

# Educational Sorting and Residential Aspirations Among Rural High School Students: What Are the Contributions of Schools and Educators to Rural Brain Drain?

Robert A. Petrin

*Ipsos Public Affairs*

Kai A. Schafft

*Penn State University*

Judith L. Meece

*University of North Carolina at Chapel Hill*

*An extended body of research has documented the outmigration of the “best and brightest” youth from rural areas. Some of this scholarship has suggested that rural schools and educators may be complicit in this process as they devote extra attention and resources to the highest achieving students—those most likely to leave their rural communities after high school. Using data from a national multimethod study, we find mixed support for this hypothesis. To the contrary, our data suggest that the highest-achieving rural students are among those with the greatest community attachment, and that student perceptions of local economic conditions are far more influential*

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ROBERT A. PETRIN is a research director at Ipsos Public Affairs in Washington, DC, 2020 K Street NW, Suite 410, Washington, DC 20006; e-mail: [robert.petrin@ipsos.com](mailto:robert.petrin@ipsos.com). His research interests include the relationship between education and inequality, higher education, schools as formal organizations, and statistical methodology.

KAI A. SCHAFFT is an associate professor of education in the College of Education at Pennsylvania State University and the director of Penn State’s Center on Rural Education and Communities. His research interests include the interrelationship between rural school and community well-being, contexts for rural youth development, and most recently, school and community impacts of unconventional gas development.

JUDITH L. MEECE is the McMichael Professor of Education at the University of North Carolina at Chapel Hill. Her research focuses on the role of classroom and school environments in the development of adolescent’s academic motivation and educational aspirations.

*in shaping postsecondary residential aspirations than the advice of educators, or the poverty level of the school.*

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In the last quarter century, many rural areas in the United States have undergone significant social, economic, and demographic changes. While some rural communities have been remade as high-amenity retirement destinations or have experienced in-migration of new and diverse populations, in other places the industrialization of agriculture and agribusiness consolidation have resulted in the decline of family farms, accompanied by population loss and the closing of businesses that once served farming communities (Brown & Schafft, 2011; Edmondson, 2003; Elder & Conger, 2000; Johnson, 2006; Lyson & Guptill, 2004). The rural manufacturing sector has also experienced steady decline, as America's rural economic base has shifted increasingly from the production of goods toward the provision of services, a change that has been disproportionately associated with nonstandard work, including part-time, temporary, and contract work, generally with limited or no benefits (Gibbs, Kusmin, & Cromartie, 2005; McLaughlin & Coleman-Jensen, 2008). Such trends have had dramatic effects on the residential aspirations of rural youth, whose departure from their communities is often noted as yet another factor contributing to rural decline (Johnson, 2006). These events have created a number of pressing challenges for many rural communities, including retaining and/or attracting younger populations and stemming the tide of youth outmigration (Artz, 2003; De Jong & Klein, 1999; Demi et al., 2009), as well as understanding the roles schools and educators play in these demographic processes (Budge, 2006; Huang, Weng, Zhang, & Cohen, 1997; Sherman & Sage, 2011).

Youth outmigration is problematic for rural communities for many reasons. Net losses of young adults from nonmetropolitan areas have historically been much greater than for older adults, and those leaving rural areas tend to be better educated and more highly trained (Cushing, 1999; Gibbs & Cromartie, 1994; Mills & Hazarika, 2001). Conversely, those left behind tend to be disproportionately composed of the less well educated and individuals with lower incomes and fewer skills (Brown & Schafft, 2011; Cushing, 1999). As a result, local disadvantage may increase in rural areas not only because of shrinking economies but because patterns of selective outmigration have fundamentally altered the demographic and socioeconomic composition of local populations (Gibbs & Cromartie, 1994; Miller, 1995; Petrin, Farmer, Meece, & Byun, 2011). Perhaps not surprisingly, these processes often result in local ambivalence regarding the role and value of education since educational attainment is so closely linked to youth outmigration (Corbett, 2007; Woodrum, 2004).

Burnell emphasizes that while rural life is often characterized by geographic isolation, the experience of growing up in a rural community is also marked by “the importance of connectedness and personal relationships” as well as the significance of self-sufficiency and rural identity that is grounded in locality and connection to place (2003, p. 105; cf. Sherman & Sage, 2011; Theobald, 1997). Because of this, several scholars have pointed to the conflicts between what Burnell terms the “traditional measures of status” (p. 105)—including cultural norms of postsecondary educational attainment, economic mobility, and professional achievement—and attachment to the home rural community. Using questionnaire data from 918 Midwestern 8th-, 10th-, and 12th-graders, Hektner (1995) finds that rural youth are significantly more likely to believe that both living close to the family and leaving their home areas will be important in life, and further, that this conflict is negatively associated with academic aspirations. As Hektner points out, “unlike students in suburbs and cities who can go to college and find professional jobs in their metropolitan areas if they so desire, rural students who want to develop their talents must often leave their communities permanently. And many do” (p. 3). This work is consistent with research by Howley, Harmon, and Leopold (1996), who find that high-achieving rural students exhibit greater levels of community satisfaction than their peers and are no more likely to express a desire to leave their home community than their lesser achieving peers.<sup>1</sup>

### **The Role of Schooling in Shaping Rural Youth Trajectories**

While research on adolescence has increasingly focused on the ways in which family and community context shape the developmental trajectories of young people and, by extension, broader patterns of social inequality (Crosnoe & Johnson, 2011; Harding, 2011; Lopéz Turley, 2009), there is relatively less scholarship on the ways rural schools and rural educators affect transitions to adulthood, and subsequently, the decision-making processes rural youth engage in as they formulate plans and aspirations for the future (Demi, Coleman-Jensen, & Snyder, 2010). The lack of research in this area is surprising not only on account of the link between rural youth aspirations and community viability, but also because of the size of the rural student population itself. Indeed, more than 20% of public K–12 students are enrolled in rural schools, and 55% of school districts and 31% of schools are located in rural areas (Brown & Schafft, 2011).

A number of scholars, however, have suggested the ways in which schooling, as an instrument of modernity, is counterposed against rural communities in which education has assumed the characteristics of an “assimilatory project” doing “the missionary work of cultural education in the ‘backward space’” of the rural community (Corbett, 2007, p. 258; cf. Howley, Harmon, & Leopold, 1996; Looker & Naylor, 2009; Sher, 1977; Theobald,

1997), and where one of the key roles of education is “to help students to develop skills that would enable them to secure employment outside the more (rural) area, and thus create economically stable lives for themselves” (Woodrum, 2004, p. 5). Accordingly, attachment to rural community and aspirations to remain local are likely to be devalued by educators, especially if those aspirations belong to youth who are clearly seen to have the academic potential for college (Burnell, 2003).

One recent work that examines the relationship between rural schools, communities, youth socialization, and youth outmigration is Carr and Kefalas’s (2009) account of educational sorting and rural brain drain. In *Hollowing Out the Middle*, Carr and Kefalas argue that rural schools and the communities they serve may undermine longer term community well-being and sustainability by grooming the “best and brightest” students to leave, while devoting far less attention to those students most likely to remain in the community as adults. Based on extensive ethnographic research conducted in “Ellis,” a Midwestern rural community, Carr and Kefalas observed that rural high school students were informally sorted by community members and, in particular, by educators, into several distinct groups. These groups were labeled by Carr and Kefalas as “Achievers,” academically successful students from professional-class backgrounds who are college bound and rarely return; “Stayers,” who are low-achieving students from working-class backgrounds who remain in the community; and “Seekers,” who lack the academic and financial resources of the Achievers but who are determined to leave home. Carr and Kefalas note that return migration also occurs since some of these “Seekers” later may become “Returners,” young people “hungry to experience life someplace else, but with time, ‘boomerang’ home after their new lives fail to take hold” (p. 107). Carr and Kefalas further concede that there are also Achievers who become Returners as well, but these are the “rarest sort,” the “credentialed and upwardly mobile would-be expatriates who set aside their chance at the essentially American wish for self-reinvention when they return home in search of stability” (p. 108). In large part, therefore, the relationship between educational sorting and outmigration is described as a one-way trip for the most talented and capable rural youth, representing a “paradox of preparation” in which rural schools create human capital that is “exported” through rural youth outmigration to subsidize the development of (nonrural) places elsewhere.

Carr and Kefalas’s work has received national attention for the ways in which it has illuminated a critical issue concerning the vitality of rural America and the roles schools and educators play in rural brain drain, as well as its identification of social norms and processes within rural schools and communities that would appear to reinforce the selective outmigration of talented young adults. However, other research emphasizes the role of rural schools in fostering strong local identity and community attachment

(Bauch, 2001; Edmondson, 2003) and even suggests that outmigration may serve as a primary means of sustaining rural communities, especially when school and community norms encourage young people to leave their home communities but then reconnect and/or return at some later point, bringing with them various social connections, supports, and assets from outside the community (Farmer et al., 2006).

The commonality between these strands of research is that they place schools and educators at the center of broader processes critical to the social and economic survival of rural communities. In this article, we hope to clarify the relationship between education and youth outmigration in rural communities by examining two different types of data drawn from a broader range of rural communities than is typically examined in such studies. In doing so, we seek first to identify distinct student types salient across a wide range of rural communities based on student reports of academic performance, school and community attachment, and residential aspirations. Second, we examine the association between the student types and school, community, and youth characteristics, in order to evaluate the extent to which schools, educators, and rural communities encourage their best and brightest to leave. Finally, we draw upon ethnographic data from this same study to help us contextualize the findings from our quantitative data and assess the prospects of “rural return” among those rural youth who do decide to leave their communities.

Our data indicate that indeed a large proportion of rural high school students do aspire to leave their communities. Yet these data also reveal the strong ties many rural youth have to their home areas and suggest that outside of family structure and residential status, economic factors are the major correlates of youth residential aspirations, rather than the influence of educators or other school-level factors. Further, our data also suggest that many rural high school students—including rural communities’ best and brightest—aspire to both leave *and* return to their home communities or similar rural areas.

## Data and Methods

### Study Design and Scope of Data Collection

The analyses presented here are part of a broader multimethod study examining U.S. rural high school students’ postsecondary educational plans and aspirations. The study was designed to be national in scope and to provide quantitative and qualitative information on students and their communities. For the quantitative portion of the study, students in Grades 9–12 were recruited from 73 schools across the United States, with 89% of schools from the National Center for Education Statistics (NCES) rural urban-centric locale codes (41, 42, and 43) and 11% from small town codes (31, 32, and 33).<sup>2</sup> Schools were sampled using the U.S. Department of Education’s Common

Core of Data (CCD). The research design oversampled RLIS (Rural Low Income Schools) and SRSA (Small Rural School Achievement) program schools. This was done to ensure adequate representation of rural schools serving smaller communities and low-income communities. Thirty-six schools had 50% or more students who were eligible to receive free or reduced-price lunch and 15 schools had 50% or more students who self-identified as ethnic minority. The final sample of 8,754 students included 27.9% 9th-graders, 27.3% 10th-graders, 25.1% 11th-graders, and 19.7% 12th-graders; 51.5% of students were female and 48.5% were male.

Student survey data were collected during the fall of 2007 and spring of 2008. The instrument consisted of a paper-and-pencil questionnaire group-administered on-site by a team of researchers. One member of the research team read the survey instructions aloud and paced survey administration, while other team members acted as monitors. Survey items pertained to student family structure, attitudes toward and participation in school, perceptions of local community and community economic conditions, as well as student residential, educational, and occupational aspirations.

During the spring of 2008 and fall of 2009, follow-up site visits and focus groups were conducted for a subsample of 12 study sites. In order to maximize variation among rural community contexts, the original 73 sites were stratified by census region and state such that each region was represented by at least three study sites where focus groups were conducted. Sites were then randomly selected with the condition that no two selected sites be located in the same state.<sup>3</sup> Each site visit involved three separate focus groups of 5–8 people, one with 11th- and 12th-grade students, one with educators, and one with community leaders. At each site, a local liaison (often the school principal, counselor, or a teacher) helped to purposefully select and recruit participants for the three separate focus groups.

Focus groups lasted between 60 and 90 minutes and were oriented toward three main themes: (1) the local community as a place to live and grow up; (2) the connection between school and community; and (3) factors influencing the way young people make plans about their future, particularly with regard to education, career, and residence. Focus group data were supplemented with researcher field notes, observations, and archival materials gathered on-site.

Focus group discussions were digitally recorded and transcribed. These transcripts, along with researcher field notes and archival materials, were coded by the authors for content related to questions central to the study. This included the relationship between school and community; the development of rural youth aspirations for future residence, education and career, and school; and the social and economic characteristics of community. When coding for youth aspirations, we differentiated, when possible, between aspirations and expectations, further distinguishing whether these aspirations and/or expectations were articulated by youth, community

members, or educators. We also coded for school and community preparation of youth for the future, which focused on both informal and formal mentoring and advising. Coding for community characteristics included identifying mentions of specific community risk and protective factors for youth, and dynamics of social inclusion and exclusion. Some coding categories were emergent in nature, including coding for “family” (including family assistance, influence, and ties as well as raising a family), local population change (including population increases, decreases, and changes in composition), and gendered issues related to youth development and aspirations. All transcript data were document coded for location and for type of focus group: youth, educators, or community members. Our study design does not allow us to link the qualitative data to the quantitative survey responses, even though many of the student focus group participants had also completed the student survey.

The survey data are the primary data we draw upon in this article, consistent with a dominant-subdominant mixed-methods design described by Creswell and Plano-Clark (2007) as an “explanatory design” where the principal analyses draw upon quantitative data that are then contextualized and supplemented by qualitative data. In the analyses presented here, we use the focus group data to contextualize our quantitative analyses and provide insights into the lived experiences of rural youth and community stakeholders, concentrating on the specificities of school and community context, and the influence of contextual factors in shaping norms and expectations for the postsecondary aspirations of rural high school students.

## **Variables**

The variables used in the quantitative analyses fall into the categories described below.

### *Student Residential Aspirations*

Students were asked a series of questions pertaining to their desire to live in their home community after reaching adulthood. These items included questions about where they would like to live at age 30, where they would like to start a job or career, and where they think they actually will start a job or career.

### *Indicators of Student Academic Performance and School–Community Integration*

Students were presented a number of questionnaire items relating to their academic performance, participation in school activities, and the amount of personal attention they received from teachers at their school. For student achievement, we used a summated scale of self-assessed

proficiency within English/Language Arts, Mathematics, Science, Social Studies, and Other Classes. We also used students' self-described grades in school that year. For extracurricular participation, 20 individual activities, clubs, and organizations were listed and students reported the number of times they participated in each. We summed the number of individual extracurricular activities students reported participating in at least 1 day a week. To measure the attention paid to students by adults at their schools, we used a survey item that asked students to evaluate the statement "most teachers at my school are interested in me" (responses ranged from 1 = *completely false* to 5 = *completely true*).

To measure school valuing, we summed student responses to 12 Likert-type items included on our survey instrument, which asked, "How much do you agree with the following statements" (1 = *strongly disagree*, 6 = *strongly agree*). Cronbach's alpha for these 12 items was .919. We developed a student rural community identity measure using student responses to five survey items which asked, "How much are each of the following statements like you" (1 = *not at all like me*, 6 = *a lot like me*). Cronbach's alpha for these items was .958. The scaled items, their means, and item-to-scale correlations are presented in Table 1.

### *Student, School, and Community Covariates*

Several items taken from the student questionnaire were used as student or community covariates in our analyses. These items were as follows: student race (minority vs. white), grade level (10th, 11th, and 12th grades vs. 9th grade), length of residence in the community (10 or more years vs. other); higher of either of students' parents' education levels (BA/BS or greater vs. other), whether or not the student planned to attend a 4-year college or university, and student perceptions of the availability of local employment. Because of the importance of family structure in shaping student mobility plans (Demi et al., 2009) we also included indicators of students' number of siblings, and household parent structure (two biological parents vs. other) in our models. Because farm residence has been shown to be an important predictor of community integration and attachment for rural youth (Elder & Conger, 2000) we included an indicator of farm residence in our models. The school covariates used in our analyses were drawn from the CCD and included metro-centric locale code (Rural Remote, Rural Distant, Remote Town, or Distant Town vs. other); percentage of students at the school receiving free or reduced-price lunch; and the natural logarithm of total school enrollment.

In addition to the above items, we also drew upon a series of questionnaire items identifying school staff with whom students reported consulting regarding their post-high school plans, as well those school staff students found to be "most useful" in formulating their future plans. These school



*Table 1*  
**Summed Scaled Variables: School Valuing, and Rural Identity**

Scaled items	Mean	Item-to-scale correlation
School valuing		
School is one of the most important things in my life.	4.31	.650
School is often a waste of time. <sup>a</sup>	2.69	-.620
Many of the things we learn in class are useless. <sup>a</sup>	3.24	-.512
Most of what I learn in school will be useful when I get a job.	3.82	.568
Dropping out of school would be a huge mistake for me.	5.38	.458
School is more important than most people think.	4.81	.685
School is important to getting a good job.	5.14	.570
School is not so important for kids like me. <sup>a</sup>	2.07	-.555
I learn more useful things from friends and relatives than I learn in school. <sup>a</sup>	3.12	-.555
The kind of education I'm getting here will help me later on.	4.41	.684
What I study in school seems important to me.	4.07	.718
I can get a job without doing well in school. <sup>a</sup>	2.61	-.458
Cronbach's alpha = .919		
Rural identity		
I have a clear sense of my rural background and what it means for me.	3.42	.745
I am happy that I live in a rural community.	3.69	.851
I have a strong sense of belonging to my own rural community.	3.35	.895
I have a lot of pride in my rural background.	3.54	.913
I feel a strong attachment toward my rural background.	3.39	.906
Cronbach's alpha = .958		

<sup>a</sup>Items reverse coded for scale construction.

staff included guidance counselor, teacher, coach, principal, or other school staff. During our statistical analyses, we used these items two ways. First, we summed the number of school staff consulted and then summed the number of staff persons found to be “most useful,” retaining these two sums as covariates. Then, we recoded these sums as 1 or 0 (for “any sources contacted” or “no sources contacted,” and “any sources most useful” or “no sources most useful,” respectively) and retained the results as a separate pair of covariates. These items were then used in our analyses as proxies for whether or not students had any contact with school staff, and the extent of contact students had with school staff about future plans.

### Analysis

Given the nature of our inquiry, we limited our quantitative analyses to only those students in the sample who reported knowing where they

wanted to live at age 30 (5,647 of the original 8,754 students). Then, we used latent class analysis (LCA; Collins & Lanza, 2010; Hagenaars & McCutcheon, 2002; Yamaguchi, 2000) to identify the latent structure underlying student responses to our academic and school-community integration items, as well as to our residential aspiration items. LCA is a highly flexible statistical tool used throughout the social sciences as a means of respondent classification and data reduction (e.g., Collins & Lanza, 2010; Hagenaars & McCutcheon, 2002).

In general, latent variable methods can be thought of as mapping a set of observed items onto a reduced number of unobserved (or, “indirectly observed”) variables. In factor analysis, for example, the correlations between a set of normally distributed observed items are assumed to be explained by a set of latent factors that are also interval-scaled and normally distributed (Bollen, 1989). In essence, the latent factors render the correlation between the observed items spurious and capture different response dimension in the data, thus reducing the original set of input items to a smaller number of latent variables. This dimension reduction can lend clarity to the observed responses and make subsequent analysis of the items more tractable. In factor analysis, for example, the latent factors can be directly regressed on a set of predictor variables rather than having to regress each individual indicator variable on the predictors before drawing some sort of overarching conclusions from several sets of models.

In LCA the associations between a set of observed categorical response variables are hypothesized to be manifestations of a single underlying yet unobserved categorical variable (Hagenaars & McCutcheon, 2002). The categories that comprise this latent variable can be thought of as classes or “types” of respondents, where it is latent class membership that drives the pattern of responses to the observed categorical items (Collins & Lanza, 2010; Hagenaars & McCutcheon, 2002). LCA does not deterministically assign respondents to a single latent type, however, but generates each respondent’s probability of belonging to each latent type. Class membership can then be regressed on one or more predictor variables (as in multinomial logistic regression) to evaluate how these predictors are associated with respondents’ probability of belonging to any given class, relative to a reference class (e.g., Yamaguchi, 2000).

In developing our analytic strategy, we elected to use LCA for several reasons. First, LCA allows us to examine the salience of the Carr and Kefalas typology across a broad set of rural communities. Second, to the extent that there are multiple dimensions inherent in the responses to the observed items, LCA combines those dimensions into a discrete set of types, which often provides insights into what respondents “look like” and how the latent response dimensions intersect (Hagenaars & McCutcheon, 2002). Finally, by embedding the latent class model directly into a regression model using a structural equation model setup (e.g., Bollen, 1989; Collins & Lanza,

2010), LCA allows users to judge the robustness of the latent typology in the presence of external predictors while also evaluating predictors of the latent types.

### **Constructing and Using the Latent Types**

In constructing our latent types, students' residential aspirations were directly integrated into our typology in a manner consistent with the educational sorting argument as it relates to rural brain drain (Carr & Kefalas, 2009; Corbett, 2007). Because of the gendered differentiation of rural adolescent experiences (e.g., Elder & Conger, 2000; Petrin et al., 2011; see also De Jong, 2000), we generated separate typologies for males and females. The resulting, best-fit latent class solutions were adopted as the student typologies used throughout the remainder of our quantitative analyses. Finally, we used latent class regression analysis (Collins & Lanza, 2010; Yamaguchi, 2000) to determine the student, school, and community characteristics associated with the odds of students belonging to one latent type versus another. Throughout our statistical analyses, model standard errors and significance tests were adjusted for the nonindependence of observations in the sample (i.e., the "clustering" of students in schools).

One challenge inherent to using LCA is identifying the minimum number of latent classes that provide a good fit to the observed response items (Nylund, Asparouhov, & Muthén, 2007). Standard likelihood ratio tests are not valid for comparing models with different numbers of latent classes (Collins & Lanza, 2010). Therefore, consistent with the approach advocated in the literature (Collins & Lanza, 2010; Nylund et al., 2007), in seeking to identify the minimum number of latent classes that could adequately capture the pattern in our students' responses, we considered multiple lines of evidence, including the Bayesian information criterion (BIC) statistic; the homogeneity and the separation (i.e., distinctness) of the latent classes; the Lo, Mendell, and Rubin (2001) adjusted likelihood ratio test; and the stability of our latent class solutions when used as dependent variables in our subsequent latent class regression analyses. On the basis of the results of Nylund et al. (2007), and given our sample size and the nonindependence of observations in our sample, we relied on BIC statistics and the Lo, Mendell, and Rubin test in deciding on the optimal number of latent classes.

## **Results**

### **Student Latent Types**

Prior to analysis, we recoded our student academic performance, school-community integration, and residential aspiration items to facilitate the interpretation of our latent classes. The resulting frequency distributions are presented by gender in Table 2. The chi-square *p* values in Table 2

indicate statistically significant cross-gender variation in the responses for eight of our nine indicator items ( $\alpha = .05$  level). This result was consistent with our expectations (see, e.g., Corbett, 2007; Elder & Conger, 2000; Petrin et al., 2011) and validated our decision to fit separate latent class models to the male and female samples.

We then used the selection criteria and evaluation procedures described above to determine the best-fitting latent class models for the male and female subsamples. In both cases, the best-fitting model was found to be a four-class model.<sup>iv4</sup> The corresponding latent class proportions and conditional probabilities are presented in Table 3. The latent class conditional probabilities define the latent types since they represent the probability of a respondent endorsing a particular response level for each indicator variable, given that he or she is a member of the corresponding latent class.

The conditional probabilities in Table 3 reveal that our four class models were substantively similar across gender and have a rather straightforward interpretation. The male and female solutions both consist of two classes of students who can be judged to have high levels of academic performance and high levels of school and community integration (Classes 1 and 2), and two classes of students who can be judged to have low levels of academic performance and low levels of school and community integration (Classes 3 and 4). Within each of these pairs of classes, the two classes are distinguished by student residential aspirations, where one pair of classes (Classes 1 and 3) represents students who are highly likely to report that they would like to have jobs at home or close to home, and to think that they will have jobs at or close to home; the other pair of classes (Classes 2 and 4) represents students who were highly unlikely to report that they would like to have jobs at or close to home or think that they will have jobs at or close to home.

For example, Class 1 males tended to be academically strong (63% had high academic proficiency, while 46.4% reported earning mostly As, and 80.9% reported earning mostly As or all As and Bs), and had comparatively high levels of school valuing and extracurricular participation (44.6% and 43.5% had high levels on each of these factors, respectively). Further, 69.2% of Class 1 males responded that it was “completely true” or “more true than false” that teachers at their school were interested in them, while 67.2% reported the highest level of community identification. The males in Class 2 were highly similar to the males in Class 1 with respect to each of these academic/community integration items with the exception of community identification, where it can be seen that Class 1 males reported stronger levels of community identification than Class 2 males. With respect to the residential aspiration items, however, Class 1 males are highly likely to report that they want to live in a rural area (66.5% of this type) and extremely likely to report wanting to have a job at or close to home, and thinking that they will have a job at or close to home (99.3% and 86.7% of this type,

*Table 2*  
**Frequency Distributions of Items Used in Constructing Latent Student Typology by Gender, With *p* Values for Chi-Square Test of Bivariate Association (Item by Gender)—Males and Females**

Item	Males		Females		Chi-square <i>p</i> value
	<i>n</i>	Valid %	<i>n</i>	Valid %	
Proficiency across 5 academic subjects					
High	890	33.0	903	32.8	.971
Medium	951	35.5	968	35.2	
Low	852	31.6	878	31.9	
Self-described grades					
Mostly As	507	19.3	781	28.7	.000
Mostly As and Bs	630	24.0	810	29.8	
Mostly Bs; half Bs + half Cs	985	37.5	856	31.5	
Mostly Cs or below	507	19.3	273	10.0	
School valuing					
High	714	26.7	1,133	41.4	.000
Medium	839	31.4	957	34.9	
Low	1,123	42.0	649	23.7	
Extracurricular participation					
High	729	30.9	910	36.2	.000
Medium	841	35.6	887	35.3	
Low	791	33.5	715	28.5	
Most teachers at my school are interested in me					
Completely true; more true than false	757	29.6	704	26.7	.026
Neutral	747	29.2	754	28.6	
False, more false than true	1,056	41.3	1,175	44.6	
Identification with rural community					
High	904	36.1	904	34.6	.002
Medium	834	33.3	793	30.3	
Low	766	30.6	918	35.1	
Want to live in any rural area, age 30					
Yes	1,155	41.0	918	32.7	.000
No	1,659	59.0	1,887	67.3	
Where would <i>like</i> to have job, age 30					
Away from area	1,188	51.0	1,409	56.1	.000
At or close to home	1,140	49.0	1,102	43.9	
Where <i>think</i> will have job, age 30					
Away from area	1,138	47.9	1,389	55.3	.000
At or close to home	1,238	52.1	1,122	44.7	

*Note.* Sample observations and valid % are item-wise, and net of missing data.

*Table 3*  
**Latent Student Typologies (Latent Class Model Conditional Probabilities and Class Proportions)**

	Latent Class: Males				Latent Class: Females			
	1	2	3	4	1	2	3	4
Proficiency across 5 academic subjects								
High	.630	.665	.112	.164	.545	.643	.066	.097
Medium	.220	.300	.387	.375	.366	.307	.338	.412
Low	.040	.035	.502	.461	.089	.050	.595	.491
Self-described grades								
Mostly As	.464	.428	.037	.043	.624	.548	.055	.076
Mostly As and Bs	.345	.340	.153	.189	.305	.320	.299	.284
Mostly Bs; half Bs + half Cs	.184	.219	.475	.490	.170	.116	.453	.480
Mostly Cs or below	.007	.013	.335	.278	.001	.016	.193	.160
School valuing								
High	.446	.512	.138	.140	.584	.627	.289	.235
Medium	.377	.372	.324	.287	.342	.281	.350	.435
Low	.177	.116	.538	.573	.074	.092	.361	.330
Extracurricular participation level								
High	.435	.418	.215	.198	.496	.486	.227	.239
Medium	.406	.432	.350	.332	.360	.372	.362	.356
Low	.159	.150	.435	.470	.144	.142	.411	.405
Most teachers at my school are interested in me								
Completely true; more true than false	.692	.651	.258	.215	.675	.685	.228	.219
Neutral	.241	.257	.317	.331	.248	.211	.379	.323
False, more false than true	.067	.092	.425	.454	.077	.104	.393	.458
Identification with rural community								
High	.672	.313	.355	.213	.674	.337	.295	.134
Medium	.240	.333	.395	.342	.278	.265	.368	.309
Low	.088	.354	.250	.445	.048	.398	.337	.557
Want to live in any rural area, age 30								
Yes	.665	.152	.655	.197	.698	.159	.481	.139
No	.335	.848	.345	.803	.302	.841	.519	.861
Where would <i>want</i> to have a job, age 30								
Away from area	.007	.947	.020	.968	.083	.929	.041	.876
At or close to home	.993	.053	.980	.032	.917	.071	.959	.124
Where <i>thinks</i> will have a job, age 30								
Away from area	.133	.935	.085	.916	.021	.942	0.00	.929
At or close to home	.867	.065	.915	.084	.979	.058	1.000	.071
Latent class proportions	.209	.227	.304	.260	.230	.287	.187	.296

*Note.*  $n = 1,865$  males and  $2,126$  females distributed across 70 schools.

respectively), while Class 2 males were highly unlikely to want to live in a rural area (only 15.2% of this type), want to have a job at or close to home (5.3% of type), or think that they will have a job at or close to home (6.5% of type). In examining the conditional probabilities for Class 3 and 4 males, we can see that these two classes are likewise highly similar to one another with respect to academic/community integration, differing only with respect to community identity (Class 3 males are higher than Class 4 males on this factor). In terms of residential aspirations, however, Class 3 males represent low academic/school and community integration males whose residential aspirations involve ending up at or close to home, while Class 4 males aspire to leave. Based on the pattern of conditional probabilities, we label Class 1 as “Achiever Stayers,” Class 2 as “Achiever Leavers,” Class 3 as “Nonacademic Stayers,” and Class 4 as “Nonacademic Leavers.” From the latent class proportions in Table 3, we can see that 20.9% of males can be labeled Achiever Stayers, 22.7% as Achiever Leavers, 30.4% as Nonacademic Stayers, and 26.0% as Nonacademic Leavers.

The latent class solution for females is very similar to the one obtained for males. For this reason, we retain the latent class labels derived from our male sample and note that 23% of females are Achiever Stayers, 28.7% are Achiever Leavers, 18.7% are Nonacademic Stayers, and 29.6% are Nonacademic Leavers. In spite of retaining the same class labels, we recognize that there are quantitative differences across male and female types bearing the same class label. In the end, however, the four types are more similar across gender than they are different, which suggests that we may be able to pool the samples for some of our analyses.

Looking across the latent types we can see that, among Achievers (Classes 1 and 2), roughly equal proportions are classified as Stayers versus Leavers. This relationship holds for both males and females. Among Nonacademics (Classes 3 and 4), the proportions of students who wish to leave versus stay is not so neatly balanced. In particular, it appears that for females a greater proportion of non-academically inclined students desire to leave versus stay, while the opposite is the case for males.

### **Predictors of Student Latent Types**

We used latent class regression analysis to help us understand student, school, and community factors associated with belonging to one latent type versus another. In order to emphasize the differences between Stayers and Leavers, we systematically altered the reference classes in our latent class regression models to highlight particular Stayer/Leaver contrasts. To assist us in understanding the relationship between school and community factors and student classification, we entered our covariates into our regression models in four blocks. Models I and II featured only the “any

advice” and “number of sources of advice” items, respectively. These first two models allow us to examine if any contact, or the scope (i.e., extent) of contact with school personnel is associated with a greater chance of being classified as a Leaver or a Stayer, among both Achievers and Nonacademic students. Models III and IV augment Models I and II (respectively) by including our full range of covariates, and thereby allowing us to evaluate whether or not any of the associations discovered via Models I and II change after adjusting for background and contextual factors. Models III and IV also allow us to determine which student, school, and community factors are most strongly associated with being classified as a Leaver versus a Stayer, for both Achievers and Nonacademic students. As noted above, when fitting our latent class regression models, we verified the stability of the corresponding latent class definitions vis-à-vis those presented in Table 3. This check provides an indication that the latent class definitions do not vary among levels of the covariates (Collins & Lanza, 2010). In all of our models, the latent class definitions were found to be stable.

The corresponding results for males are presented in Tables 4 and 5. From Models I and II comparing Achiever Leavers to Achiever Stayers (Table 4), it can be seen that students who reported having any contact with school personnel about plans for after high school, or who reported receiving any “most useful” advice from school personnel, were less likely to be classified as Leavers versus Stayers, although the corresponding effects tend to be small and not statistically significant at the  $\alpha = .05$  level.

Drawing the full range of student, school, and community covariates into consideration in Models III and IV reveals a richer story about the factors that differentiate Achiever Leavers from Achiever Stayers. First, the effects associated with student-school personal contact increase in magnitude, again indicating that any contact and the scope of contact with school personnel are not associated with students being classified as leavers versus stayers (in fact, the effect is in the opposite direction). In Models III and IV, we can also see that family structure (living with both biological parents), and length of time in the community are both negatively associated with being classified as a Leaver versus a Stayer, even after adjusting for farm residence (which is negatively associated with being classified as a Leaver vs. a Stayer). There is also a strong relationship between minority status and student classification as a Leaver versus a Stayer, net of all other variables in the model, with minority males being more likely to be classified as Leavers versus Stayers. While the primary focus of this article is on the school and community correlates of student residential aspirations, these minority effects are worth noting since they indicate potentially important and complex relationships between race, community structure, and residential plans that warrant further investigation in subsequent research.

Student reports that “many people in the area have to move to get jobs” is positively associated with being classified as a Leaver versus a Stayer. The



*Table 4*  
**Latent Class Regression Models—Males,  
 Achiever Leavers Versus Achiever Stayers**

Predictor	Model I	Model II	Model III	Model IV
Student covariates				
Minority student	–	–	.484*	.522*
High parent education	–	–	–.037	–.035
Grade 12 (vs. 9)	–	–	.238	.291
Grade 11 (vs. 9)	–	–	.160	.190
Grade 10 (vs. 9)	–	–	.084	.108
Plans to attend 4-year PSEI	–	–	–.623	–.564
Lived in community >10 years	–	–	–.552*	–.548*
Farm residence	–	–	–1.517***	–1.532***
Lives with both biological parents	–	–	–.519*	–.503*
No. of siblings	–	–	.002	.005
		–		
School covariates				
Ln enrollment	–	–	.028	.046
Poverty level (% free lunch)	–	–	–.987	–.873
Any info sought from teacher/ school personnel	–.035	–	–.084	–
Any of “most useful” info obtained from teacher/school personnel	–.081	–	–.374	–
No. of teacher/school info sources contacted	–	.022	–	–.091
No. of “most useful” info sources contacted that were teacher/school officials or staff	–	–.062	–	–.193 <sup>†</sup>
Community covariates				
Town, distant	–	–	–.026	.000
Town, remote	–	–	.127	.176
Rural, distant	–	–	–.441	–.379
Rural, remote	–	–	.109	.196
Many must move to get jobs	–	–	.779**	.776**
Sample <i>n</i>	1,865	1,865	1,656	1,656

*Note.* Standard errors and significance levels adjusted for clustering in the sample (students distributed across schools). PSEI = postsecondary educational institution.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , <sup>†</sup> $p < .10$ .

fact that the latter coefficient has a strong, statistically significant effect, when school poverty level has a negative non–statistically significant effect, suggests to us that it is not overall community economic conditions but rather student perceptions of the local labor market that distinguish Leavers from Stayers among male Achievers. Finally, plans to attend a 4-year college, while not statistically significant, have an effect that is in the opposite direction we would expect based on the prior literature, suggesting a negative

*Table 5*  
**Latent Class Regression Models—Males,  
 Nonacademic Leavers Versus Nonacademic Stayers**

Predictor	Model I	Model II	Model III	Model IV
<b>Student covariates</b>				
Minority student	–	–	.593*	.596*
High parent education	–	–	–.202	–.201
Grade 12 (vs. 9)	–	–	.351	.394
Grade 11 (vs. 9)	–	–	.859**	.849**
Grade 10 (vs. 9)	–	–	.486*	.450*
Plans to attend 4-year PSEI	–	–	.431**	.441**
Lived in community >10 years	–	–	–.748***	–.771***
Farm residence	–	–	–.378	–.361
Lives with both biological parents	–	–	.142	.136
No. of siblings	–	–	.012	.017
		–		
<b>School covariates</b>				
Ln enrollment	–	–	–.003	–.009
Poverty level (% free lunch)	–	–	–.227	–.279
Any info sought from teacher/school personnel	–.284	–	–.458	–
Any of “most useful” info obtained from teacher/school personnel	–.181	–	–.130	–
No. of teacher/school info sources contacted	–	–.101	–	–.251 <sup>†</sup>
No. of “most useful” info sources contacted that were teacher/school officials or staff	–	–.206	–	–.043
<b>Community covariates</b>				
Town, distant	–	–	.197	.221
Town, remote	–	–	.288	.274
Rural, distant	–	–	.219	.186
Rural, remote	–	–	.129	.091
Many must move to get jobs	–	–	.580**	.551**
Sample <i>n</i>	1,865	1,865	1,656	1,656

*Note.* Standard errors and significance levels adjusted for clustering in the sample (students distributed across schools). PSEI = postsecondary educational institution.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , <sup>†</sup> $p < .10$ .

association between seeking higher education and the desire to leave versus stay among Achiever males.

The results for Nonacademic males in Table 5 largely parallel what was found for Achiever males. Nonacademic males who reported having any contact with school personnel about plans for after high school, or who reported receiving any “most useful” advice from school personnel, were again less likely to be classified as Leavers versus Stayers (although the

corresponding effects are not statistically significant at the  $\alpha = .05$  level). In Models III and IV, we can again see that these effects generally increase in magnitude when our full range of student and school covariates is included in the model. The data thus continue to provide a preliminary indication that school and education professionals are not complicit in fostering student plans to leave their host communities. We can also see from Models III and IV that length of time in the community is negatively associated with being classified as a Leaver versus a Stayer, even after adjusting for farm residence. Furthermore, although the effect is weaker for the Nonacademic contrast than the Achiever contrast examined in Table 4, student reports that “many people in the area have to move to get jobs” is again positively associated with being classified as a Leaver versus a Stayer (while the effect of school poverty level is again in the opposite direction). Unlike Achievers, however, Nonacademics who report planning to attend a 4-year college or university are more likely to be classified as Leavers versus Stayers.

The latent class regression model results for females appear in Tables 6 (Achievers) and 7 (Nonacademics). Looking at Models I and II in Table 6, we can see that, unlike what was found to be the case for males, receiving any information from school personnel regarding future plans is positively associated with female Achievers being classified as Leavers versus Stayers, although the effect is not statistically significant at the  $\alpha = .05$  level. In spite of this, receiving any “most useful” information from school personnel is negatively associated with being a Leaver versus a Stayer for female Achievers ( $p < .05$ ). The data also provide some indication in Model II that the scope (i.e., extent) of “most useful” information sources coming from the school is negatively associated with being a Leaver versus Stayer for Achiever females.

Many of the effects for student, school, and community covariates in Models III and IV parallel what was found for male Achievers, including the fact that poor local labor market conditions (“many must move to find jobs”) are positively associated with being a Leaver versus a Stayer. In addition, we can see from Models III and IV that for Achiever females, as was the case for Achiever males, the magnitude of the effects of “most useful information sources” (whether “any” or “number of”) are larger than those for “information sources sought.” Unlike what was found to be the case for males, however, having plans to attend a 4-year postsecondary educational institution is positively associated with being classified as Leavers versus Stayers for Achiever females. We also find regional effects that did not exist for Achiever males (Achiever females from remote towns are more likely to be classified as Leavers vs. Stayers).

With respect to Nonacademic Leavers versus Nonacademic Stayers (Table 7), we find only small and non-statistically significant effects for contact with school personnel with respect to future plans in Models I and II. In Models III and IV, both effects increase in magnitude and indicate that any contact with, or the scope of contact with, school personnel is not associated

Table 6  
**Latent Class Regression Models—Females,  
 Achiever Leavers Versus Achiever Stayers**

Predictor	Model I	Model II	Model III	Model IV
Student covariates				
Minority student	–	–	.852***	.871***
High parent education	–	–	.190	.189
Grade 12 (vs. 9)	–	–	.398 <sup>†</sup>	.353
Grade 11 (vs. 9)	–	–	.346	.328
Grade 10 (vs. 9)	–	–	.117	.123
Plans to attend 4-year PSEI	–	–	.877**	.854**
Lived in community >10 years	–	–	–.628*	–.593*
Farm residence	–	–	–.569**	–.574**
Lives with both biological parents	–	–	–.204	–.225
No. of siblings	–	–	–.007	–.009
		–		
School covariates				
Ln enrollment	–	–	–.020	–.013
Poverty level (% free lunch)	–	–	–.219	–.225
Any info sought from teacher/ school personnel	.251	–	.088	–
Any of “most useful” info obtained from teacher/school personnel	–.383*	–	–.386 <sup>†</sup>	–
No. of teacher/school info sources contacted	–	.108	–	.107
No. of “most useful” info sources contacted that were teacher/school officials or staff	–	–.220 <sup>†</sup>	–	–.258*
Community covariates				
Town, distant	–	–	.442	.490
Town, remote	–	–	1.122*	1.146*
Rural, distant	–	–	–.080	–.037
Rural, remote	–	–	.377	.415
Many must move to get jobs	–	–	.868***	.865***
Sample <i>n</i>	2,126	2,126	1,937	1,937

Note. Standard errors and significance levels adjusted for clustering in the sample (students distributed across schools). PSEI = postsecondary educational institution.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , <sup>†</sup> $p < .10$ .

with student likelihood of being classified as a Leaver versus Stayer. In addition, we again find that having plans to attend a 4-year college or university differentiates would-be Leavers from Stayers, with aspiring baccalaureates more likely to be classified as Leavers versus Stayers. Further, perceived economic opportunity (“many must move to find jobs”) has a strong positive

*Table 7*  
**Latent Class Regression Models—Females,  
 Nonacademic Leavers Versus Nonacademic Stayers**

Predictor	Model I	Model II	Model III	Model IV
<b>Student covariates</b>				
Minority student	–	–	.346 <sup>†</sup>	.334 <sup>†</sup>
High parent education	–	–	.129	.135
Grade 12 (vs. 9)	–	–	.252	.230
Grade 11 (vs. 9)	–	–	.448*	.425*
Grade 10 (vs. 9)	–	–	.176	.179
Plans to attend 4-year PSEI	–	–	.894***	.886***
Lived in community >10 years	–	–	–.003	–.033
Farm residence	–	–	.383	.385
Lives with both biological parents	–	–	–.316 <sup>†</sup>	–.311
No. of siblings	–	–	–.084	–.080 <sup>†</sup>
		–		
<b>School covariates</b>				
Ln enrollment	–	–	.099	.108
Poverty level (% free lunch)	–	–	.373	.441
Any info sought from teacher/ school personnel	–.020	–	–.170	–
Any of “most useful” info obtained from teacher/school personnel	–.075	–	–.176	–
No. of teacher/school info sources contacted	–	.033	–	–.055
No. of “most useful” info sources contacted that were teacher/school officials or staff	–	–.132	–	–.180
<b>Community covariates</b>				
Town, distant	–	–	.136	.154
Town, remote	–	–	.357 <sup>†</sup>	.347 <sup>†</sup>
Rural, distant	–	–	–.044	–.052
Rural, remote	–	–	.451	.472
Many must move to get jobs	–	–	.776***	.754***
Sample <i>n</i>	2,126	2,126	1,937	1,937

*Note.* Standard errors and significance levels adjusted for clustering in the sample (students distributed across schools). PSEI = postsecondary educational institution.

\* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ , <sup>†</sup> $p < .10$ .

and statistically significant relationship between being classified as a Leaver versus a Stayer.

Given the cross-gender similarities in the latent class solutions evident in Table 3, we fit a final latent class model to the pooled sample (i.e., male and female samples, combined). Doing so provides us with additional statistical power to explore the influence of school-based information sources on

student classification as a Leaver versus a Stayer. After identifying the four-class solution as the best-fitting latent class model, we found that the latent types from this four-class model were substantively the same as those presented in Table 3. We then evaluated the effects of our four blocks of predictors for the Leaver versus Stayer contrasts examined above. The results (not presented here in the interest of space, but available from the authors upon request) extend those presented in Tables 4–7. In particular, we found that among Achievers, receiving any “most useful” information from teachers or school resources was negatively associated with being a Leaver versus a Stayer (Model I,  $b = -.285$ ,  $p < .05$ ). When our student, school, and community covariates were included as predictors alongside the school-based information source measures, we found that the negative effect of receiving any “most useful” information on the odds of being classified as a Leaver versus a Stayer among Achiever students was still salient at the  $\alpha = .05$  level (Model III,  $b = -.338$ ,  $p < .05$ ). We further found that the scope (i.e., extent) of information sources considered most useful was negatively associated with being classified as a Leaver versus a Stayer among Achiever students (Model IV,  $b = -.234$ ,  $p < .01$ ). In addition for our full covariate models, the effect of student perceptions of local economic opportunity was the second strongest predictor of Achievers’ odds of being classified as Leavers versus Stayers, falling just below the effect of farm residence, even after controlling for family structure, farm status, postsecondary educational plans, and so forth (i.e., Models III and IV,  $p < .001$ , for both).

In sum, the parameter estimates from our latent class regression models collectively provide correlational evidence indicating that school personnel are not complicit in fostering student plans to leave their rural communities. This finding applies to both Achievers and Nonacademics, regardless of gender. Indeed, this is the case in particular for school personnel considered by students to provide the “most useful” information. Furthermore, across all of our latent class regression results, and comparing our findings for Achievers versus Nonacademics (i.e., for both males and females) it could be argued that Achievers are more strongly influenced by a narrower range of school-based information sources, since across our models the effects for “most useful” data sources are generally larger in magnitude than the corresponding effects for “all data” sources.

Looking across gender, however, we observed subtle differences in the student, school, and community factors influencing the residential plans of rural high school students. For example, the effects of local employment opportunities were stronger for Achievers than Nonacademics, but only for males. At the same time, the effect of local employment opportunities is roughly equal among Achiever males and Achiever females, but larger for Nonacademic females than Nonacademic males. We were surprised that the effect of baccalaureate aspirations had effects for Achiever males that differed from those on Nonacademic males, as well as both Achiever

and Nonacademic females. We were also surprised to find regional effects for females that did not exist for males. We believe these effects speak not only to the gendered structure of opportunity in rural communities (e.g., Corbett, 2007; Sherman, 2009) but also suggest the possibility of interactions between gender, academic and community integration, and educational aspirations. Finally, we consistently found that the factors that most strongly differentiate Leavers from Stayers are student perceptions of economic opportunity and residence. All of the male-female differences in effects are consistent with the literature, which points to greater sensitivity on the part of rural females than male students with respect to local opportunities.

### **Outmigration as the First Step Toward Youth Rural Return? Qualitative Evidence**

Consistent with many of Carr and Kefalas's observations (2009) as well as with our quantitative data, our school and community focus group data suggest that there are often strong social norms encouraging young people, and especially the most talented young people, to leave rural communities. We further find that there is frequently a very strong ambivalence on the part of community members, educators, and students about the prospects of outmigration in terms of what outmigration implies for maintaining strong family ties, as well as what it implies for community well-being more generally (Dahl & Sorenson, 2010). A high school teacher from an economically struggling rural community in the southeastern United States told us during a focus group session:

I think it's a two-edged sword. We want our youth to stay, but at the same time, we want them to have the opportunities that they are not going to have if they necessarily stay here. It's tricky. I mean, uh, we encourage some of our kids—I'm hoping some of our kids will go out and become teachers and maybe come back and help teach at this school as some of us get older and retire. You know, I would love to think that we could revitalize some of the town and hopefully have some shops and jobs that may not be available today to some of our kids. But in reality, I think a lot of our kids look at it as a chance, you know, to go on to (larger places)—find opportunities and the ones that are the most successful may not come back. I think that's the tricky part. We want them to go out and find those opportunities, but we also . . . I think we need some of the more successful ones to come back and you know really push the town to grow and succeed.

This focus group participant starkly identifies the roots of this ambivalence: the desire to see young people provided with ample future opportunities but also the understanding that those opportunities are not likely to exist in the home community. In a similarly economically depressed rural town in the southern Black Belt, a participant in a community focus group

echoed this concern, stating “the feeling of the community is that we want them to have every opportunity to succeed and we know if they stay here, the income opportunities are so limited they may end up on welfare.” A female student from a rural Appalachian community similarly noted that adults in her community “just know that there’s nothing really around here for younger (people) . . . there is no opportunity for us so, I mean, for us to get away and make something of ourselves is more what they see in us.”

When communities were perceived as highly distressed, outmigration with little expectation of rural return was presented as the most realistic and reasonable option, although in most instances one that was at best reluctantly embraced, and in particular by adult community members. As one community member from a town in the Northwest experiencing declines in family farms stated bluntly, “You don’t have a choice. They can’t stay around here. You know they have to go to the larger cities.” Similar sentiments were expressed by a group of educators in an isolated northwestern community facing the collapse of logging as the area’s core industry:

I think there is a bit of survivability mode with the community . . . they don’t necessarily want their kids to go away because in most cases they don’t come back . . . so I think that leads to some apprehension with kids. We have kids whose economic situation changes monthly, weekly, seasonally between pretty well off and being pretty well near poverty level.

These qualitative data are thus consistent with our quantitative analyses that similarly demonstrate the tendency of Leavers to disproportionately perceive limited local employment opportunities. As we were told by a student in an Appalachian school, “That’s why everybody would be glad to leave. So they could find better jobs.”

However, and especially in communities *not* experiencing pronounced economic distress, we also frequently found both expectations—and precedents—of rural return. In some cases, this was understood more or less matter-of-factly as a matter of community attachment and the virtues of growing up in a small place. A Midwestern female student described the experience of being raised in a rural community as “the close-knit (quality) that everybody knows everybody . . . you know, I’m kin to this person or I grew up with this person.” Students often contrasted rural school and community virtues with the (perceived) more anonymous and impersonal environments of large urban areas. The identification with the home community and the social ties associated with place led to the following exchange between students in rural Appalachia:

Male 1: (Many young people return) after it’s all said and done, just because, like, you have that tie to the town.

Female: Yeah.



Male 1: It's almost like you don't want to leave, but you do. I don't know. It's hard to explain.

Female: Part of you do, but like part of you don't.

Male 1: Yep. Because everybody you know is here and your family is here. And it seems like even though it's not perfect it's still, this is where you've always lived.

Male 2: Sure. It's your home town.

Many students further described how the close nature of communities was reinforced by the environment they found within rural schools, a setting that fostered a sense of belonging and inclusiveness. A female student from a school in the Southwest stated,

The school's smaller, so it's easier to get involved and, like, be the head of things, because you don't have to compete against everyone. Like, it's, it's easier to get on teams, like sports teams and it's easier to get in clubs and be part of student council or, be like, if you're not in it, to at least be a part of it and contribute to it. And it's just, I think that helps a lot with like being responsible and being able to communicate and work with different people, because you have to work with the whole school. Because everyone's involved.

The student quoted above reiterates themes that ran throughout the descriptions of rural school environments related to us by students, educators, and community members in which the small size of the school environment meant that not only was it harder for students to "fall between the cracks" but that the participation of *all* students in a variety of extracurricular activities was actively sought, especially in smaller schools, because of the need for full student participation in order to make some extracurricular programming, like sports or drama, viable. An educator from a rural Southern school explained, "I see that as an advantage to a little school . . . is that you can be in a lot of different things whereas in a small school they might be more selective, more elite you know. You might not make the team in that, so you might not make the cut, you know, to do that and in a small school usually if you want to do it, you can do it. If you want to be in a club, you can be in a club."

However, beyond the attachment to locality that the close-knit nature of the rural community and school environment fostered, for many of the rural youth and community members we spoke with, rural outmigration of young people was perhaps paradoxically understood as an important means of achieving community revitalization and sustainability, if that outmigration could be expected to one day be followed by rural return. As one parent explained, "I have nothing against the community. I want him to go out though and learn to grow and be his own person and grow on his own and work for somebody else and then come back." Education was therefore

very often seen as not necessarily leading to a community's demise through steady selective outmigration of talented young people but rather as a necessary input to communities' vitality and human capital base, especially in communities possessing sufficient economic activity to provide potential opportunities for young adults.

Not only was outmigration seen as a vital means of gaining skills and experiences that might be brought back to the community, but in all but the most economically distressed communities there was a belief that attachment to the local community and the rural way of life was sufficient to attract former outmigrants. A high school teacher from the Midwest said, "I think it more often would happen that a kid would say, 'I want to get the heck out of here,' that actually ended up back here than the opposite. I don't think there's many that would say, 'I think I'd kind of like to stay in this area,' that end up going somewhere else." Comments such as the following were typical of what we heard across our focus groups:

*Female FG Member 1:* I think some of them are ready to spread their wings and get the heck out of here. (*group laughter*) They would say, to go to something bigger and better. But a lot of times I think this type of community is somewhat bred into those kids. And I'm just speaking from experience in that you want to sometimes come back to where your roots were and raise your kids how you were raised. So even though they want to get away and go to college or go wherever. I think, long term, some of those kids usually end up back in this community. Or in another one like it. Like in my case.

*Female FG Member 2:* I was telling [Teacher] yesterday—I didn't see it myself, my daughter shared it with me, but my middle son—there is a new thing on Facebook, you know, "25 random facts about me." (*group laughter*) I don't know if you've heard about this or not. Anyway, one of the facts that my middle son put down was that he was raised on dirt roads and that's where he wants to raise his kids.

These comments suggest the ways in which many rural community members expressed confidence not only that the gravitational pull of the home community will eventually draw many of their children back home but rather that the considerable positive characteristics of the home rural community, or as the focus group participant suggests, "another one like it," provide sufficient attraction for young adults. Others could quickly name local youth, even amongst "Achievers," who appeared destined for rural return. An educator related to us, "Our valedictorian this year is a very bright kid and she's very clear that she's got, I mean and I don't think that she's adamantly opposed to being a teacher, but she's picked that because that's what she sees she can do and still live here. She wants to come back." In sum, the qualitative data suggest community norms and youth decision making that are strongly shaped by pragmatic assessments

of local economic opportunity, as well as by a strong rural community and place attachment imparted by school and community. They do not suggest a reflexive grooming by educators and community members of the “best and brightest” to leave local communities, but rather a sincere desire for local youth to be exposed to opportunity, with the hope that the local community will, for some, ultimately represent a place that young people will choose to call home. The qualitative data also perhaps suggest why, within the quantitative data, the most academically high-achieving students had among the highest community attachment, since it is in the home community and school that those rural students have found success, have largely positive associations, and have received consistent support and attention from adults.

### Potential Limitations

There are four potential limitations to the current study. First, while our data are national in scope, they do not constitute a nationally representative sample of rural high school students. Rather, our data collection strategy by design oversampled the types of rural communities that are of particular interest to researchers and policymakers, including the type of community examined by Carr and Kefalas, and the types of communities most likely to experience disproportionate youth outmigration due to economic contraction and stagnation. That said, while our data cannot be said to be representative of all U.S. rural high school students, in the context of the questions examined in this article we believe our analyses provide a compelling portrait of students in rural communities most susceptible to brain drain. The scope of our data and the size of our sample therefore augment existing studies of rural high school students based on smaller numbers of students and communities.

A second potential limitation of the current study is that our residential variables (and the associated ethnographic data) pertain to student aspirations and expectations, rather than their actual behaviors. We also lack longitudinal data matching students' aspirations to their subsequent actions. Nevertheless, behavioral demographers have long indicated that values, intentions, and expectations are among the strongest predictors of migration behavior, especially among those who had already made concrete decisions about future mobility plans, and especially during transitional phases of the life course (e.g., De Jong, 1999; Kley, 2010). In light of this, we further note that our quantitative analyses were limited to students who had reported already making decisions about their mobility plans, and that our latent class solutions show that among these deciders there is a strong alignment between desired and expected future residence. From this perspective, we believe that our data capture essential features of rural students' attachment to community that can inform contemporary research and debates about the contributions of schools and educators to rural brain drain. Further, our

qualitative data enable us to gain insight into how rural educators and community members evaluate the aspirations of the youth with which they work, especially in the context of longer terms patterns of local economic change, youth outmigration, and in some instances, youth rural return.

Third, our analyses are correlational, and as such may not capture complex causal relationships important for understanding aspects of rural brain drain. Further, in our quantitative analyses, socialization and influence are posited to flow predominantly from teachers to students, where in fact socialization is a dynamic process, and students undoubtedly shape the advice and support of their teachers. Nevertheless, we believe the breadth of our evidence (and the correspondence between our latent types and previous work on rural students and rural communities) enable our findings to extend existing research on the topics examined here. Specialized methods for causal and directional analyses may refine or qualify our conclusions.

Finally, our data collection window by chance spanned a period that featured the onset (but not the full brunt) of the Great Recession. To gauge the likely impact of this event on the relationships and dynamics in our data, we reran our latent class regression analyses using time of questionnaire administration (measured by month, as well as by academic semester) as a covariate (results not shown here). These covariates did not improve the fit of our models, and did not substantively alter any of the relationships reported here. In addition, owing to our study objectives and sample design, our ethnographic data collection strategy paid particular attention to economic contexts, especially in light of how they shaped student decision making and intended plans. While we certainly found a clear association between the economic condition of our communities and student plans, we did not find that recent changes in economic fortunes were a salient dimension in our focus groups. Rather, our ethnographic data indicate that students, parents, educators, and community elites very much thought in terms of much longer-term economic trends and fortunes, rather than immediate headline events, at least at the time of our field work. This of course does *not* mean that the Great Recession did not have a dramatic impact on life in the rural United States but rather that our data collection occurred at a time when the full impact of the recession and market dynamics had not necessarily filtered down into our rural communities.<sup>v5</sup>

## Conclusions

In this article, we used survey data from a national sample of rural high school students to determine the salience of distinct rural student types across a broad range of rural communities. We then evaluated the relationship between these types and factors commonly highlighted in the literature on the rural brain drain as a means of evaluating the role schools and educators play in grooming rural areas' "best and brightest" to leave their

communities. Finally, we drew upon qualitative data from a subset of our survey sites to help interpret and elaborate our findings.

Carr and Kefalas (2009) suggest that rural students may be sorted according to their potential or expected achievement in high school and beyond. The most successful students, Achievers, are the most likely to leave and not return, a process directly abetted by the expectations of educators and other adults in the community. By contrast, Stayers, who represent the lowest-achieving students, are the most likely to stay. Carr and Kefalas argue that this sorting process, over time and in combination with the selectivity of migration streams out of rural communities, has a cumulative negative effect on the well-being and viability of these communities such that “small towns play an unwitting part in their own decline” (p. 24).

In our analysis of the student survey data, we were able to identify four latent types of rural high school students with parallels to the types noted by Carr and Kefalas (2009). Moreover, our types, examined in isolation, paint an equally grim picture of the residential aspirations of rural youth. Yet ultimately our quantitative and qualitative data tell a slightly different story than the one presented by Carr and Kefalas. The Achievers, they state, “get the message that it is their fate, indeed their duty, to leave the small town behind” (p. 31). We find, however, that Achievers, in spite of whatever prospects they might anticipate outside their rural communities, do not differ greatly from their less academic peers in terms of a desire to leave. Further, when we examine specific school, community, and economic predictors of student latent types, we find little evidence to suggest that schools or educators groom students to leave. Rather, contact with teachers or other school personnel about career or future plans tends, if anything, to be associated with student aspirations to remain in rural communities. Finally, in terms of absolute magnitude, and net of the influences of residential factors and family structure, among the strongest predictors of student plans to leave their communities is economic opportunity, while the effects of school factors on plans to leave the community are comparatively slight. Moreover, community poverty alone does not appear to have a sizeable or statistically significant association with students’ residential aspirations. Rather, it is student perceptions of employment opportunities that differentiate Leavers from Stayers. This is the case for the most academically oriented and well-integrated students, as well as students who are less academically oriented and less integrated into their schools and communities.

Further, our qualitative data suggest that to the extent educators and adult community members do encourage youth outmigration, this does not tend to be done uncritically. Rather, it appears to be done with the understanding that supporting the outmigration of young people is in fact a crucial means of increasing rural human capital when strong local ties are able to attract young adults back home after they’ve accumulated additional education, life experiences, and skills elsewhere. That is, our

qualitative data suggest that many educators and rural community members understand that preventing the “hollowing out” of rural communities is not necessarily a matter of “keeping kids on the farm,” but rather of ensuring that rural youth have the opportunity to gain skills, education, training and resources outside the community that they might ultimately bring back with them (Farmer et al., 2006). Thus, it is not surprising that educators and other rural community members in our focus groups spoke of the importance of creating local environments that young people felt connected to and valued by, and to which at least some of these youth (or others like them) could ultimately envision returning.

These are nontrivial differences from the standpoint of how researchers and policymakers understand the processes by which rural communities lose human capital. There has been a tendency within popular debates to fault educators for a variety of social ills, from student underachievement, to lagging national economic competitiveness due to an underprepared and undereducated workforce, and so forth (e.g., Schafft, 2010). *Hollowing Out the Middle* similarly tends to highlight the ways in which rural educators (along with other members of rural communities) inadvertently undermine community well-being, a process that in “Ellis” was tantamount, the authors write, to the town “slowly committing suicide” (Carr & Kefalas, 2009, p. 139). This line of argumentation, however, neglects the differences in opportunity structures across rural and nonrural locales, as well as among rural communities themselves, that shape what young adults perceive as viable life choices (e.g., Corbett, 2007; Kley, 2010; Lichter & Brown, 2011; Roscigno, Tomaskovic-Devey, & Crowley, 2006). Accordingly, subsequent researchers should more closely examine a variety of rural community contexts when evaluating socialization processes, decision dynamics, and other factors that foster youth outmigration (Dahl & Sorenson, 2010), paying particular attention to local economic and labor market structures as well as local social norms (Flaherty & Brown, 2010; Lichter & Brown, 2011).

From the standpoint of community development, our findings raise questions about rural schools as potential drivers of economic development in so far as they are able to develop meaningful relationships with local employers, suggest to students economic opportunities available to them locally, and engage in strategic workforce development and community engagement (Harmon & Schafft, 2009). More generally though, this work indicates the ways in which a great many rural youth harbor strong attachments to their communities and how rural communities in turn might be able to retain and/or attract highly skilled young people if in fact opportunities are available. Accordingly, researchers and policymakers should investigate national and regional policies that can help enhance rural community capacity and sustainability. Ultimately, it may be the case that the hollowing out of rural America has less to do with the systematic underinvestment at the local level in those rural youth likely to end up as Stayers or

Returners, than with a systematic underinvestment at the regional and national levels in rural America more broadly.

### Notes

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<sup>1</sup>See, however, Huang et al. (1997), who use national longitudinal data to demonstrate the positive association between rural youth outmigration and school emphases on academic versus vocational-technical education.

<sup>2</sup>The urban-centric locale codes were developed by the U.S. Census Bureau for the National Center for Education Statistics (NCES) in order to describe schools' geographic proximity to an urbanized area of a given population size and density (website: [http://nces.ed.gov/ccd/rural\\_locales.asp](http://nces.ed.gov/ccd/rural_locales.asp)).

<sup>3</sup>The 50 states are divided into four census regions by the U.S. Census Bureau: Northeast, Midwest, South, and West. See: [www.census.gov](http://www.census.gov).

<sup>4</sup>These test statistics are available from the authors upon request.

<sup>5</sup>It is also worth noting that while the S&P500 decline was underway in the spring of 2008, the S&P500 did not bottom until the beginning of 2009, with the unemployment rate peaking approximately 6 months later.

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