the same direction, though insignificant, in the case of education and social trips, controlling for ethnicity. I suggest that low income may inhibit long-distance recreational travel among the elderly, and coupled with low education, may limit hobbies such as collecting books, home renovation, golf, or formal socializing in the home. In a sense, local social travel is a substitute for these activities. Thus, again, social trips provide social fulfillment in the face of economic difficulties, just as they do in the face of solitude due to the loss of a spouse.

Beyond Activity Theory: Medical Visits

The results so far have shown that social trips increase the happiness felt by respondents and that socially isolated or culturally different elderly persons

may mobilize spatially to rekindle social and cultural interaction. But life-maintenance trips carry a different sense of urgency and may be burdensome rather than pleasurable. This is best illustrated in trips for medical checkups. These trips are quite different in many aspects from the social trips that are the fundamental building blocks of activity theory. Furthermore, trips to medical appointments stand out from a policy perspective, owing to their potential life-or-death importance to elderly residents; the travel distance they entail; and the frequent necessity of public transportation to implement them. The results below were not part of the original hypotheses, but they appear quite relevant to the larger issues of this study.

In Table 5, I compare basic characteristics of the five trip purposes with the highest incidence among our respondents (Table 2) – including three social and two life maintenance trips. The uniqueness of trips to medical checkups for the Atascosa sample is apparent. To begin with, medical checkups received more first place rankings in response to the question "What were the three most important reasons you left your home this month?" than any of the five trip purposes in the table, and in fact than any trip purpose we asked about. Note that medical checkups tended to take place either in Pleasanton or outside the county – particularly in San Antonio – to a higher degree than any other trip purpose. Finally, note that whereas other trips involved driving oneself and occasionally walking to the destination, medical visits depended more heavily on a household member or relative for transportation, and no one walked. This suggests that medical visits are more prevalent among those in poorer health. In fact, 77% of the respondents who were not in good health (i.e., who characterized their health as fair, poor, or very poor) had at least one medical appointment per month, compared with 53% of those who were in good health. More interesting is the tendency to depend on primary group members for transportation. Compared to social trips, it would appear that given their distance and seriousness, medical trips are perceived (by the patient and the driver) as a bit of a burden to unload on a friend or neighbor.

In the remainder of this section, I focus only upon the respondents who characterized their health as fair, poor, or very poor. The reason for removing the 38 "healthy" respondents from this analysis is that their exclusion enables

Table 5. Importance, Usual Destination and Travel Mode for Selected Trip Purposes, June 2001 (Percentage Distributions).

	Social Trips			Life Maintenance Trips	
	Visit the Senior Center	Go to Church	Eat at Restaurant	Shop for Groceries	Go for Medical Check-up
Overall n	59	57	59	82	68
Importance of trip: ranked first?					
Yes	8.5	17.5	1.7	25.6	35.3
No	91.5	82.5	98.3	74.4	64.7
Total	100.0	100.0	100.0	100.0	100.0
Usual destination					
In county, outside Pleasanton	67.8	61.0	44.3	37.4	23.1
Pleasanton	28.6	31.5	44.5	58.6	56.9
Outside of the county	3.6	7.5	11.2	4.0	20.0
Total	100.0	100.0	100.0	100.0	100.0
Most frequent travel mode					
Walk	8.5	7.3	6.8	5.1	0.0
Drive	50.8	41.8	39.0	44.2	30.8
Household member or relative drives	18.6	36.4	37.2	34.2	52.4
Friend or neighbor drives	13.6	14.5	15.3	15.2	10.7
Public transportation	8.5	0.0	0.0	0.0	1.5
Other	0.0	0.0	1.7	1.3	4.6
Total	100.0	100.0	100.0	100.0	100.0

us to focus on the barriers to seeing a doctor for those who most need to do so. From a policy perspective, this is the subpopulation whose travel is most urgent, and whose barriers to travel are most pressing.

The factors that explain the number of medical visits per month for those who are not in good health are illuminating (Table 4). On average, a person made 1.22 medical checkup trips during the previous month, but urban dwellers made 1.40 trips, versus only 1.13 trips for rural dwellers. This parallels the findings for social trips. But not driving a car is found to reduce medical trips – whereas it was found to lead to slightly more social trips. Now consider living situation. Note that both the unmarried and those living alone take about 1.5 medical trips per month, compared to less than one trip for others; these differences are significant at the .10 level. It would appear that a solitary living situation is not a barrier, and may in fact stimulate help from relatives and friends or the use of public transportation. Examination of more detailed cross-tabulations indicates, however, that living alone and not being married are associated with more medical trips in urban areas, but play no role in rural areas. In rural areas, medical trips average just over one per month regardless of living situation. I contend that distance (rurality) stems social networking and lessens the availability of kin and of public transportation in the case of medical trips, whereas it does not affect social trips in this manner. Furthermore, it is clear that medical trips are fewer for ill Hispanics (and for poorer and less-educated persons in general) than for ill non-Hispanics (Table 5) – a situation precisely the opposite from that of social trips. It would appear that social networking and cultural solidarity can somewhat overcome distance in the case of social trips. This is apparently not true for medical trips.

Conclusions

To summarize, this study set out to examine both the consequences and causes of local trips to daily activities among a sample of the elderly population of Atascosa County, Texas. In light of activity theory, a classic theory in gerontology, it was hypothesized that higher frequencies of local trips would be associated with higher levels of happiness. The statistical results support this hypothesis. Drawing from the literature on the importance of social

networks and intimate relationships to the elderly, it was also hypothesized that greater frequency and variety of travel to social ADLs would be a direct function of good spatial access and of certain demographic facilitators. These hypotheses were neither accepted nor rejected conclusively. Regarding spatial access, urban dwellers had more social trips than rural dwellers, as expected; but people who drove a car actually had fewer such trips. It was suggested that not driving a car, a person would become more proactive in making social contacts with possible drivers, and this would trigger greater social activities in general. Regarding demographic facilitators, living alone and not being married acted as predicted to stimulate more social trips, but a major surprise was that low income, less education, and Hispanic ethnicity led to overwhelmingly more social trips rather than fewer. I advanced the concepts of social role fulfillment, to explain why socially isolated persons have more trips, and cultural reinforcement, to explain why the poor, less-educated, and Hispanic respondents had more trips.

In other words, elderly persons are more resilient than much of the literature would suggest. Among the mobile elderly, if faced with the death of a spouse or the inability to drive, they take a proactive stance and establish new social bonds, often pooling their resources to travel to local venues where social activities take place. If faced with low income and racial prejudice (a situation faced by many elderly Hispanics in Atascosa County), rather than being resigned to their "fate" or unable to do anything about it, they seemingly take an active role—maintaining their cultural institutions and visiting them frequently— in order to forge a group identity that enables their adjustment to the majority culture. The social trips of Hispanic elderly are more numerous than those of non-Hispanic elderly. However, the reverse is true for trips to medical appointments among those respondents in ill health; Hispanics make many fewer such trips than non-Hispanics.

This study would have benefited from a larger sample size, and a more comprehensive sample of all the elderly in the county – less tied to the senior citizens centers. In addition, if questions had been asked about social and life maintenance activities not dependent on local travel, I could have framed the results better within the whole of activity theory, in which isolated passive and active activities around the home are included. However, even with these

shortcomings, the study offers support for several counter-intuitive conclusions about elderly travel behavior and the reasons for it. The dichotomized Anglo-Hispanic culture of rural south Texas emerges from these statistics in a manner that supports recent historical and cultural accounts of the region (Montejano 1987; Arreola 2002).

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