

UC Irvine

UC Irvine Previously Published Works

Title

Community Criminology: Fundamentals of Spatial and Temporal Scaling, Ecological Indicators, and Selectivity Bias

Permalink

<https://escholarship.org/uc/item/3s85p0sx>

Journal

Contemporary Sociology A Journal of Reviews, 45(6)

ISSN

0094-3061

Author

Kubrin, Charis E

Publication Date

2016-11-01

DOI

10.1177/0094306116671949bbb

Copyright Information

This work is made available under the terms of a Creative Commons Attribution License, available at <https://creativecommons.org/licenses/by/4.0/>

Peer reviewed

Community Criminology: Fundamentals of Spatial and Temporal Scaling, Ecological Indicators, and Selectivity Bias, by Ralph B. Taylor. New York: New York University Press, 2015. 328 pp. \$52.00 cloth. ISBN: 9780814725498.

CHARIS E. KUBRIN
University of California-Irvine
ckubrin@uci.edu

Long known for his careful and sophisticated research on communities and crime, Ralph Taylor seeks nothing short of an overhaul of the field in his book *Community Criminology: Fundamentals of Spatial and Temporal Scaling, Ecological Indicators, and Selectivity Bias*. Rarely mincing words (at one point even claiming that community criminology research is currently of “limited practical value” [p. 21]), Taylor’s book is dedicated to identifying the key problems associated with research on crime in its community context. But Taylor first takes aim at the field more broadly, arguing a chief concern is a lack of integration among levels of theorizing; in other words, that theorists have failed to progress toward a criminology integrated across levels of explanation and instead have

become progressively isolated. “There appears to be both a general tension and a de facto separation between macrocriminology, concerned with large-scale historical, social, cultural and demographic factors, and microcriminology, concerned with individuals, small groups, and small-scale spaces” (pp. 2–3). Taylor couches this discussion in the field’s ongoing philosophy of science debate regarding methodological holism (the view that macro-level attributes and processes are the most relevant causal factors) and methodological individualism (the view that micro-level attributes and processes are the most relevant causal factors).

Moving from the general to the specific, Taylor enumerates the problems in community criminology, emphasizing that theorists have not systematically acknowledged the challenges presented by the methodological holism versus methodological individualism debate and that foundational issues directly relevant to constructing and testing theories in this area—in particular, spatial scaling, temporal scaling, construct validation of ecological indicators, and selectivity bias—have been largely overlooked. The majority of the book is dedicated to discussing how each issue poses significant measurement AND theoretical challenges.

To a lesser degree, Taylor also provides an integrated framework for considering these four concerns by presenting a metamodel (a model intended to give an all-inclusive picture of a process or system by abstracting from detailed individual models contained within it). Taylor presents a particular version of the Boudon-Coleman “boat” metamodel. This metamodel embodies a view of human behavior called “systemism,” where individuals interact both among themselves and with their environment—a feature consistent with Taylor’s aim that community criminology must move toward theoretical integration. Given that the four issues of spatial scaling, temporal scaling, construct validation of ecological indicators, and selectivity bias require careful consideration if community criminology is ever to break the methodological holism vs. individualism stalemate and achieve theoretical integration, I’ll say a few words about each.

Taylor begins with spatial scaling, which “addresses both what shifts theoretically

when examining variables and processes at different geographic scales, and how variables and processes connect across different geographic scales" (p. 7). Spatial scaling thus considers how thinking about relevant theoretical processes depends—or does not—on the units being investigated. According to Taylor, community and crime scholars have not sufficiently considered issues of spatial scaling in their research. He raises several concerns: 1) potential conceptual missteps, which occur when researchers, for example, inappropriately generalize theorizing about concepts or dynamics across levels of analysis (fallacy of the wrong level), lose sight of the roles of individuals in shaping group behavior and sentiment (group fallacy), or believe relationships seen for individuals or smaller spatial units hold similarly for groups or larger areas (individual fallacy); 2) aggregation bias under the homology assumption, which occurs when researchers assume identical relationships across different spatial scales; and 3) the presence of unmeasured variables, which occurs when variables that are relevant to an outcome and are influenced by geographic proximity are not included in the current model of the outcome.

Indicative of these problems, Taylor suggests, is the relatively recent emergence of a criminology of place (think hot-spots-of-crime studies) focusing on patterning of crime across small-scale locations, such as addresses or street segments, as an alternative to either individual-centered criminology or more geographically global ecological criminology. Among the many conceptual and operational concerns about hot spots Taylor raises are these: hot spots exist in the data world but not the real world; to conclude that hot spots are free-standing entities existing in the real world is to commit the logical fallacy of reification; there is no coherent unity intrinsic to each hot spot itself, as its definition is fundamentally relativistic (the location identified is associated with higher crime counts than surrounding locations); hot spots often mix points and areas (places and spaces); operational definitions are often jurisdiction specific; inconsistent criteria over time within jurisdictions are used to define or bound hot spots; and land-use patterns are not always accounted for in hot

spot research (pp. 126–127). Taylor eschews the approach's emphasis on the places where crime occurs, arguing, "Places do not behave. Micro-level places may be affected by crime or justice agency dynamics or may facilitate or impede dynamics that might lead to crime acts. But the etiology of crime acts is about *individuals*, perhaps in small groups, behaving in certain ways in certain places" (p. 122). He maintains that the "wheredunit" approach simply cannot replace the "whodunit" approach.

Taylor next discusses temporal scaling, which considers "about how long it takes for variables to shift significantly or to change other variables significantly" (p. 7). His critique is that community and crime scholars fail to clearly specify how time affects communities, which raises a series of questions. How much time must elapse for scores on an ecological, community-level variable to shift significantly for a significant number of units? If one changing variable is an input and another changing variable is an output, are they both capable of changing at comparable rates in the period investigated, given the nature of each attribute? And, given the broader theoretical frame within which two variables are situated, how long does it take the theorized ecological process to cycle?

As a concrete example of researchers' failing to properly specify the role of time, Taylor critiques research on routine activities theory, which is most frequently tested with aggregate (i.e., community-level data) cross-sectional data. He argues that data of this kind cannot test routine activities theory because the theory is about whether a crime event occurs in a small time-space window due to a confluence of particular attributes of that time-space window. His prescription? Routine activities theory should not be examined using a time scale larger than minutes and a spatial scale larger than individual addresses or street corners. Taylor also suggests that "community criminologists seeking to make conceptual headway on the causes and consequences of community crime rates should abandon all cross-sectional analysis" (pp. 153–154).

Construct validation, "a process concerned with establishing the meaning of a set of indicators" (p. 7), is the third issue Taylor addresses. Taylor cuts right to the heart of

the matter when he claims that key indicators in communities and crime models are plagued by semantic ambiguity (i.e., a given indicator is often attached to more than one concept). The result is that one measurable thing often means several things at once. Taylor cites social disorganization theory, one of the most frequently employed theories among communities and crime scholars, as an illustration of semantic ambiguity, claiming, "The vast majority of studies using this perspective failed to tie the social disorganization concept solely to theoretically appropriate indicators" (p. 210).

Taylor believes semantic ambiguity occurs because researchers rarely engage in systematic, multimethod ecological construct validation to clarify which indicators clearly belong to which constructs (in other words, multimethod patterns of convergent and discriminant validation are rarely examined). Ultimately, Taylor recommends a two-phase approach for pursuing construct validation; but, importantly, both phases "presume that the researcher has resolved the temporal and spatial scaling concerns described in earlier chapters, has indicators for each key construct derived from multiple data sources, and has data available which can be organized into a dynamic, longitudinal boat metamodel" (pg. 223)—clearly, no small feat and a request that, in fact, may be unrealistic (a point I'll return to in the conclusion of my review).

The fourth core issue that requires careful consideration if community criminology is to accomplish theoretical integration is that of selection effects. Selection effects occur when people are nonrandomly selected into places where they live, work, or behave, or into social contexts. According to Taylor, several challenges related to selection effects confront community criminology researchers, including separating selection effects from contextual impacts of spatial contexts, developing theoretically appropriate selection submodels when the context is primarily social, and estimating how selection effects may contribute to community-level or extra-community-level inequalities. These challenges are old hat for community and crime scholars, but Taylor reminds readers that researchers have not sufficiently addressed them. He offers three different

approaches for thinking about selection effects.

With *Community Criminology*, Taylor provides an insightful critique of the state of the field. He navigates the many complex theoretical, conceptual, and empirical challenges facing community and crime scholars with impressive skill and clarity. The reader comes away having developed a true appreciation of the "grand challenge" (p. 3) that confronts community and crime scholars, while at the same time recognizing what it will take to ultimately achieve theoretical integration in this area. And while Taylor concedes that this grand challenge is analytically and theoretically demanding, at times I feel he underestimates just how difficult it will be for researchers to actualize his metamodel given data, resource, and time constraints familiar to many of us who work in this area. To achieve his desire, that is, "to understand the processes connecting society, city, neighborhood, household, and individual," (p. 3) and to do so in a way that is sensitive to the many complex issues and questions he raises in *Community Criminology*, will be nothing short of heroic. Still, Taylor's lofty aims and goals jolt us into realizing that we could always do so much more—and should.