

7-19-06  
revised 11-3-07

**“Brain Drain – Really?”  
In Fact, Upstate Rural and Suburban Counties Overall  
Have a “Brain Gain”**

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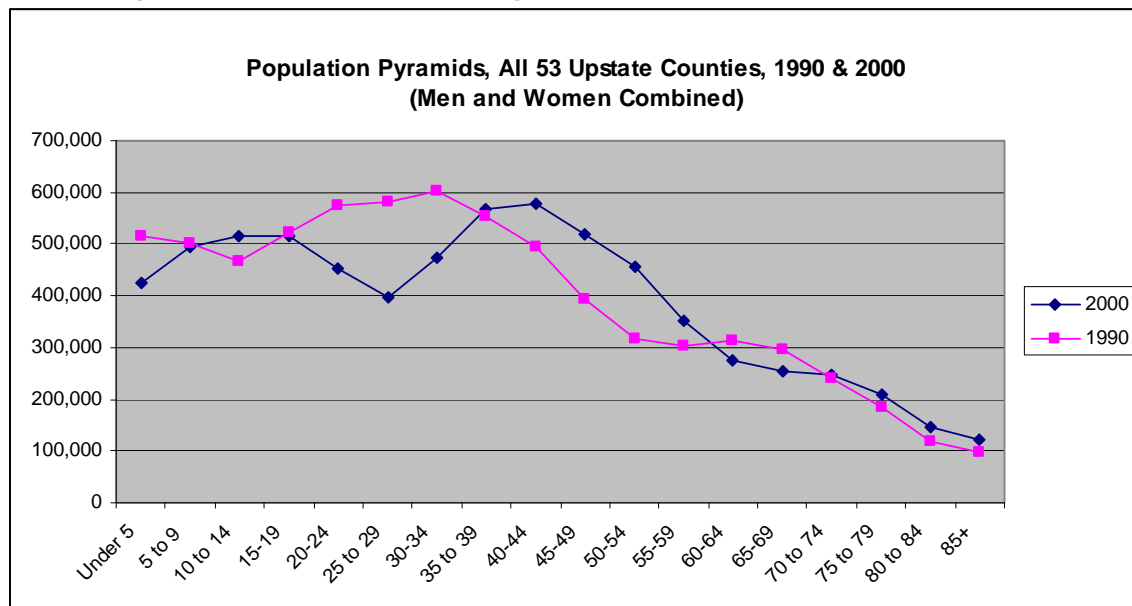
**Background.** Several studies in the past year and half, as well as newspaper articles based on them, have argued that Upstate New York is suffering from a brain drain of young people. Both the NYS Department of Education and the Buffalo Federal Reserve Bank have published studies showing that many young people have left upstate New York for parts unknown. They are correct in this assessment. But, this is not the whole story. Such losses seem virtually offset by brain gains among older adults, especially in New York’s rural and suburban counties. This perspective has not reached the newspapers very well.

**Basic Findings.** In Upstate New York as a whole, the deficit of adults in their early twenties in 2000 compared to their numbers in 1990 is rather dramatic. We can easily see these deficits through analyzing population pyramids. Population pyramids, a staple in demographic analyses, show numbers of people (on a vertical axis) in various age categories (on a horizontal axis). They are called pyramids because when set upright, with males separated from females (a usual procedure but one not used below), they take a pyramidal shape.

In Figure 1 numbers of people are in 5-year age categories from birth to age 85 or more for both 1990 and 2000 on the same graph. The pyramids are on their sides, so that they may not even be recognized as pyramids (they are also truncated in not presenting numbers for men and women separately). Numbers of people in the same age categories can then be compared through the “areas” falling between 1990 and 2000. Since numbers in the age 20-34 categories in 1990 (the “squares” in Figure 1) were higher on the scale than in 2000 (the “diamonds”), the area between 1990 and 2000 in these age categories can be deemed “losses.” Such “losses” of people between 1990 and 2000 actually

occurred in several other age categories including those under age 5 and those ages 60-69. Still, the largest and most dramatic losses were among younger adults between ages 20 and 34, and especially those aged 25-29.

**Figure 1. Population Pyramids for 1990 and 2000 for All 53 Upstate New York Counties (outside New York City and its Adjacent Suburbs) Show a Deficit of Young People Between the Ages of 20 and 34, of Youngsters under Age 5, and Adults from Age 60 to 69.**



Source: U.S. Census of Population, County Totals, STF1, 1990 & 2000.

*But, is there really a deficit?* What the studies and newspaper accounts failed to emphasize is the relative “surplus” of adults ages 35 to 59 (where the 2000 “diamonds” are higher than the 1990 “squares”), or that numbers of people age 35-39 are virtually equal in size (where 1990 lines cross 2000 lines).

The deficit of younger adults ages 20-34 between 1990 and 2000 certainly includes those who have gone to college and not returned. Some may well “return” around age 35, but it is not clear exactly who moved into Upstate or why. Still, the substantial deficit of those age 20-34 is indeed most troubling. When comparing levels in 1990 to those in 2000, Upstate counties show total losses of 436,078 in the age 20-34 categories, a huge deficit between their levels in 1990 and those in 2000. This deficit amounts to 8,228 young adults per county. Since the average county size in upstate New York in 1990 was 133,579, the net loss of young adults was 6.2 of their 1990 total populations.

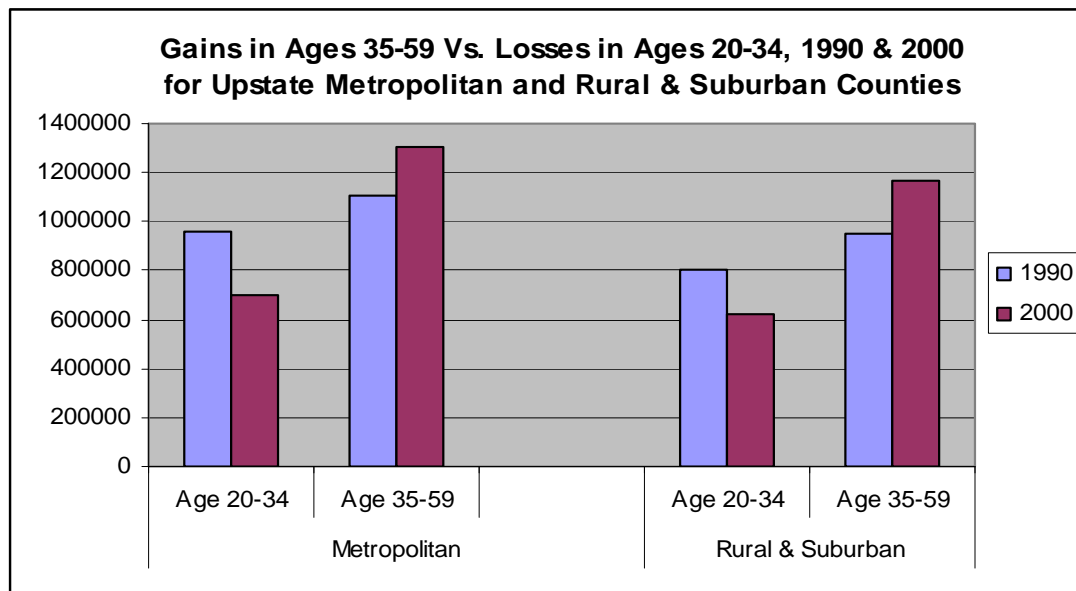
Still, net gains in these 53 Upstate counties in the age 35-59 categories from 1990 to 2000 amounted to 412,172 working-age adults, or 7,777 per county, or 5.8

percent of their populations. The overall net loss due to younger adults, then, was *0.4 percent* of their *working-age* populations age 20-59. Then, adding the net gains and losses in the seniors and elderly, ages 60 and over, gives a small overall population *decrease* of 0.37 percent between 1990 and 2000 in these *adult* population groupings. In other words, despite the large losses of young people, Upstate populations still were relatively stable overall, and even the working-age adult population just barely lost out, by less than one-half of a percentage-point overall. What the newspaper articles should have been reporting, as seen in Figure 1, was that the “overall demographics” have shifted, and this shift can be interpreted as a focus of opportunity in the face of deficit for upstate counties.

To understand more realistically any brain drain deficits between 1990 and 2000, then, comparisons should be made on the entire spectrum, which results in seeing surpluses of adults between ages 35 and 59 in 2000 compared to 1990. These relatively dramatic surpluses probably indicate that middle-aged adults at least found opportunities in Upstate New York of which they could take advantage. Naturally, larger counties, such as metropolitan counties, would have larger deficits while others, such as rural counties, would be smaller.

**Differences between Rural and Metropolitan Counties.** Numbers of people in the critical sets of age categories, those age 20-34 compared to those age 35-59, also vary rather dramatically between the forty-four rural and suburban Upstate counties compared to the nine metropolitan Upstate counties. Findings on these differences are given in Figure 2 and Table 1. (We show Table 1 because specific numbers in Figure 2 are not entirely clear.) As noted above, although the patterns in the two sets of counties are similar, the specific findings in Table 1 show that losses in the age 20-34 categories were generally offset by gains in the age 35-59 categories. But losses were larger and gains smaller in New York’s nine metropolitan-core counties than in its forty-four rural and suburban counties. As seen in Table 1, Upstate metropolitan counties had a deficit of 57,599 working-age adults (age 20-59) between 1990 and 2000, whereas rural and suburban counties had a surplus of 33,693.

**Figure 2. Total Gains and Losses in New York's 9 Upstate Metropolitan-Core Counties versus its 44 Rural Counties Show that the Major Losses were in Metropolitan Counties While Rural Counties Showed Some Overall Gains.**



Source: U.S. Census of Population, County Totals, STF1, 1990 & 2000.

Note: See also the Population Pyramids for Rural and Suburban versus Metropolitan Counties below.

**Table 1. Total Gains and Losses in 9 Metropolitan (Core) Counties versus 44 Rural & Suburban Counties Show that the Major Losses were in Metropolitan Counties While Rural and Suburban Counties Showed Some Overall Gains.**

*Males & Females Combined*

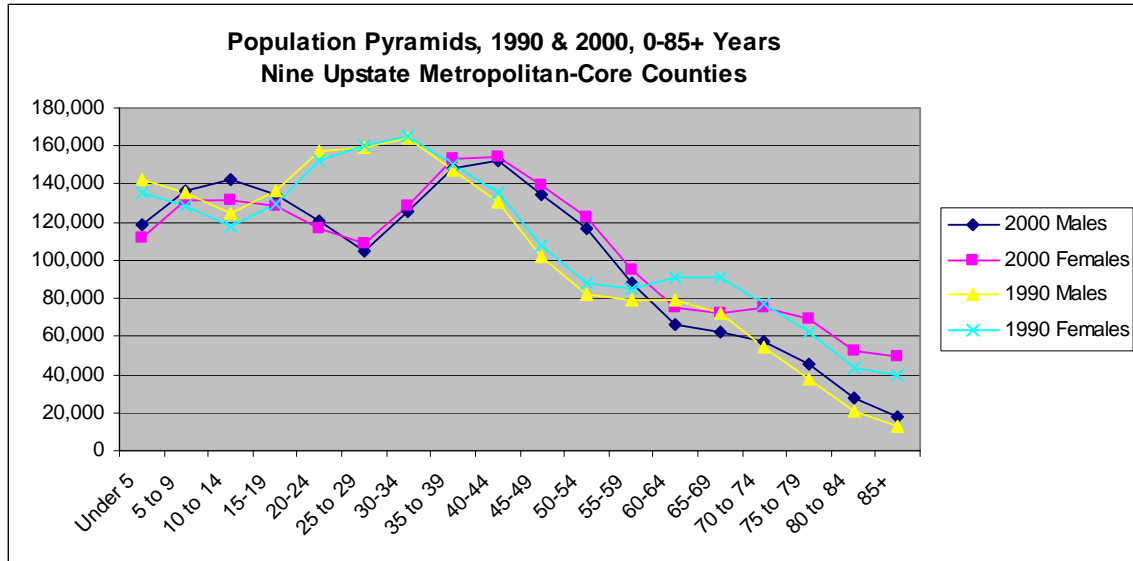
		1990	2000	Total Gains/Losses		
<b>Metropolitan</b>	<b>Age 20-34</b>	958,346	704,225	-254,121	-57,599	<i>total net ages 20-59</i>
	<b>Age 35-59</b>	1,108,540	1,305,062	196,522	-6399.89	<i>net per county</i>
						<i>percent net to 1990 total ages 20-59</i>
						-2.79
<b>Rural &amp; Suburban</b>	<b>Age 20-34</b>	801,438	619,481	-181,957	33,693	<i>total net ages 20-59</i>
	<b>Age 35-59</b>	952,624	1,168,274	215,650	765.75	<i>net per county</i>
						<i>percent net to 1990 total ages 20-59</i>
						1.92

Source: U.S. Census of Population, County Totals, STF1, 1990 & 2000.

Figures 3 and 4 compare the population pyramids of metropolitan versus rural and suburban counties. These figures also show the small differences between men and women in both 1990 and 2000. Compared to the suburban and rural counties, deficits in the age 20-34 categories (and in the age 60-69 categories) are a little larger in the metropolitan counties in Figure 3 and surpluses in the age 35-59 categories were smaller than in Figure 4 for rural and

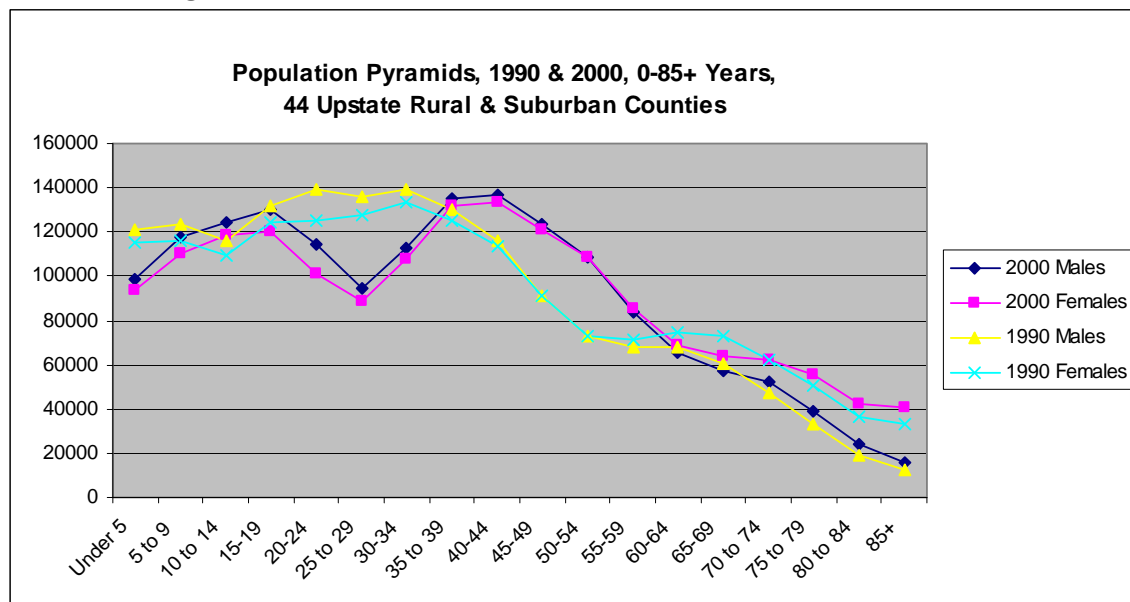
suburban counties. Differences among men and women in these age categories were negligible.

**Figure 3. Population Pyramids in 9 Upstate Metropolitan-Core Counties for 1990 and 2000 Show Larger Deficits of Younger Adults and Smaller Surpluses of Middle-Aged Adults Compared to Rural Counties.**



Source: U.S. Census of Population, County Totals, STF1, 1990 & 2000.

**Figure 4. Population Pyramids in 44 Upstate Rural and Suburban Counties for 1990 and 2000 Show Smaller Deficits of Younger Adults and Larger Surpluses of Middle-Aged Adults Compared to Metropolitan-Core Counties.**



Source: U.S. Census of Population, County Totals, STF1, 1990 & 2000.

These findings add another dimension to our explanation of gains and losses of “brains” in Upstate New York. Since Upstate counties were relatively stable in their population sizes, then a re-distribution of the population was taking place from metropolitan counties into both suburban and rural counties. In fact, rural counties’ *growth rates* were higher than the suburban, although suburban counties experienced larger *numbers* of people between 1990 and 2000. And, growth rates in Upstate’s rural and suburban counties during the period from 1970 to 2000, including from 1990 to 2000, were always positive while Upstate metropolitan-core counties’ growth rates were generally negative (as also seen in Table 1).

Metropolitan versus rural and suburban counties, then, follow different trajectories in their growth and decline. Apparently, some losses in metropolitan counties reflect, in part, people moving from there to surrounding counties, both suburban and rural. Most of us experience these population shifts as shopping malls and congested roadways become more prominent in rural and suburban locations.

**Differences among New York’s Three Major Regions.** Tables 2, 3, and 4 present findings on regional differences in the patterns of gains and losses. In all three major regions the patterns persist between Upstate metropolitan in contrast to rural and suburban counties. They show the expected surpluses in the rural and suburban counties in all three regions, and even in the Northern region (not

shown because it has no metropolitan counties). But, expected deficits in metropolitan-core counties are found only in the Central and Western regions. The Eastern region shows small surpluses in both metropolitan-core and in rural and suburban counties, slightly in favor of the age 35-59 categories overall. Both the Central and Western regions had smaller surpluses in their rural and suburban counties. In the Northern region, which has no metropolitan or suburban counties, the rural counties show very small (0.3 percent), but expected, overall surpluses in favor of the age 35-59 category over losses in the 20-34 age categories.

**Table 2. Total Gains and Losses in Metropolitan versus Rural and Suburban Counties in the *Eastern* Region Show that the Major Losses were in Metropolitan Counties While Rural Counties Showed Some Overall Gains.**

*Eastern Region: Males & Females Combined*

		1990	2000	Total Gains/Losses		
<b>Metropolitan</b>	<b>Age 20-34</b>	232,368	176,628	-55,740	4,992	<i>total net ages 20-59</i>
	<b>Age 35-59</b>	269,849	330,581	60,732	554.67	<i>net per county</i>
					0.99	<i>percent net to 1990 total ages 20-59</i>
<b>Rural &amp; Suburban</b>	<b>Age 20-34</b>	801,438	619,481	181,957	33,693	<i>total net ages 20-59</i>
	<b>Age 35-59</b>	952,624	1,168,274	215,650	765.75	<i>net per county</i>
					1.92	<i>percent net to 1990 total ages 20-59</i>

Source: U.S. Census of Population, County Totals, STF1, 1990 & 2000.

**Table 3. Total Gains and Losses in Metropolitan versus Rural and Suburban Counties in the *Central* Region Show that the Major Losses were in Metropolitan Counties While Rural Counties Showed Some Overall Gains.**

*Central Region: Males & Females Combined*

		1990	2000	Total Gains/Losses	
<b>Metropolitan</b>	<b>Age 20-34</b>	241,381	168,708	72,673	-33,945
	<b>Age 35-59</b>	268,627	307,355	38,728	-3771.67
					-6.66
<b>Rural &amp; Suburban</b>	<b>Age 20-34</b>	264,922	207,669	57,253	4,195
	<b>Age 35-59</b>	297,966	359,414	61,448	95.34
					0.75

Source: U.S. Census of Population, County Totals, STF1, 1990 & 2000.

**Table 4. Total Gains and Losses in Metropolitan versus Rural and Suburban Counties in the Western Region Show that the Major Losses were in Metropolitan Counties While Rural Counties Showed Some Overall Gains.**

*Western Region: Males & Females Combined*

*Males & Females Combined*

		1990	2000	Total Gains/Losses		
<b>Metropolitan</b>	<b>Age 20-34</b>	484,597	358,889	125,708	-28,646	<i>total net ages 20-59</i>
	<b>Age 35-59</b>	570,064	667,126	97,062	-3182.89	<i>net per county</i>
					-2.72	<i>percent net to 1990 total ages 20-59</i>
<b>Rural &amp; Suburban</b>	<b>Age 20-34</b>	164,007	127,912	-36,095	9,714	<i>total net ages 20-59</i>
	<b>Age 35-59</b>	203,442	249,251	45,809	220.77	<i>net per county</i>
					2.64	<i>percent net to 1990 total ages 20-59</i>

Source: U.S. Census of Population, County Totals, STF1, 1990 & 2000.

In general, then, the findings that rural and suburban counties have no losses in brain power over the range of 20-59 working age populations between 1990 and 2000 hold for men and women, and for the four major New York regions. The losses are confined, overall, to Upstate metropolitan counties.

**Conclusions.** The full stories of brain drains in Upstate New York have not been complete in newspapers throughout the state. Newspapers disproportionately tend to emphasize the dramatically negative more than the ploddingly positive. First, “brain surpluses” in older working-age categories (35-59) compared to younger age 20-34 categories have not been distinguished or emphasized by either newspapers or scholars. And, second, brain drain happened among the 20-34 age categories and mainly in metropolitan-core counties of the state’s Central and Western regions, but not overall in rural and suburban counties. These metropolitan versus rural and suburban, and regional, differences are important to scholars, but they also carry policy implications.

A major issue implicit in these stories is the effect on mindsets of people as they face problems in the state and in their counties. Instead of believing biased newspaper (and even scholarly) accounts and wringing their hands about the seemingly inevitable losses of younger adults implicit in most newspaper stories, community leaders and concerned citizens should be realistically assessing their situations and making full use of available older-adult resources in resolving their problems. Communities should undoubtedly generate strategies to try to bring more young skilled and college-educated adults into their communities. But, they should also make full use of all their assets in facing their problems.



Surpluses of middle-aged adults in rural and suburban counties, especially, should be recognized as strong assets in these communities. Middle-aged adults generally have more experience in the real worlds of complex institutions, as well as larger incomes and property values, and more stability in their family lives compared to younger adults. These are formidable resources to be brought to bear on local problems. Community leaders and concerned citizens should focus on working to mobilize such human resources as they seek strategies for resolving the myriad of local problems facing them.