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CLASSIFYING THE COLLEGES OF THE FORGOTTEN AMERICANS:
A GEOGRAPHICALLY-BASED CLASSIFICATION OF PUBLIC
MASTER'S COLLEGES AND UNIVERSITIES

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In his first address to a Joint Session of Congress in February 2009, President Barack Obama committed the nation to dramatically expanding adult baccalaureate degree attainment among US adults, which had fallen from first to eighth among developed nations around the world:

That is why, at the start of my administration I set a goal for America: by 2020, this nation will once again have the highest proportion of college graduates in the world....Today, I am announcing the most significant down payment yet on reaching this goal in the next ten years. It's called the American Graduation Initiative. It will reform and strengthen community colleges from coast to coast so that they get the resources students and schools need—and the results workers and businesses demand. Through this plan, we seek to help an additional five million Americans earn degrees and certificates in the next decade.

The task of dramatically increasing adult baccalaureate degree attainment requires a substantially greater policy focus on what National Center for Public Policy Center and Higher Education President Pat Callan termed the most understudied sector of US higher education, the nation's public regional universities (2009 unpublished remarks to the Council for the Public Policy of ASHE). Reasons for this include, first, that many of our nation's public flagship universities, including the Universities of California, Illinois, Minnesota, and Texas, all capped their enrollments at the end of or shortly after the "baby boom" that spanned the period 1965 to 1973 (Katsinas & Tollefson, 2009). Second, the largest baby boom since the mid-1960s—what the late Clark Kerr termed "Tidal Wave II"—is presently of college age. Between 2009 and 2012, there will be one million more persons between the ages of 18 and 24 years of age, and 3 million more young adults between the ages of 25 and 34 in the American population than there were in 2009. As Katsinas and DeMonBrun (2011) note, these dramatically higher numbers of college-age students will occur whether or not our institutions of public higher education are funded to serve them. Third, state tax appropriations for public higher education have not grown to accommodate the record growth in high school graduation class size in many states. In fact, 34 of 46 responding states reported mid-year budget cuts in FY2003, and 34 of 48 responding states reported mid-year budget cuts in state tax

appropriations for public higher education in FY2009-2010 (Katsinas & Friedel, 2010). Fourth, as the Delta Cost Project notes, to compensate for cuts in state operating budgets from 1998 to 2008, significant cost-shifting has occurred, as institutional boards and leaders have chosen not to cut spending (and thus dramatically change their missions and educational functions), and instead have chosen to shift their revenue sources from state taxes to tuition (Desrochers, Lenihan, & Wellman, 2010). Thus, the combined demographic challenge of all-time record enrollments and public flagship university enrollment caps will likely push even more students to the nation's nonselective public Associate's Colleges (ACs) and Master's Colleges and Universities (MCUs). This underscores the need for new policy tools—in this case, one that geographically classifies public MCUs in a manner consistent with the new Carnegie Basic Classification of Associate's Colleges—to bring greater precision to research *across* the two sectors of American higher education with a primary access mission.

This paper is organized as follows: First, we describe how Carnegie currently classifies public MCUs as part of its 2005 Basic Classification, and how Carnegie geographically classifies the public Associate's Colleges sector. Our proposed sub-classification of public Master's Colleges and Universities, in a manner consistent with that used by Carnegie for their Associate's Colleges sector, is then presented, with examples of how this research tool can be used to tease out differences by geographic type of rural, suburban, and urban MCUs. Federal data from the National Center for Education Statistics' Integrated Postsecondary Education Data System for enrollments and student financial aid are then analyzed to show how this theoretical framework classifying public MCUs can be used to assist higher education scholars and policymakers in their efforts to better understand the role both sectors play in delivering on the promise of access.

How Carnegie classifies public Master's Colleges and Universities

Most public MCUs can trace their historical roots to the teachers colleges and normal schools that broadened their missions following World War II to the end of the Baby Boom, a period that began with the GI Bill enrollment boom through the mid-1970s. This is the era of the "great transformation" of higher education, when total US enrollments grew from about 2.3 million students in 1950 to about 3.5 million students in 1960, to 11.5 million students in 1980. Clark Kerr (1991) called this "the golden age," a time when the first mass system of universal higher education of any industrialized country emerged. Today, many of these institutions still emphasize a key component of their service mission: preparing teachers for the regions their colleges serve (Kinkead, 2009).

In the Carnegie Foundation's 2005 Basic Classification, Master's

Colleges and Universities (MCUs) were assigned on the predominance of master's degrees as their highest level of degree awarded (CFAT, 2010). Past editions of the Basic Classification in 1973, 1976, and 1987 used a different term—"Comprehensive Colleges and Universities." Allan Ostar, who served as President of AASCU from 1965-1991, specifically recalls that when officials from Clark Kerr's Carnegie Commission on Policy Studies in Higher Education called him in the early 1970s to ask for advice, he suggested "comprehensive colleges and universities" and not the term "regional universities" that Alden Dunham had used in his 1969 book *Colleges of the Forgotten Americans: A Profile of State and Regional Universities*. Ostar justified "comprehensive colleges and universities" on the basis that these institutions had broadly assigned missions to serve the regions in which they were situated (Ostar, personal interview). This notion of comprehensive service to region continues to this day, demonstrated by AASCU's ongoing "Stewardship of Place" initiative (AASCU, 2002).

Table 1 shows the 2000 and 2005 Carnegie Basic Classification of Institutions of Higher Education. According to the Carnegie Foundation, the 2005 Basic Classification represented the largest overhaul of the classifications since their initial publication in 1973. As Table 1 shows, a third category within the doctoral sub-classifications was added; most important is the change in the Associate's Colleges sector, as each of the prior editions of the Basic Classification in 1973, 1976, 1987, 1994, and 2000 had but a single sub-classification for what constituted roughly 40% of all institutions. The 2005 Basic Classification divided Associate's Colleges into public, private not-for-profit, and for-profit institutions, with 11 sub-classifications for the publics, and two each for the private institutional types. Within the 11 public sub-classifications, there are four "other" types—Associate's Public Special Use, Associate's Public 2-Year Under Universities, Associate's Public Primarily Associate's, and Baccalaureate Associate's Colleges (at which Bachelor's degrees do not exceed 5% of total degrees awarded). Together, these four types serve roughly 6% of the total public ACs student enrollments (Hardy & Katsinas, 2007).

We now turn to the 656 public, private, and for-profit Master's Colleges and Universities in the 2005 Carnegie Basic Classification operating within the boundaries of the United States and its territories. These 656 institutions served a total of 3,887,786 undergraduate students in the fall of 2004. By type of control, the 266 public MCUs served 2,411,305 undergraduates or 62% of nearly 4 million enrolled in this sector; the 345 private not-for-profit institutions served 1,290,716 or 33%, and the 45 private for-profit institutions served 185,765 students or 5% of the total enrollment (Carnegie Foundation for the Advancement of Teaching, 2006).

*The Carnegie Classification System of Institutions of Higher Education by
Major Class and Subclasses, 2000 and 2005*

2000 Major Class Subclass	2005 Major Class Subclass
<i>Associate's Colleges</i>	<i>Associate's Colleges</i> Associate's-Public Rural-serving Small Associate's-Public Rural-serving Medium Associate's Public Rural-serving Large Associate's Public Suburban-serving Single Campus Associate's Public Suburban-serving Multicampus Associate's Public Urban-serving Single Campus Associate's Public Urban-serving Multicampus Associate's- Public Special Use Associate's Private Not-for-profit Associate's Private For-profit Associate's Public 2-year Colleges under Universities Associate's Public 4-year, Primarily Associate's Associate's Private Not-for-profit 4-year, Primarily Associate's Associate's Private For-profit 4-year, Primarily Associate's
<i>Doctoral-Granting Institutions</i> Doctoral/Research Universities-Extensive Doctoral/Research Universities-Intensive	<i>Doctorate-Granting Universities</i> Research Universities (very high research activity) Research Universities (high research activity) Doctoral/Research Universities
<i>Master's Colleges & Universities</i> Master's Colleges & Universities I Master's Colleges & Universities II	<i>Master's Colleges and Universities</i> Master's Colleges and Universities (larger programs) Master's Colleges and Universities (medium programs) Master's Colleges and Universities (smaller programs)
<i>Baccalaureate Colleges</i> Baccalaureate Colleges- Liberal Arts Baccalaureate Colleges- General Baccalaureate/Associate's Colleges	<i>Baccalaureate Colleges</i> Baccalaureate Colleges- Arts & Sciences Baccalaureate Colleges- Diverse Fields Baccalaureate Colleges- Associate's Colleges
<i>Specialized Institutions</i> Theological Schools Medical Schools & Medical Centers Other Separate Health Profession Schools Schools of Engineering & Technology Schools of Business & Management Schools of Art, Music & Design Schools of Law Teachers' Colleges Other Specialized Institutions	<i>Special Focus Institutions</i> Theological seminaries, Bible colleges, and other faith-related Institutions Medical Schools and medical centers Other health profession schools Schools of engineering Other technology-related schools Schools of business and Management Schools of Art, Music, and Design Schools of Law Other Special-Focus Institutions
<i>Tribal Colleges & Universities</i>	<i>Tribal Colleges</i>

Carnegie used the numerical thresholds of the highest degrees awarded to assign institutions to the general Master's Colleges and Universities category, and then the numbers of master's degrees awarded to assign institutions to each of its MCU sub-classifications of Smaller-, Medium-, and Larger-Programs by governance structure. For public, private not-for-profit, and for-profit MCUs, those institutions granting between 50 and 99 master's degree annually are classified Smaller-Programs, those granting between 100 and 199 master's degrees annually as Medium-Programs, and those institutions granting 200 or more master's degrees annually are classified as Larger-Programs MCUs. Among the 266 public MCUs, 31 or 12% are classified as Smaller-Programs, 69 or 26% are classified as Medium-Programs, and 166 or 62% are classified as Larger-Programs. Carnegie also used the subcategories of Smaller-, Medium-, and Larger-Programs to classify private not-for-profit and for-profit MCUs. Among the 345 private not-for-profit MCUs, 81 or 23% are classified as Smaller-Programs, 105 or 30% are classified as Medium-Programs, and 159 or 46% are classified as Larger-Programs. Among the 45 private for-profit MCUs, 13 or 29% are classified as Smaller-Programs, 14 or 31% are classified as Medium-Programs, and 18 or 40% are classified as Larger Programs.

We believe subdividing public sector MCUs using a geographically based classification scheme similar to Carnegie's Associate's Colleges can produce a far more useful tool for research, policy, and programs than a scheme based solely upon number of master's degrees awarded and type of governance. We believe place matters. This fact was recognized within Carnegie's 2005 Basic Classification, which for the first time provided geographic sub-classifications of the Associate's College sector by rural-, suburban-, and urban-serving institutions. This makes good sense for the public MCUs sector as well, particularly to measure college degree success, which likely will emphasize expanding transfer across the Associate's College and MCU sectors. We now turn attention to analyzing enrollments and student financial aid using the geographically-based 2005 Carnegie Basic Classification of Associate's Colleges and the proposed MCU classification.

Geographically Classifying Master's Colleges & Universities

Before we begin our discussion of the methodology employed to classify all public MCUs, we thought it prudent to make a clear case for geography as a classification tool. The best argument for geographic classification comes from a simple institutional comparison. As Kinkead (2009) found, the current Carnegie classification lacks precision and is susceptible to improper comparisons. Consider, for example, Western Carolina University, located in Cullowhee, NC and California State

University—Long Beach (CSU-LB). Under the current Carnegie classification scheme for MCUs, both Western Carolina and CSU-LB are considered “Large” institutions. This “large” classification is because both institutions graduate more than 200 students per year from master’s degree programs. If a researcher wanted to study public MCUs and relied only upon the current Carnegie classification method, the differences, which are many, between a rural-serving institution like Western Carolina and an urban-serving CSU-LB are simply lost. For instance, Western Carolina has a total enrollment of approximately 8,500 students, with only about 8% minority status while CSU-LB has a total enrollment above 32,000 with more than 60% of minority status.

We believe that institutions are inextricably rooted in place. An institution may change governance structure, architecture, strategic plan, enrollment profile, etc., but an institution cannot easily separate from its physical location. In fact, physical location and geographic setting (rural, urban, suburban) is often a source of institutional identity and pride and is frequently used in marketing and promotional materials. If place matters for recruitment, identity, alumni pride, etc., then it certainly matters for institutional classification.

We do not wish to belabor the point here, but without a geographically-based classification scheme, differences such as the ones discussed above are lost. A geographically-based classification scheme allows a researcher to precisely compare institutions that share similar geographic and perhaps demographic characteristics. It would be simply wrong to lump a rurally-isolated campus in with a campus located in a major metropolitan area. In short, a geographically-based classification scheme allows comparisons both between and among institutional types and sub-types.

To classify public Associate’s Colleges, Carnegie used population data collected from the 2000 United States Decennial Census through its American Fact Finder system, with population data accessed for each city in which the institutions report their physical address (Hardy, 2005). Public Associate’s Colleges reporting a physical address within the confines of a Primarily Metropolitan Statistical Area (PMSA) or Metropolitan Statistical Area (MSA), with the city’s name included in the title of the PMSA or MSA, and with a total population of 500,000 people or more were coded as “urban-serving.” Associate’s Colleges with physical addresses within PMSAs or MSAs with a total population of 500,000 people or more, but not included in the name of the PMSA or MSA, were coded as “suburban-serving,” and those institutions with a physical address outside of any PMSA or MSA, or located within the parameters of a PMSA or MSA with fewer than 500,000 people were coded as “rural-serving.”

Table 2 presents institutions that reported to IPEDS data for annual unduplicated headcount enrollments and average enrollments for both 2000-01 and 2006-07 academic years by number and percentages, deploying the exact same methodology by which Katsinas, Lacey, and Hardy (2005) classified Associate's Colleges for the Carnegie Foundation. The first three columns under "institutions" in Table 2 present the Associate's Colleges within the seven geographic sub-classifications within the Carnegie 2005 Basic Classification universe. A total of 973 discrete Associate's Colleges submitted institutional data to NCES in both 2000-01 and 2006-07 (not presented here are the four "other" types of public Associate's Colleges (hereafter, ACs) in this, the largest sector within the Carnegie universe). Of these 973 institutions, 584 or 60% are rural, 210 or 22% are suburban, and 179 or 18% are urban.

By major geographic type, the 265 public MCUs include 163 rural, 56 suburban, and 46 urban institutions. This percentage distribution is quite similar to the public Associate's Colleges that are classified geographically in Table 2 (see third column), with 61% classified as rural, 21% as suburban, and 17% as urban. Table 2 shows that by sub-classification, the 163 rural public MCUs include 26 or 10% Rural-Small, 46 or 17% Rural-Medium, and 91 or 34% Rural-Large institutions. The suburban-serving sector includes 56 institutions, of which 15 or 6% are Suburban-Small, and 41 or 15% are Suburban-Large. The urban-serving sector includes 46 institutions, of which 13 or 5% are Urban-Small, and 33 or 12% are Urban Large. This produces a classification scheme for the public MCUs with 7 sub-classifications, a number equal to the Carnegie Basic Classification of Associate's Colleges.

The next five columns of Table 2, under the heading of "Annual Unduplicated Headcount Enrollment," show the dramatic enrollment surge of nearly 3 million students across all types of public two- and four-year access institutions from 2000-01 to 2006-07. In just seven years, ACs served an additional 2,306,374 students, and MCUs served an additional 690,599 students, increases of 31 and 38 percent, respectively. All types of rural, suburban, and urban ACs and MCUs saw substantial growth, with rural institutions seeing the greatest growth both numerically and on a percentage basis. We also note that the rural-serving institutions were growing fastest across both access sectors, with increases of over 1 million students at ACs and nearly 400,000 at MCUs. By percentages, these increases were 43 and 45 percent, respectively.

We attach great significance to the final four columns of Table 2, which show the average enrollments by sub-classification in 2000-01 and 2006-07, as well as the numerical and percentage change within each sector. It is very clear that each sector is witnessing substantial enrollment growth in the current enrollment boom. By numbers within

Table 2 Enrollment at Associate's Colleges in the 2005 Carnegie Basic Classification and Master's Colleges and Universities in the Proposed Classification, 2000-1 and 2006-7												
2005 Carnegie Basic Classification of Associate's Colleges	Institutions		Annual Unduplicated Headcount Enrollment				Change, 2000-1 to 2006-7				Average enrollment	
	No.	%	2000-1	2006-7	No.	%	% change within subclass	2000-1	2006-7	No.	% change within subclass	
Rural Small	136	14	140,706	198,485	57,779	41	3	1,035	1,459	425	41	
Rural Medium	305	31	890,587	1,431,953	541,366	61	23	2,920	4,695	1,775	61	
Rural Large	143	15	1,361,224	1,784,176	422,952	31	18	9,519	12,477	2,958	31	
Total Rural	584	60	2,392,517	3,414,614	1,022,097	43	44	4,097	5,847	1,750	43	
Suburban Single Campus	110	11	1,032,566	1,350,457	317,891	31	14	9,387	12,277	2,890	31	
Suburban Multi-Campus	100	10	1,333,976	1,692,873	358,897	27	16	13,340	16,929	3,589	27	
Total Suburban	210	22	2,366,542	3,043,330	676,788	29	29	11,269	14,492	3,223	29	
Urban Single Campus	32	3	203,254	427,926	224,672	111	10	6,352	13,373	7,021	111	
Urban Multi-Campus	147	15	2,396,597	2,779,414	382,817	16	17	16,303	18,908	2,604	16	
Total Urban	179	18	2,599,851	3,207,340	607,489	23	26	14,524	17,918	3,394	23	
Total	973	100	7,358,910	9,665,284	2,306,374	31	100	7,563	9,933	2,370	31	
Public MCUs *												
Rural Small	26	10	98,731	127,691	28,960	29	4	3,797	4,911	1,114	29	
Rural Medium	46	17	208,844	277,729	68,885	33	10	4,540	6,038	1,498	33	
Rural Large	91	34	576,986	873,757	296,771	51	43	6,341	9,602	3,261	51	
Rural Total	163	61	884,561	1,279,177	394,616	45	57	5,427	7,848	2,421	45	
Suburban Small	15	6	74,445	87,047	12,602	17	2	4,963	5,803	840	17	
Suburban Large	41	15	386,395	546,118	159,723	41	23	9,424	13,320	3,896	41	
Suburban Total	56	21	460,840	633,165	172,325	37	25	8,229	11,307	3,077	37	
Urban Small	13	5	103,294	120,746	17,452	17	3	7,946	9,288	1,342	17	
Urban Large	33	12	368,585	474,791	106,206	29	15	11,169	14,388	3,218	29	
Urban Total	46	17	471,879	595,537	123,658	26	18	10,258	12,946	2,688	26	
R, S, & U Total	265	100	1,817,280	2,507,879	690,599	38	100	6,858	9,464	2,606	38	

Data Source: NCES/IPEDS 2008 Collection Year. Note: * Public MCUs are classified using the proposed geographic classification (Kinkead, 2009).

the ACs, Urban Single Campus and Suburban Multi-Campus institutions saw the largest average enrollment growth, of 7,021 and 3,589 students, respectively; within MCUs the top three sub-classifications saw virtually the same numerical enrollment growth, with Suburban Large growing by an average of 3,896 students, Rural Large growing by an average of 3,261 students, and Urban Large growing by an average of 3,218 students. In the real world of higher education administration, leaders are trying to create positive learning environments to produce successful outcomes, as measured by degrees awarded. Table 2 shows that all access institutions are seeing significant enrollment growth; within many ACs, that growth is quite often akin to establishing a new campus, and within MCUs it is akin to establishing a new college or major academic unit.

Thus, the geographic profile of the nation's 265 publicly-controlled MCUs—of which 61% are rural-serving, 21% suburban-serving, and 17% urban-serving—by percentage closely matches the institutional distribution within the 2005 Carnegie's Basic classification of Associate's Colleges. The enrollment distribution is somewhat different; however, of the 2,507,879 undergraduate students enrolled at the 265 public Master's institutions in the 2006-07 academic year, 51% were enrolled at the 163 rural-serving institution, 25% at the 56 suburban institutions, and 24% at the 46 urban-serving institutions.

Applying the New Geographic Classification of Public MCUs

Table 3 presents unduplicated annual headcount enrollments by race and ethnicity for both access sectors for the 2006-07 academic year, expressed in numbers and percentages. Table 4 shows how the different racial and ethnic groups are situated on a percentage basis within each public AC and MCU subclass. Table 3 shows that of the 9.7 million students enrolled at ACs, 5.5 million are White, 1.3 million are Black, 1.4 million are Hispanic, 619,886 are Asian or Pacific Islander, 98,421 are American Indian or Native Alaskan, 644,570 are "race unknown," and an additional 126,035 are non-resident aliens. Within the 2.5 million students enrolled at public MCUs, more than 1.5 million are White, a third of a million are Black, 264,802 are Hispanic, 137,508 are Asian and Pacific Islander, 26,401 are American Indian or Alaskan Native, 149,547 are "race unknown," and an additional 59,696 are non-resident aliens. By geographic sub-classification and specific racial and ethnic category, 30 and 44 percent of all Black students are enrolled at rural ACs and MCUs, respectively; 45 and 42 percent of all Hispanic students are enrolled at urban ACs and MCUs, respectively; 47 and 32 percent of all Asians/Pacific Islander students are enrolled at suburban ACs and MCUs, respectively; and 49 and 40 percent of all American Indian/Alaskan Native students are enrolled at rural ACs and MCUs, respectively.

Table 4 presents annual unduplicated headcount enrollments for 2000-1 and 2006-7 by race and ethnicity, and shows the growing percentages of racial and ethnic minorities across all types of public access institutions. Table 4 also shows how similar the rough approximations of race and ethnicity are across the major rural, suburban, and urban major sub-classifications for public ACs and MCUs. At rural institutions, white enrollments in 2006-7 were 71% at both public ACs and public MCUs; Black enrollments in that same year were 11 and 12 percent, respectively, and Hispanics were 8 and 7 percent, respectively. Enrollment percentage distributions were almost nearly the same for suburban and urban institutions. In terms of enrollments by race and ethnicity, the urban ACs and urban MCUs categories include many majority-minority institutions, as do some of the suburban ACs and MCUs. The striking similarities as measured by the percentage distribution of enrollments by race and ethnicity found at ACs and MCUs further justify a classification of the public MCUs based upon geography.

Table 5 shows the number of first-time/full-time degree- and certificate-seeking students receiving student financial aid in the IPEDS Student Financial Aid Cohort Study who receive student financial aid by type of aid, and who incur student loan debt for both public Associate's Colleges and public Master's Colleges and Universities in the 2006-7 academic year. The first two columns of Table 5 show the number of students in the cohort by AC and MCU type, and a slightly more even distribution across rural, suburban, and urban institutions for the ACs than for the MCUs. The next three columns, under the heading of "Students in the IPEDS Student Aid Cohort who receive... ANY Financial Aid," show the numbers and percentages of students in the cohort who receive any financial aid to access college. By numbers, and by percentages in the cohort, 62% of all students in the cohort at ACs, and 76% at MCUs use student financial aid to access college. By institutional type, more rural students receive some form of financial aid for both the public AC and MCU sectors (71% and 78%, respectively than at corresponding suburban and urban institutions (49% and 76%, and 60% and 73%, respectively).

Large numbers and percentages of students at public access institutions rely on student financial aid from the federal government, the state and local governments, and institutional sources to access higher education, resulting in substantial percentages incurring student loan debt. We note here the strikingly higher percentages of students incurring student loan debt to complete their degrees at public MCUs, the clear result of the cost shifting that experts such as Delta Cost Project (2009) have cited, as public access universities are forced to raise tuition to make up for sharp cuts in state tax appropriations for their operating budgets.

Table 3
Annual Unduplicated Headcount Student Enrollment for Public Access Institutions by Race and Ethnicity, 2006-07

Public Associate's Colleges	Total		White		Black		Hispanic		Asian/ Pacific Islander		American Indian/ Alaskan Native		Race Unknown	
	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Rural Small	198,485	2	130,713	2	39,343	3	8,914	1	8,687	1	3,576	4	6,668	1
Rural Medium	1,431,953	15	1,071,764	19	169,377	13	80,013	6	21,511	3	21,442	22	62,269	10
Rural Large	1,784,176	18	1,231,306	22	163,149	13	193,995	14	48,740	8	23,218	24	110,643	17
Rural Total	3,414,614	35	2,433,313	44	371,869	30	282,922	20	78,938	13	48,236	49	179,580	28
Suburban Single	1,350,457	14	719,313	13	157,802	13	243,950	18	109,868	18	8,047	8	93,855	15
Suburban Multi-	1,692,873	18	899,666	16	179,592	14	242,278	17	182,066	29	11,417	12	145,038	23
Suburban Total	3,043,330	31	1,618,979	29	337,394	27	486,228	35	291,934	47	19,464	20	228,893	37
Urban Single	427,926	4	249,653	5	88,167	7	43,242	3	14,508	2	3,695	4	24,903	4
Urban Multi-	2,779,414	29	1,222,965	22	460,450	37	580,720	42	234,506	38	27,026	27	201,194	31
Urban Total	3,207,340	33	1,472,618	27	548,617	44	623,962	45	249,014	40	30,721	31	226,097	35
Total	9,665,284	100	5,525,380	100	1,257,880	100	1,393,112	100	619,886	100	98,421	100	644,570	100
Public MCUs *														
Rural Small	127,691	5	82,891	5	27,382	8	4,013	2	2,054	1	2,502	9	6,474	4
Rural Medium	277,729	11	178,494	12	32,913	10	34,068	13	8,427	6	5,191	20	13,043	9
Rural Large	873,757	35	647,048	42	87,710	26	49,600	19	22,274	16	11,980	45	40,365	27
Rural Total	1,279,177	51	908,433	59	148,005	44	87,681	33	32,755	24	19,673	75	59,882	40
Suburban Small	87,047	3	57,322	4	11,055	3	6,258	2	3,485	3	435	2	6,039	4
Suburban Large	546,118	22	319,477	21	69,569	21	59,936	23	40,740	30	3,146	12	37,684	25
Suburban Total	633,165	25	376,799	25	80,624	24	66,194	25	44,225	32	3,581	14	43,723	29
Urban Small	120,746	5	60,643	4	32,992	10	5,136	2	3,375	2	710	3	16,316	11
Urban Large	474,791	19	190,589	12	71,840	22	105,791	40	57,153	42	2,437	9	29,626	20
Urban Total	595,537	24	251,232	16	104,832	31	110,927	42	60,528	44	3,147	12	45,942	31
R, S, & U Total	2,507,879	100	1,536,464	100	333,461	100	264,802	100	137,508	100	26,401	100	149,547	100

Data Source: NCHES/PEIS 2008 Collection Year. Notes: *This uses proposed geographic classification of public MCUs developed by Kirkend (2009).

Table 6 shows the changes by type of access institution comparing the 2000-1 and 2006-7 academic years, again through use of the IPEDS Student Financial Aid Cohort Study Survey. Here four important observations can be made: First, under the heading of "Students Receiving ANY Financial Aid," we see strikingly similar percentages by geographic type of students who received financial aid from any source in 2006-7. At Associate's Colleges, the percentages of students receiving any type of financial aid by geographic rural/suburban/urban split were 52, 24, and 25 percent, respectively; at Master's Colleges & Universities these percentages were 58, 23, and 19 percent, respectively. Second, under the column headed "Students Receiving ANY Financial Aid," the numbers of students in the IPEDS Student Financial Aid Survey rose between 2000-1 and 2006-7 for each and every type of two- and four-year public access institution within each Carnegie sub-classification. Among Associate's Colleges, the percentage increase from 2000-01 to 2006-7 of financially aided students among the ACs ranged from a low of 10% at Rural Small to a high of 59% at Suburban Multi-Campus and 49% at Suburban Single Campus and Urban Multi-Campus institutions. Among Master's Colleges and Universities, the percentage increase from 2000-1 to 2006-7 ranged from a low of 3% at the Urban and Suburban Small institutions to a high of 39% at Rural Large institutions.

By type of aid, over the seven year period, significantly more students in the cohort received federal Pell Grants and Supplemental Education Opportunity Grants (SEOGs). Of the students attending ACs, not surprisingly, in 2006-07, roughly two out of three received some federal aid, while four out of ten at the public MCUs did so. There can be no question of the importance of the Pell Grant program as a key in providing access to first-time-in-college-students to access ACs and MCUs. Table 6 shows roughly similar percentage increases in students receiving state and local government funded aid across ACs and MCUs, but strikingly different patterns of institutional aid and student loan debt incurred. While state and local scholarships are of clear importance to the students who receive them, when measured by total dollars, local government aid is small, and state aid is dwarfed by federal aid (we also note that these data were for the 2006-7 year, before the state of the current recession, when states like Illinois made deep cuts in their state-funded student financial aid program to cope with large state revenue shortfalls). By AC type, the level of institutional aid actually declined at Urban Single Campus ACs, and was flat at Rural Large institutions.

More students attending access institutions are incurring debt. In Table 6, we note the heading "Students Incurring Loan Debt" which under the IPEDS definition is actually called "loans awarded." We deliberately choose not to use that terminology because student loans are

Table 4
Percentage Unduplicated Student Headcount Enrollment by Race and Ethnicity, and by 2005 Carnegie Basic Classification of Associate's Colleges and by Proposed Geographic Classification of Public Master's Colleges and Universities, 2000-1 and 2006-7

2005 Carnegie Basic Classification of Associate's Colleges	Total	White		Black		Hispanic		Asian/Pacific Islander		American Indian/Alaskan Native		Race Unknown		Non-Resident Alien	
		2000-1	2006-7	2000-1	2006-7	2000-1	2006-7	2000-1	2006-7	2000-1	2006-7	2000-1	2006-7	2000-1	2006-7
Rural Small	100%	70%	66%	20%	20%	3%	4%	2%	4%	1%	2%	4%	3%	0%	0%
Rural Medium	100%	78%	75%	11%	12%	5%	6%	1%	2%	1%	1%	3%	4%	0%	0%
Rural Large	100%	72%	66%	7%	9%	10%	11%	3%	3%	2%	1%	5%	6%	1%	1%
Rural Total	100%	74%	71%	9%	11%	8%	8%	2%	2%	1%	1%	5%	5%	1%	1%
Suburban Single-Campus	100%	54%	53%	10%	12%	18%	18%	9%	9%	1%	1%	7%	7%	1%	1%
Suburban Multi-Campus	100%	55%	53%	8%	11%	13%	14%	13%	11%	1%	1%	8%	9%	2%	2%
Suburban Total	100%	54%	53%	9%	11%	15%	16%	11%	10%	1%	1%	8%	8%	2%	2%
Urban Single-Campus	100%	60%	58%	16%	21%	11%	10%	3%	3%	2%	1%	6%	6%	1%	1%
Urban Multi-Campus	100%	45%	44%	16%	17%	21%	21%	9%	9%	1%	1%	6%	7%	2%	2%
Urban Total	100%	47%	46%	16%	17%	20%	19%	9%	8%	1%	1%	6%	7%	2%	2%
Total	100%	58%	57%	11%	13%	14%	14%	7%	6%	1%	1%	6%	7%	1%	1%
Public MCUs *															
Rural Small	100%	65%	65%	16%	21%	3%	3%	1%	2%	2%	2%	11%	5%	2%	2%
Rural Medium	100%	70%	64%	11%	12%	10%	12%	3%	3%	1%	2%	4%	5%	1%	2%
Rural Large	100%	79%	74%	8%	10%	4%	6%	2%	3%	1%	1%	5%	5%	2%	2%
Rural Total	100%	75%	71%	10%	12%	5%	7%	2%	3%	1%	2%	5%	5%	2%	2%
Suburban Small	100%	72%	66%	11%	13%	6%	7%	3%	3%	1%	0%	4%	7%	2%	3%
Suburban Large	100%	63%	56%	11%	13%	10%	11%	8%	7%	0%	1%	6%	7%	2%	3%
Suburban Total	100%	65%	60%	11%	13%	9%	10%	7%	7%	0%	1%	6%	7%	2%	3%
Urban Small	100%	54%	50%	30%	27%	3%	4%	2%	2%	0%	1%	8%	14%	3%	1%
Urban Large	100%	41%	40%	17%	15%	19%	22%	13%	12%	1%	1%	7%	6%	3%	4%
Urban Total	100%	44%	44%	20%	18%	15%	19%	11%	10%	1%	1%	7%	8%	3%	3%
R, S, & U Total	100%	64%	61%	13%	13%	9%	11%	6%	5%	1%	1%	6%	6%	2%	2%

Data Source: NCES/IPEDS 2008 Collection Year. Note: * Public MCUs are classified using the proposed geographic classification (Kinkead, 2009).

incurred debt, they are not awarded; presumably, the banks or the federal government would like to be paid back. Significant differences exist across all three geographical types with respect to student direct grant aid (Pell and SEOG) and loan indebtedness. Three-fourths (76%) of first-time, full-time degree seeking students received any financial aid, and 31% received Pell, SEOG, or both, while just under half (46%) incurred student loan debt.

Discussion

This paper proposed and tested a geographically-based classification scheme for the 265 public Master's Colleges and Universities (MCUs) in the 2005 Basic Classification of the Carnegie Foundation for the Advancement of Teaching. The 2005 Carnegie Basic Classification for the first time geographically classified public two-year colleges, justified on the basis that states typically assign, through written statute or via regulatory authority, geographic service delivery areas to their community colleges. Public MCUs, most of which are AASCU members, also share a strong commitment to stewardship of place. Given the national policy goal of dramatically increasing the numbers of adults in this country with college degrees, the need to develop policy tools that allow for geographic analysis of ties between two- and four-year institutions could not be more needed, or timely.

This study reclassified public MCUs as rural-, suburban-, and urban-serving, and then classified by size. The existing 2005 Carnegie Basic Classification had previously grouped the MCUs by size, but not by geography. When analyzed, it was found that the cell sizes for the Small and Medium sized Suburban and Urban public MCUs were so small that it made sense to combine them together, as was done in Tables 2-6. Thus, under our scheme the Rural-, Suburban-, and Urban-Large public MCUs award 200 or more master's degrees annually; Suburban-Small and Urban-Small award between 50 and 199 master's degrees annually; Rural-Small MCUs award between 50 and 99 master's degrees annually, and Rural-Medium MCUs award between 100 and 199 master's degrees annually. There are the same number of cells (7 each) with similar names across both the Associate's Colleges and Master's Colleges and Universities sectors, as Tables 2-6 show.

When various NCES/IPEDS data were analyzed for enrollments from 2000-1 to 2006-7, enrollments by race and ethnicity, and student financial aid, many similarities across the public AC and MCU sectors were revealed, strongly suggesting the efficacy of a geographically based classification tool for public MCUs. Both are growing—*fast*. Both serve substantial numbers of racial and ethnic minorities, and large numbers of first-time-in-college students. And both serve large numbers of students

Table 5
Financial Aid Awards to and Loans Incurred According to the IPEDS Student Financial Aid Cohort Study Survey of Students at Public Associate's Colleges and Master's Colleges & Universities, 2006-7

Public Associate's Colleges	Students in the Cohort		Students in the IPEDS Student Financial Aid Cohort who receive...						Students in Cohort Who				
	Number	by type	ANY Financial Aid	Federal Aid (PELL-SEOG)	State/Local Aid	Institutional Aid	Incur Loan Debt	Number	%				
Rural Small	24,798	4	20,755	84	100	13,700	66	7,931	38	4,549	22	6,704	32
Rural Medium	135,591	22	101,369	75	100	61,135	60	47,470	47	27,199	27	36,658	36
Rural Large	110,221	18	69,939	63	100	40,420	58	33,917	48	15,245	22	24,374	35
Rural Total	270,610	44	192,063	71	100	115,255	60	89,318	47	46,993	24	67,736	35
Suburban Single	90,785	15	47,599	52	100	26,542	56	30,390	64	5,810	12	14,660	31
Suburban Multi-	91,522	15	41,854	46	100	23,551	56	24,320	58	6,182	15	10,932	26
Suburban Total	182,307	30	89,453	49	100	50,093	56	54,710	61	11,992	13	25,592	29
Urban Single	29,672	5	19,496	66	100	12,410	64	10,841	56	2,249	12	7,296	37
Urban Multi-	129,386	21	75,436	58	100	51,641	68	44,435	59	8,538	11	16,445	22
Urban Total	159,058	26	94,932	60	100	64,051	67	55,276	58	10,787	11	23,741	25
Total	611,975	100	376,448	62	100	229,399	61	199,304	53	69,772	19	117,069	31
Public MCLUs *													
Rural Small	18,214	5	15,479	85	100	6,917	45	6,739	44	6,745	44	10,481	68
Rural Medium	41,088	12	33,538	82	100	13,347	40	14,608	44	15,205	45	20,190	60
Rural Large	130,263	39	98,453	76	100	35,450	36	46,201	47	35,883	36	64,080	65
Rural Total	189,565	57	147,470	78	100	55,714	38	67,548	46	57,833	39	94,751	64
Suburban Small	11,096	3	8,024	72	100	3,037	38	3,072	38	2,146	27	5,984	75
Suburban Large	64,320	19	49,032	76	100	18,367	37	30,001	61	17,093	35	26,586	54
Suburban Total	75,416	23	57,056	76	100	21,404	38	33,073	58	19,229	34	32,570	57
Urban Small	10,566	3	8,124	77	100	3,882	48	3,705	46	2,614	32	5,149	63
Urban Large	56,570	17	40,713	72	100	22,257	55	24,027	59	15,084	37	18,520	45
Urban Total	67,136	20	48,837	73	100	26,139	54	27,732	57	17,698	36	23,669	48
R, S, & U Total	332,117	100	253,363	76	100	103,257	41	128,353	51	94,770	37	150,990	60

Source: IPEDS Student Financial Aid Cohort Study, 2008 Year. Notes: *Proposed geographic classification developed by Kinkaid (2009).

who need financial aid from federal, state and local, and institutional sources, and also incur significant student debt.

We close by repeating the point made to one of the authors (Katsinas) by the late Clark Kerr. Kerr said that it was beyond the ability of the Carnegie Commission staff in the late 1960s and early 1970s to develop a classification scheme for the two-year sector, but that it was needed “to improve the precision of research” (personal communication, 1994). The authors hope their classification scheme will improve the precision of research on public MCUs, and their critically important role in transfer, which we posit is a regionalized place-based activity between Associate’s Colleges and public Master’s Colleges and Universities. A baseline of similar quantitative institutional definitions across these two types can allow for much greater precision in qualitative research on good transfer and articulation policies. To echo the late Barbara K. Townsend’s encouragement of Katsinas, Lacey, and Hardy with their efforts to classify two-year colleges, Master’s Colleges and Universities deserve to be classified through a geographic frame that honors their strong commitment to place, a commitment shared across both access sectors.

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Table 6
Financial Aid Awards to and Loans Incurred by First-Time/Full-Time Degree- and Certificate Seeking Undergraduate Students at Public Associate's Colleges and Master's Colleges & Universities in the 2005 Carnegie Basic Classification, 2000-1 and 2006-2007

Associate's Colleges	Students Receiving ANY Financial Aid			Students Receiving Federal Aid			Students Receiving State/Local Aid			Students Receiving Institution Aid			Students Receiving Loan Debt			
	2000-1		%	2006-7		%	2000-1		%	2006-7		%	2000-1		%	
	No	%		No	%		No	%		No	%		No	%		
Rural Small	18,844	20,755	6	10	12,432	13,700	10	7,162	7,931	11	3,567	4,549	28	6,082	6,704	10
Rural Medium	78,058	101,569	27	30	46,992	61,135	50	35,117	47,470	35	22,107	27,199	23	22,540	36,658	63
Rural Large	57,028	69,939	19	23	33,882	40,420	19	26,513	33,917	28	15,248	15,245	0	17,700	24,374	30
Rural Total	153,930	192,063	52	25	93,306	115,255	24	68,792	89,318	30	40,922	46,993	15	46,322	67,736	46
Suburban Single	31,918	47,599	13	49	19,404	26,542	37	20,059	30,390	52	4,056	5,810	43	9,040	14,660	62
Suburban Multi-	26,370	41,854	11	59	16,537	23,551	42	15,594	24,320	56	4,383	6,182	41	4,901	10,932	123
Suburban Total	58,288	89,453	24	53	35,941	50,093	39	35,653	54,710	53	8,439	11,992	42	13,941	25,592	84
Urban Single	16,441	19,496	5	19	10,488	12,410	18	8,872	10,841	22	2,417	2,249	-7	3,974	7,296	84
Urban Multi-	50,609	75,436	20	49	35,691	51,641	45	29,730	44,435	49	6,812	8,538	25	7,891	16,445	108
Urban Total	67,050	94,932	25	42	46,179	64,051	39	38,602	55,276	43	9,229	10,787	17	11,865	23,741	100
Total	279,268	376,448	100	35	175,426	229,399	31	143,047	199,304	39	58,590	69,772	19	72,128	117,069	62
Public MCUs *																
Rural Small	11,536	15,479	6	34	5,928	6,917	17	5,551	6,739	21	4,371	6,745	54	8,700	10,481	20
Rural Medium	29,444	33,538	13	14	12,137	13,347	10	11,510	14,608	27	12,761	15,205	19	16,361	20,190	23
Rural Large	80,987	98,453	39	22	31,500	35,450	13	37,614	46,201	23	27,811	35,883	29	50,453	64,080	27
Rural Total	121,967	147,470	58	21	49,565	55,714	12	54,675	67,548	24	44,943	57,833	29	75,514	94,751	25
Suburban Small	6,203	8,024	3	29	2,373	3,037	28	3,500	3,072	-12	1,847	2,146	16	5,040	5,984	19
Suburban Large	33,398	49,032	20	47	14,570	18,367	26	19,478	30,001	54	11,651	17,093	47	20,785	26,586	28
Suburban Total	39,601	57,056	23	44	16,943	21,404	26	22,978	33,073	44	13,498	19,239	43	25,825	32,570	26
Urban Small	6,821	8,124	3	19	3,173	3,882	22	2,377	3,705	56	2,089	2,614	25	3,354	5,149	54
Urban Large	28,620	40,713	16	42	17,758	22,257	25	17,723	24,027	36	11,845	15,084	27	12,457	18,520	49
Urban Total	35,441	48,837	19	38	20,931	26,139	25	20,100	27,732	38	13,934	17,698	27	15,811	23,669	50
R. S. & U Total	197,009	253,363	100	29	87,439	103,257	18	97,753	128,353	37	72,375	94,770	31	117,150	150,990	29

Data Source: NCPEDS 2008 Collection Year. Notes: *This uses proposed geographic classification of public MCUs developed by Kinkead (2009).

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