Appendix for

(Re)conceptualizing Neighborhood Ecology in Social Disorganization Theory: From a Variable-Centered Approach to a Neighborhood-Centered Approach

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In ancillary analyses, we conducted LCA using all the variables that are typically included in indices for concentrated disadvantage and residential instability, along with racial/ethnic heterogeneity. We therefore included in the LCA model the following variables: average length of residence and percent homeowners (from the residential instability index), percent in poverty, percent single parent households, percent with at least a bachelor's degree, percent Black, and the unemployment rate (from the concentrated disadvantage index), and racial/ethnic heterogeneity. Thus, there are eight variables in the LCA.

The optimal solution contained 14 latent classes. We show how these eight variables are related to each of the 14 latent classes in Table A1. The naming of the classes is based on how the class scores on disadvantage, instability, and heterogeneity, respectively. Thus, the first row is high/high/high for class 14, indicating that this class has high levels of disadvantage, instability, and heterogeneity. Going across this row of z-scores, values above .5 are bolded to indicate a variable that is strongly represented in this class. As shown,

neighborhoods in class 14 have high levels of racial/ethnic heterogeneity, low levels of average length of residence and percent owners (hence high instability), and high percent in poverty. However, they do not have high levels of the other four disadvantage variables. The second row is class 4, in which high/high/moderate indicates that the neighborhoods have high disadvantage (and high values of poverty, single parent households, unemployment, percent Black, and low education), high instability (low values on length of residence and percent owners), but just moderate racial/ethnic heterogeneity. The remaining classes can be interpreted similarly. Note that all of the concentrated disadvantage measures do not necessarily load the same for some latent classes; for example, classes 1 and 11 do not have very substantial values on the disadvantage variables, except they have high or low levels of highly educated residents, respectively.

We present the models predicting violent and property crime with these 14 latent classes in Table A2 (class 7 is the reference category, given it was close to the mean on most variables). The variance explained in the models using the latent class measures was slightly higher than the traditional approach of including these variables combined into indexes of concentrated disadvantage and residential instability. We see that the presence of highly educated residents appears to have a significant impact on crime rates in some neighborhoods—an important dimension not anticipated by social disorganization theory.

Table A1. Class composition of 14 latent classes for models including component variables of concentrated disadvantage and residential instability indices

Disadvantage /Instability /Heterogeneity	Racial/ ethnic hetero geneity	Length of residence	Percent owners	Percent in poverty	Percent single parent households	Percent with at least a bachelor's degree	Unemploy ment rate	Percent Black	Percent of tracts
High/High/High - class 14	**0.82**	**-1.18**	**-1.53**	**0.71**	0.32	0.45	0.09	0.08	6.4%
High/High/moderate - class 4	0.42	**-0.58**	**-0.97**	**1.52**	**1.63**	**-0.90**	**1.08**	**1.72**	6.1%
High/High/ns - class 3	-0.36	**-0.83**	**-1.19**	**1.11**	**1.10**	**-0.79**	0.40	-0.29	6.4%
High/high renter/Very Low - class 10	**-2.38**	-0.20	**-1.08**	**1.16**	**0.93**	**-1.20**	0.44	**-0.56**	3.4%
High/high renter/Low - class 13	**-1.28**	-0.22	**-0.88**	**1.70**	**1.38**	**-1.22**	0.49	0.33	3.6%
ns/ns/High - class 5	**1.08**	-0.35	0.07	-0.30	0.04	-0.08	-0.06	**0.57**	7.9%
Educ/High/ns - class 1	-0.07	**-0.50**	**-0.52**	-0.47	-0.44	**1.34**	**-0.52**	-0.33	8.8%
low educ/ns/ns - class 2	-0.02	0.05	0.45	0.25	0.12	**-0.91**	**0.85**	0.12	6.6%
Black/Low/ns - class 9	0.10	**1.44**	0.39	-0.10	0.34	-0.28	0.37	**4.56**	1.7%
ns/ns/ns - class 7	0.47	-0.04	0.02	-0.14	-0.10	-0.29	-0.01	-0.41	12.1%
low educ/Low/Low - class 11	**-1.31**	**0.55**	0.11	0.20	0.06	**-0.95**	0.35	**-0.55**	5.8%
Low/Low/High - class 12	**0.67**	0.42	**0.92**	**-0.82**	**-0.68**	0.33	-0.41	-0.17	10.3%
Low/Low/ns - class 6	-0.31	**0.56**	**0.75**	**-0.69**	**-0.71**	**0.50**	-0.39	**-0.52**	12.7%
Low/Low/ns - class 8	-0.39	**1.02**	**1.29**	**-0.98**	**-1.02**	**1.32**	**-0.87**	-0.49	8.3%

Table A2. Crime models using three index measures for social disorganization, and latent classes based on them

	Violent crime models				Property crime models			
Disadvantage/Instability/Heterogeneity	(1)		(2)		(3)		(4)	
High/High/High - c14	0.176	*			0.341	**		
	(2.44)				(5.63)			
High/High/moderate - c4	0.868	**			0.159	**		
	(12.14)				(2.61)			
High/High/ns - c3	0.227	**			0.092			
	(3.23)				(1.57)			
High/high renter/Very Low - c10	0.516	**			0.015			
	(5.47)				(0.18)			
High/high renter/Low - c13	0.691	**			0.023			
	(7.98)				(0.32)			
ns/ns/High - c5	0.000				-0.011			
	(0.00)				-(0.21)			
Educ/High/ns - c1	-0.264	**			0.151	**		
	-(4.05)				(2.82)			
low educ/ns/ns - c2	0.122	†			-0.092			
	(1.75)				-(1.56)			
Black/Low/ns - c9	0.895	**			0.041			
	(7.73)				(0.41)			
low educ/Low/Low - c11	0.249	**			-0.092			
	(3.45)				-(1.52)			
Low/Low/High - c12	-0.475	**			-0.199	**		
	-(7.76)				-(3.93)			
Low/Low/ns - c6	-0.475	**			-0.147	**		
	-(8.00)				-(2.98)			
Low/Low/ns - c8	-1.073	**			-0.383	**		
	-(15.18)				-(6.81)			
Socio-demographic variables								
Racial/ethnic heterogeneity			-0.003	**			-0.001	
			-(4.01)				-(0.72)	
Concentrated disadvantage			0.449	**			0.033	*
			(26.32)				(2.31)	
Residential stability			-0.036	†			-0.164	**
			-(1.92)				-(10.45)	
Pseudo r-square	0.060		0.059		0.028		0.027	

*Note: Results presented as unstandardized coefficients and (t-values). + p < .05 (one-tail test), * p < .05, ** p < .01, *** p < .001. N = 3,864 tracts. All models control for percent aged 16 to 29; percent immigrants, population density; percent industrial land; percent offices; percent residential land; percent retail land; spatial lag of immigrants; spatial lag of aged 16 to 29; spatial lag of population density*