

Application of Census Commuting Data in Specification of Life-Style Clusters by Place of Work

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Life-style cluster segmentation systems are among the more popular products provided by commercial data suppliers. However, because these systems are based on the demographic composition of an area's residential population, they often suggest little about the population employed in the area. This paper describes how a special tabulation of 1990 census journey-to-work data was used to adapt a residence-based cluster segmentation product for use with the workplace population.

Using small-area census data and multivariate clustering techniques, life-style cluster segmentation systems establish sets of neighborhood types, known as clusters, and assign small geographic areas to these clusters on the basis of their demographic composition. The PRIZM cluster system, developed by Claritas in the 1970s, was the first product of its type; in its present form, it assigns each of the nation's 226,399 block groups to one of 62 life-style clusters. PRIZM clusters are defined within a framework of 15 broad cluster groups defined by socioeconomic status and an urban-rural typology developed by Claritas (1,2). For ease of use, the clusters are given descriptive names such as Kids & Cul-de-Sacs, Big City Blend, or Rural Industria. The broad cluster groups are identified in Table 1, and the 62 PRIZM clusters are given in Table 2.

In a typical application, a business might geocode its customer list in order to append the relevant block group cluster code and then analyze its product's performance

for persons living in different neighborhood types, or clusters. By describing a cluster "profile" of their present customers, businesses can fine-tune their marketing efforts and identify areas with untapped sales potential.

Promotional materials often reference the saying "Birds of a feather flock together" to convey the premise that small areas are sufficiently homogeneous to comprise a neighborhood typology strongly related to life-style and consumer behavior. Such assumptions are better met in some areas than others, but experience confirms that life-style clusters provide impressive consumer segmentation and predictive capability, while sparing the time and expense of a multivariate analysis for each application.

WORKPLACE CLUSTERS

The demand for daytime or workplace demographic data has grown as businesses realize the opportunities to market to consumers at or near their place of work. For example, in evaluating potential bank branch locations, the size and composition of the population employed in an area during business hours can be more relevant than that of the area's residential population.

As the demand for workplace demographics has grown, users of life-style cluster systems have asked for workplace versions of these products. Workplace demographic data are a challenge, since so little census data

TABLE 1 PRIZM Cluster Groups

	Rural		Urban	
High SES	T1	C1	S1	U1
	R1	T2	S2	
	R2		S3	U2
Low SES	R3	T3	C3	U3

SES = Socioeconomic Status

Cluster Groups

S1: Elite Suburbs	S3: Inner Suburbs	U3: Urban Cores
U1: Urban Uptown	U2: Urban Midscale	C3: 2nd City Blues
C1: 2nd City Society	C2: 2nd City Centers	T3: Working Towns
T1: Landed Gentry	T2: Exurban Blues	R2: Heartlanders
S2: The Affluentials	R1: Country Families	R3: Rustic Living

Urban-Rural Types

R = Rural
T = Town
C = 2nd City
S = Suburban
U = Urban

NOTE: The 62 PRIZM life-style clusters are grouped into 15 broad "cluster groups," as illustrated in the grid above. The vertical dimension reflects socioeconomic status (as measured by income, education, occupation, and housing value), and the horizontal dimension reflects position on the urban-rural typology defined by Claritas.

are tabulated by place of work. However, workplace clusters present a special challenge because the homogeneity assumption is often unrealistic for place of work. Birds of a feather may reside together, but the workplace is characterized by life-style diversity—with everyone from upper management to clerical and custodial staff and persons at various life-cycle stages working in the same location.

Even if one could specify the demographic composition of an area's workplace population, this composition would not translate into life-style clusters comparable with those of the residential system. The workplace is populated with individuals, not families, and one would not expect to find workplace versions of clusters such as Pools and Patios or New Empty Nest. Furthermore, the diversity of life-styles in the workplace would likely dilute the predictive power of workplace cluster assignments.

Given such realities, the Workplace PRIZM product was developed using a different approach. Rather than defying workplace diversity by assigning single workplace cluster codes based on the characteristics of workers, the objective was to reflect this diversity in terms of the residential cluster system. Specifically, the objective was

to identify the mix of residential life-styles (clusters) brought to the workplace by commuters. Grounding the workplace product in the standard PRIZM scheme facilitates residential-workplace comparisons and preserves relevance to the household—the unit most relevant to consumer segmentation.

1990 CENSUS COMMUTING FLOWS

The Workplace PRIZM product was made possible by a special tabulation of the 1990 census journey-to-work data designated Special Tabulation Product (STP) 154. Originally produced for the U.S. Department of Agriculture, this tabulation was possible because the 1990 census long-form questionnaire collected information on the journey to work, including the respondent's workplace address. By geocoding respondents' residential and workplace addresses to census tract, the tabulation defines the journey to work in terms of a tract of origin and a tract of destination.

Thus, STP 154 can be viewed as a large origin-destination matrix, including over 5 million tract-to-tract

TABLE 2 PRIZM Life-Style Clusters

Cluster Group	Cluster	Cluster Nickname	Brief Description	Race, Ethnicity
S1	01	Blue Blood Estates	Elite Super-Rich Families	Dominant White, High Asian
S1	02	Winner's Circle	Executive Suburban Families	Dominant White, High Asian
S1	03	Executive Suites	Upscale White-Collar Couples	Dominant White, High Asian
S1	04	Pools & Patios	Established Empty Nesters	Dominant White, High Asian
S1	05	Kids & Cul-de-Sacs	Upscale Suburban Families	Dominant White, High Asian
U1	06	Urban Gold Coast	Elite Urban Singles & Couples	Dominant White, High Asian
U1	07	Money & Brains	Sophisticated Townhouse Couples	Dominant White, High Asian
U1	08	Young Literati	Upscale Urban Singles & Couples	Dominant White, High Asian
U1	09	American Dreams	Established Urban Immigrant Families	Mixed Ethnic Diversity
U1	10	Bohemian Mix	Bohemian Singes & Couples	Mixed Ethnic Diversity
C1	11	Second City Elite	Upscale Executive Families	Dominant White
C1	12	Upward Bound	Young Upscale White-Collar Families	Dominant White, High Asian
C1	13	Gray Power	Affluent Retirees in Sunbelt Cities	Dominant White
T1	14	Country Squires	Elite Exurban Families	Dominant White
T1	15	God's Country	Executive Exurban Families	Dominant White
T1	16	Big Fish Small Pond	Small Town Executive Families	Dominant White
T1	17	Greenbelt Families	Young Middle-Class Town Families	Dominant White
S2	18	Young Influentials	Upwardly Mobile Singles & Couples	Dominant White, High Asian
S2	19	New Empty Nests	Upscale Suburban Fringe Couples	Dominant White
S2	20	Boomers & Babies	Young White-Collar Suburban Families	Dominant White, High Asian
S2	21	Suburban Sprawl	Young Suburban Townhouse Couples	Mixed Ethnic Diversity
S2	22	Blue-Chip Blues	Upscale Blue-Collar Families	Dominant White
S3	23	Upstarts & Seniors	Middle Income Empty Nesters	Dominant White
S3	24	New Beginnings	Young Mobile City Singles	Mixed Ethnic Diversity
S3	25	Mobility Blues	Young Blue-Collar/Service Families	Dominant Hispanic
S3	26	Gray Collars	Aging Couples in Inner Suburbs	Mixed Ethnic Diversity
U2	27	Urban Achievers	Mid-Level White-Collar Urban Couples	Dom. White, High Asian & Hispanic
U2	28	Big City Blend	Middle-Income Immigrant Families	Dominant Hispanic, High Asian
U2	29	Old Yankee Rows	Empty-Nest, Middle-Class Families	Dominant White, High Asian
U2	30	Mid-City Mix	African-American Singles & Families	Dominant Black
U2	31	Latino America	Hispanic Middle-Class Families	Dominant Hispanic
C2	32	Middleburg Managers	Mid-Level White-Collar Couples	Dominant White
C2	33	Boomtown Singles	Middle Income Young Singles	Dominant White
C2	34	Starter Families	Young Middle-Class Families	Mixed Ethnicity, High Hispanic
C2	35	Sunset City Blues	Empty Nests in Aging Industrial Cities	Dominant White
C2	36	Towns & Gowns	College Town Singles	Dominant White, High Asian
T2	37	New Homesteaders	Young Middle-Class Families	Dominant White
T2	38	Middle America	Midscale Families in Midsize Towns	Dominant White
T2	39	Red, White & Blues	Small Town Blue-Collar Families	Dominant White
T2	40	Military Quarters	GIs & Surrounding Off-Base Families	Mixed Ethnic Diversity
R1	41	Big Sky Families	Midscale Couples, Kids & Farmland	Dominant White
R1	42	New Eco-topia	Rural White/Blue-Collar/Farm Families	Dominant White
R1	43	River City, USA	Middle-Class Rural Families	Dominant White
R1	44	Shotguns & Pickups	Rural Blue-Collar Workers & Families	Dominant White
U3	45	Single City Blues	Ethnically-Mixed Urban Singles	Mixed, High Asian
U3	46	Hispanic Mix	Urban Hispanic Singles & Families	Dominant Hispanic
U3	47	Inner Cities	Inner City, Solo-Parent Families	Dominant Black
C3	48	Smalltown Downtown	Older Renters & Young Families	Dominant White, Some Hispanic
C3	49	Hometown Retired	Low-Income, Older Singles & Couples	Dominant White
C3	50	Family Scramble	Low-Income Hispanic Families	Dominant Hispanic
C3	51	Southside City	African-American Service Workers	Dominant Black
T3	52	Golden Ponds	Retirement Town Seniors	Dominant White
T3	53	Rural Industria	Low-Income, Blue Collar Families	Dominant White, High Hispanic
T3	54	Norma Rae-ville	Young Families, Bi-Racial Mill Towns	Dominant Black
T3	55	Mines & Mills	Older Families, Mine & Mill Towns	Dominant White
R2	56	Agri-Business	Rural Farm-Town & Ranch Families	Dominant White
R2	57	Grain Belt	Farm Owners & Tenants	Dominant White, Some Hispanic
R3	58	Blue Highways	Moderate Blue-Collar/Farm Families	Dominant White
R3	59	Rustic Elders	Low-Income, Older, Rural Couples	Dominant White
R3	60	Back Country Folks	Remote Rural/Town Families	Dominant White
R3	61	Scrub Pine Flats	Older African-American Farm Families	Dominant Black
R3	62	Hard Scrabble	Older Families in Poor Isolated Areas	Dominant White

commuting flows. The file presents each census tract as a place of work and identifies the number of workers commuting to that tract from various tracts of residence. The characteristics of commuters are not identified—just the total numbers—and these numbers are sample data weighted to 100 percent.

Employment destinations often draw commuters from many origin tracts. For example, Tract 2018.02 in the Old Town section of Alexandria, Virginia, shows a total inbound flow of 3,425 workers from 256 tracts of residence, and Tract 102.00 in the midtown Manhattan section of New York City indicates 53,361 commuters

from 2,585 tracts. Table 3 illustrates the inbound commuting totals for a mostly residential tract in Fairfax County, Virginia, which draws from a smaller number of origin tracts.

An examination of the commuting flows reveals several limitations. Since the data are based on place of work during the census reference week, they do not always reflect a worker's regular commute, and place of work is sometimes a vast distance from place of residence. A resident of Memphis might have spent the reference week working at the company's Minneapolis facility. However, such occurrences are relatively rare,

TABLE 3 Commuting Flows into Fairfax County, Virginia, Tract 4207.00

Origin of Commute							
State	County	Tract	Total Flow	Tract Allocated	Place Allocated	County Allocated	Flow Used
24	003	7070.00	11	0	0	0	11
24	017	8507.03	7	0	0	0	7
24	027	6067.01	7	0	0	0	7
51	013	1010.00	5	0	0	0	5
51	013	1011.98	14	0	0	0	14
51	013	1012.00	5	5	5	0	0
51	013	1023.00	7	0	0	0	7
51	013	1030.00	6	0	0	0	6
51	050	4159.00	4	0	0	0	4
51	059	4201.00	5	0	0	0	5
51	059	4202.00	4	0	0	0	4
51	059	4203.00	33	0	0	0	33
51	059	4207.00	112	0	0	0	112
51	059	4208.00	6	0	0	0	6
51	059	4211.00	8	0	0	0	8
51	059	4214.00	7	0	0	0	7
51	059	4217.00	6	0	0	0	6
51	059	4223.00	8	0	0	0	8
51	059	4304.00	8	0	0	0	8
51	059	4306.00	6	0	0	0	6
51	059	4314.00	6	0	0	0	6
51	059	4321.00	5	0	0	0	5
51	059	4324.00	22	11	11	11	11
51	059	4325.00	6	0	0	0	6
51	059	4326.00	9	0	0	0	9
51	059	4408.00	8	0	0	0	8
51	059	4515.00	10	0	0	0	10
51	059	4523.00	39	14	14	7	25
51	059	4524.00	9	0	0	0	9
51	059	4525.00	8	0	0	0	8
51	059	4607.00	8	0	0	0	8
51	059	4615.00	6	6	6	0	0
51	059	4811.00	10	10	10	0	0
51	059	4911.00	8	0	0	0	8
51	059	4924.00	8	0	0	0	8
51	069	0504.00	6	0	0	0	6
51	113	9901.00	4	4	4	4	0
51	153	9012.08	3	0	0	0	3
51	153	9012.15	7	0	0	0	7
51	153	9015.98	6	0	0	0	6
51	510	2003.02	6	0	0	0	6
51	510	2008.02	5	0	0	0	5
51	510	2018.01	12	0	0	0	12
Total			480	50	50	22	430

and their impact on overall commuting patterns is negligible.

STP 154 also makes it clear that there is much room for improvement in the geocoding of workplace addresses. For each workplace-residence tract pair, the file indicates the "total" commuting flow, the flow allocated to tract, the flow allocated to place, and the flow allocated to county (or Minor Civil Division in New England). Allocation indicates uncertainty in address coding and is most common at the tract level. For a specific tract pair, the file might identify a total of 40 persons in the commuting flow, with 15 allocated to tract, 5 allocated to place, and none allocated to county. Nationwide, tract of work was allocated for about 52 percent of all commuters, but allocation rates varied widely from area to area. Allocation counts are illustrated in the Table 3 example.

Although the Census Transportation Planning Package (CTPP) indicates 1990 census commuting flows, it was not a viable option for this project. Even if nationwide files of small-area CTPP data had been available, their presentation for tracts in some areas and traffic analysis zones in others would have made their application cumbersome. By comparison, STP 154 was ready to use.

DEVELOPMENT OF WORKPLACE PRIZM

The strategy for Workplace PRIZM was to use STP 154 to transport residence-based cluster codes with commuters to their tract of work and thereby construct a residential cluster composition at the workplace. The more commuters originating from areas with a common cluster code, the more that cluster would be represented in the tract of work. Although conceptually straightforward, the process was complicated by the limitations of the commuting data. First, the issue of allocation had to be confronted, and second, a decision had to be made on how to use tract-level commuting flows to transport cluster codes specified at the block-group level.

Allocation

The first inclination was to not allow allocation at any geographic level. This stringent definition of commuting flows often works well in major employment areas where workplace addresses tend to be more codable, but flows become sparse to nonexistent in outlying areas. Because much of the flow allocated to tract is not allocated to place, there was concern that eliminating this portion of the flow would sacrifice valuable information. Therefore, the definition was relaxed to include that portion of the flow requiring allocation to tract but

not to place. In other words, only that portion was removed from the "total" flow that was so uncertain as to require allocation to county, place, or both. The example in Table 3 indicates the "flow used" based on this definition. (Although the "relaxed definition" was used for the standard Workplace PRIZM product, results also were produced with the "stringent definition" for use where it might be judged preferable.)

Tract allocation can result in the misspecification of tracts sending commuters to a tract of work and a distortion of the workplace cluster composition. The impact is impossible to measure, but it can be mitigated by accurate geocoding to place. Because the relaxed definition requires geocoding to place, the residential tracts paired with a workplace tract should be valid for the place in which the workplace tract is located. In outlying areas, where tract coding is most problematic, places tend to be small, and geocoding to place can approach the precision of geocoding to tract. Defaulting to place of employment would be most problematic in large cities with many tracts. However, large cities tend to be major employment centers, where geocoding is relatively strong, and there tends to be less difference between the stringent and relaxed definition of commuting flows. An exception would be the unincorporated portions of large counties, which can have many tracts and high rates of tract allocation.

The consequences of tract allocation can be negated in applications involving tract aggregations, and where such aggregations include whole places, the stringent definition would sacrifice valuable information. Even for individual tracts, the impact of tract allocation can be modest if the cluster mix brought to a workplace through erroneous tract allocation is similar to that brought in through accurate geocoding. In short, allocation probably affects the extent of a cluster's contribution to the workplace mix more than its presence or absence.

Thus, tract allocation is a source of imprecision in the current Workplace PRIZM product, but the impact does not offset the value of the unique capabilities made possible by the census commuting flow data.

Block Group Clusters into Tract-Level Flows

The Workplace PRIZM strategy was to transport residential cluster codes through a network of commuting flows, and with PRIZM clusters defined for block groups, one would want commuting flows specified at this level. However, tract allocation rates suggest that tract-to-tract flows are sufficiently daring. Tract-level PRIZM codes are available, but their precision and use levels are so much lower that their use in Workplace PRIZM was not seriously considered.

The alternative was to feed block group cluster codes into the tract-level commuting flows. Census tracts contain from one to nine block groups, so up to nine cluster codes had to be transported through each tract-to-tract flow. Rather than weighting all block groups in a tract equally, they were weighted according to the number of workers in the block group—based on the 1990 census journey-to-work tables. If an origin block group had 60 percent of a census tract's outbound workers, that block group's PRIZM code was assigned a 60 percent weight in the relevant tract flow. Note that these within-tract weights are independent of the tract's weight relative to others sending commuters to a specific tract of work.

WORKPLACE PRIZM PRODUCT

Workplace PRIZM provides a distribution of PRIZM clusters brought to the workplace by inbound commuters. The distribution relates to workers (including those working at home or commuting within the tract) and does not include nonworkers remaining in the area or nonresidents arriving for nonwork purposes. The workplace cluster mix does not necessarily reflect the life-styles of individual workers, but rather the composite life-style and consumer preferences of the neighborhoods from which they commute.

Workplace PRIZM distributions can be viewed in percentage terms, but for many applications, counts of workers by cluster type are desired. Basing such counts on total inbound commuters from STP 154 would place additional pressure on the allocation-laden tract flows and preclude estimates for the current year. For this reason, Workplace PRIZM percentages were applied to independent estimates of tract-level employment produced by Claritas. [Using input from a business list compiled by a commercial supplier and geocoded by Claritas, the Claritas employment estimates also are subject to the limitations of workplace address coding but are based on more recent input and are adjusted for conformity with employment estimates from the Bureau of Labor Statistics and the Census Bureau's County Business Patterns series (3).]

As expected, Workplace PRIZM draws contrasts between residential and workplace compositions, with the workplace reflecting greater diversity. The differences are striking, even for areas as large as Manhattan, whose 886 block groups are assigned to only 13 life-style clusters. In part, this is because clusters in the "suburban," "town," or "rural" cluster groups are not assigned in areas as urban as Manhattan. In contrast, all 62 clusters are represented (albeit sparsely) in Manhattan's workplace composition. As illustrated in Table 4, "native" clusters, such as Urban Gold Coast, Hispanic Mix, Bohemian Mix, and Inner Cities, are well represented in the workplace mix. However, affluent suburban clusters, such as Winner's Circle,

Blue Blood Estates, and Pools & Patios, also have a significant presence, as does Old Yankee Rows, an urban cluster more typical of Brooklyn and Queens. Clusters least represented among commuters to Manhattan include Rural Industria, Grain Belt, and Back Country Folks.

Table 5 illustrates a similar contrast for a census tract in midtown Manhattan. The tract had a 1990 census population of only 320 people living in block groups assigned to the Single City Blues and Young Literati clusters. The inbound commuting flow is much larger at 53,361, and only 7.6 percent come from areas assigned to the two "native" clusters. The largest numbers come from neighborhoods classified as Urban Gold Coast (17.5 percent), Old Yankee Rows (10.3 percent), and Bohemian Mix (8.8 percent). (Of the 53,361 inbound commuters, 20,257 were allocated to tract 102.00. Estimated employment from the Claritas Workplace Population product is 38,139. Workplace PRIZM counts are based on this smaller number.)

The pattern of greater workplace diversity is in part a reflection of reality and in part an artifact of the product's design. By definition, tracts have no more than nine block groups and therefore a maximum of nine block group clusters. A typical tract might have four block groups assigned to just two clusters—clusters that reduce demographic composition to a single code. By drawing from commuters' tracts of residence, Workplace PRIZM casts a wide net and can associate up to 62 PRIZM codes for a single tract of employment. Thus by design alone, Workplace PRIZM will show greater diversity. Nevertheless, there is reason to expect that PRIZM and Workplace PRIZM reflect real and important differences in residential and workplace compositions.

APPLICATIONS

Workplace PRIZM is not a replacement for standard PRIZM but a supplement that measures life-style and consumer preference patterns that are not detected by the residence-based product. A product might appear to have unimpressive sales potential based on an area's residential cluster composition but look promising on the basis of the workplace composition. In PRIZM terms, the product would be said to have a low market potential index (MPI) but a high workplace potential index (WPI). (MPI and WPI are index scores relative to national penetration rates measured by consumer surveys. If 20 percent of consumers nationwide own a product but a site's PRIZM profiles suggest only a 15 percent penetration, the MPI for that area would be 75. In contrast, the area's Workplace PRIZM composition might suggest a 25 percent penetration, or a WPI score of 125.)

Table 6 presents MPI and WPI scores for a small sample of product categories in the Manhattan tract (102.00)

TABLE 4 Percent Cluster Compositions: Manhattan, New York City

Cluster Group	Cluster	Cluster Nickname	Residential PRIZM	Workplace PRIZM
S1	01	Blue Blood Estates	0.00	2.73
S1	02	Winner's Circle	0.00	3.76
S1	03	Executive Suites	0.00	1.22
S1	04	Pools & Patios	0.00	2.75
S1	05	Kids & Cul-de-Sacs	0.00	2.27
U1	06	Urban Gold Coast	30.73	15.32
U1	07	Money & Brains	0.01	3.90
U1	08	Young Literati	4.50	5.64
U1	09	American Dreams	0.00	5.54
U1	10	Bohemian Mix	17.89	9.17
C1	11	Second City Elite	0.00	1.35
C1	12	Upward Bound	0.00	0.52
C1	13	Gray Power	1.87	1.69
T1	14	Country Squires	0.00	1.06
T1	15	God's Country	0.00	0.70
T1	16	Big Fish Small Pond	0.00	0.19
T1	17	Greenbelt Families	0.00	0.06
S2	18	Young Influentials	0.00	0.31
S2	19	New Empty Nests	0.00	0.86
S2	20	Boomers & Babies	0.00	0.08
S2	21	Suburban Sprawl	0.00	0.47
S2	22	Blue-Chip Blues	0.00	0.41
S3	23	Upstarts & Seniors	0.00	0.22
S3	24	New Beginnings	0.00	0.05
S3	25	Mobility Blues	0.00	0.09
S3	26	Gray Collars	0.00	0.20
U2	27	Urban Achievers	2.69	4.64
U2	28	Big City Blend	0.12	1.49
U2	29	Old Yankee Rows	5.73	11.26
U2	30	Mid-City Mix	0.00	2.60
U2	31	Latino America	0.08	3.81
C2	32	Middleburg Managers	0.00	0.09
C2	33	Boomtown Singles	0.00	0.04
C2	34	Starter Families	0.00	0.09
C2	35	Sunset City Blues	0.00	0.05
C2	36	Towns & Gowns	0.51	0.16
T2	37	New Homesteaders	0.00	0.08
T2	38	Middle America	0.00	0.02
T2	39	Red, White & Blues	0.00	0.03
T2	40	Military Quarters	0.21	0.14
R1	41	Big Sky Families	0.00	0.10
R1	42	New Eco-topia	0.00	0.08
R1	43	River City, USA	0.00	0.03
R1	44	Shotguns & Pickups	0.00	0.01
U3	45	Single City Blues	4.94	2.64
U3	46	Hispanic Mix	19.49	7.13
U3	47	Inner Cities	11.26	4.61
C3	48	Smalltown Downtown	0.00	0.02
C3	49	Hometown Retired	0.00	0.07
C3	50	Family Scramble	0.00	0.04
C3	51	Southside City	0.00	0.08
T3	52	Golden Ponds	0.00	0.02
T3	53	Rural Industria	0.00	0.00
T3	54	Norma Rae-ville	0.00	0.01
T3	55	Mines & Mills	0.00	0.01
R2	56	Agri-Business	0.00	0.01
R2	57	Grain Belt	0.00	0.00
R3	58	Blue Highways	0.00	0.02
R3	59	Rustic Elders	0.00	0.03
R3	60	Back Country Folks	0.00	0.00
R3	61	Scrub Pine Flats	0.00	0.00
R3	62	Hard Scrabble	0.00	0.00

TABLE 5 Percent Cluster Compositions: Manhattan, Tract 102.00

Cluster Group	Cluster	Cluster Nickname	Residential PRIZM	Workplace PRIZM
S1	01	Blue Blood Estates	0.00	4.14
S1	02	Winner's Circle	0.00	4.85
S1	03	Executive Suites	0.00	1.67
S1	04	Pools & Patios	0.00	2.97
S1	05	Kids & Cul-de-Sacs	0.00	2.10
U1	06	Urban Gold Coast	0.00	17.49
U1	07	Money & Brains	0.00	4.17
U1	08	Young Literati	3.08	5.57
U1	09	American Dreams	0.00	5.04
U1	10	Bohemian Mix	0.00	8.79
C1	11	Second City Elite	0.00	1.52
C1	12	Upward Bound	0.00	0.56
C1	13	Gray Power	0.00	1.75
T1	14	Country Squires	0.00	1.64
T1	15	God's Country	0.00	0.74
T1	16	Big Fish Small Pond	0.00	0.18
T1	17	Greenbelt Families	0.00	0.05
S2	18	Young Influentials	0.00	0.46
S2	19	New Empty Nests	0.00	0.81
S2	20	Boomers & Babies	0.00	0.07
S2	21	Suburban Sprawl	0.00	0.55
S2	22	Blue-Chip Blues	0.00	0.36
S3	23	Upstarts & Seniors	0.00	0.21
S3	24	New Beginnings	0.00	0.05
S3	25	Mobility Blues	0.00	0.08
S3	26	Gray Collars	0.00	0.17
U2	27	Urban Achievers	0.00	4.46
U2	28	Big City Blend	0.00	1.58
U2	29	Old Yankee Rows	0.00	10.26
U2	30	Mid-City Mix	0.00	2.20
U2	31	Latino America	0.00	4.11
C2	32	Middleburg Managers	0.00	0.05
C2	33	Boomtown Singles	0.00	0.07
C2	34	Starter Families	0.00	0.05
C2	35	Sunset City Blues	0.00	0.03
C2	36	Towns & Gowns	0.00	0.13
T2	37	New Homesteaders	0.00	0.11
T2	38	Middle America	0.00	0.01
T2	39	Red, White & Blues	0.00	0.05
T2	40	Military Quarters	0.00	0.03
R1	41	Big Sky Families	0.00	0.11
R1	42	New Eco-topia	0.00	0.06
R1	43	River City, USA	0.00	0.05
R1	44	Shotguns & Pickups	0.00	0.00
U3	45	Single City Blues	96.92	2.05
U3	46	Hispanic Mix	0.00	5.09
U3	47	Inner Cities	0.00	3.22
C3	48	Smalltown Downtown	0.00	0.03
C3	49	Hometown Retired	0.00	0.04
C3	50	Family Scramble	0.00	0.02
C3	51	Southside City	0.00	0.09
T3	52	Golden Ponds	0.00	0.02
T3	53	Rural Industria	0.00	0.00
T3	54	Norma Rae-ville	0.00	0.00
T3	55	Mines & Mills	0.00	0.01
R2	56	Agri-Business	0.00	0.02
R2	57	Grain Belt	0.00	0.02
R3	58	Blue Highways	0.00	0.02
R3	59	Rustic Elders	0.00	0.02
R3	60	Back Country Folks	0.00	0.00
R3	61	Scrub Pine Flats	0.00	0.00
R3	62	Hard Scrabble	0.00	0.00

TABLE 6 Residential and Workplace Product Potential:
Manhattan, Tract 102.00

Consumer Profile	Nat'l Pct	MPI	WPI
Fine Jewelry \$400+ Last Yr.	6.2	113	109
Have a Passport	16.4	109	193
Own Pagers/Beepers	4.0	106	132
Own \$1,000+ Computer System	13.4	96	117
Gourmet Coffee Beans Last 6 Mos.	3.5	80	169
3+ Business Trips by Plane	2.3	71	164
Own Luxury Size Car	14.3	63	92
Own Cellular Phone	6.0	57	104
Own Gas Grill	22.1	53	71
Own a Mercedes	0.8	6	130

MPI = Market Potential Index (Residence)

WPI = Workplace Potential Index

described above. The scores are similar in some categories, such as the purchase of fine jewelry, but quite different in others. For example, on the basis of the residential and workplace cluster compositions, one would expect a greater demand for gourmet coffee beans among the workplace population (WPI = 169) than the residential population (MPI = 80). Similarly, one would expect the tract's workers to be more likely than its residents to be in the market for pagers, cellular phones, and products associated with international and domestic air travel.

Marketers must use judgment, because a high WPI score does not guarantee demand for purchase within the tract. For example, the impressive WPI for Mercedes ownership does not mean that this midtown tract would be a good location for a dealership. However, evidence that Mercedes owners are well represented in the area's large workplace population could be valuable in a variety of marketing applications.

CONCLUSION

If life-style clusters assume that "you are where you live," workplace clusters assume that "you are where you live even when you are at work." Obviously, the world is not that simple. PRIZM clusters do not reflect the life-style and consumer preferences of every person in an area, and Workplace PRIZM is not a definitive characterization of

the workplace population. Transporting neighborhood clusters with individual commuters leaves ample room for uncertainty, and improvements in the geocoding of workplace addresses are needed to refine even these neighborhood-based specifications.

However, Workplace PRIZM accurately reflects that the workplace is populated with commuters from varied neighborhoods, with characteristics different from those of its residential population. The combination of PRIZM segmentation, small-area employment estimates, and 1990 census commuting flows enables one to specify life-style and consumer preference patterns from the unique perspective of the workplace. Thus, even in its present form, Workplace PRIZM provides valuable information that was previously unavailable and that is already being used in a variety of business applications.

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