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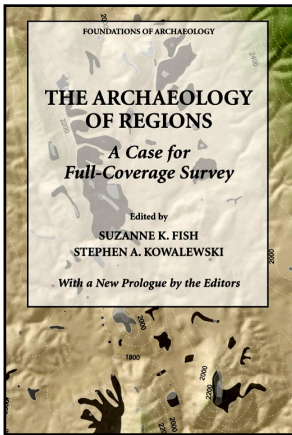
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## The Archaeology of Regions: A Case for Full-Coverage Survey

Suzanne K. Fish and Stephen A. Kowalewski. 2009. Percheron Press, Clinton Corners, New York. xxv & 277 pp., 54 figures, 11 tables. \$42.50 (paper).

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Since the Viru Valley project if not before, the distribution and abundance of the surface archaeological record has revealed regional characteristics of prehistoric cultures. The number, range of types, and spatial distribution of surface remains support inferences about prehistoric population, economic practices and sociopolitical organization. However large the area and intense the coverage, regional survey always is sampling.

Before 1960, few archaeologists gave serious thought to sampling. When they surveyed large areas, they simply covered as much as possible. Around 1965, archaeologists began exploring rigorous sample methodology. By the 1970s, intelligently designed regional samples were fairly common in the midcontinent and elsewhere. Those, like Flannery's Real Mesoamerican Archaeologist, who questioned sampling because it seemed tedious and missed Teotihuacán, were old fogeys resisting improvements in archaeological methods.

Not just old fogeys resisted sampling during its heyday; archaeology at large, mired in the prescientific immaturity that it still struggles to surpass, grappled with sampling and then largely abandoned it for shinier new toys. After 1980, self-conscious concern for sampling abated. (Mediterranean classical archaeology is an honorable exception.) By 1990, *The Archaeology of Regions* (*Regions* henceforth) questioned the need for sampling at all in large-scale survey. Suzanne K. Fish's and Stephen A. Kowalewski's introduction bemoaned the "sharply focused . . . , perfection of sampling designs" and corresponding "neglect" (p. 2) of full coverage, apparently based partly on the belief that contract survey was predominantly sampling. However true that might be elsewhere, it is inconsistent with my 1970s-1980s view from the trenches of midcontinental contract practice. Thus, *Regions's* point of departure is an arguable appraisal of the field. Whatever sampling's ephemeral popularity, its current neglect suggests that, for better or worse, *Regions'*

perspective carried the debate. As a result, today concern for proper sampling seems as dated as disco music.

Midcontinental practice is not represented in *Regions*, Paul R. Fish and Thomas Gresham's survey of a reservoir basin in the Georgia Piedmont being nearest the midcontinent both in space and relevant field conditions. Its geographic weight falls chiefly on the arid Southwest and Mesoamerica, its substantive focus on hierarchical societies (except in the Southwest). This is no criticism, but does reflect the midcontinent's general neglect (Shott 2000) and casts some doubt on *Regions'* broader relevance. Yet its main subject, sampling the regional archaeological record, has universal relevance.

*Regions* is salutary in pointing out some limitations of sampling, but attempts little critical appraisal of its preferred alternative. The editors' prologue proclaims that full-coverage survey (FCS) exceeds sampling in both amount of evidence and efficiency of its collection. The first claim is both undeniable and almost a tautology, as Flannery's Skeptical Graduate Student long ago noted; all else equal, the more ground you cover the more artifacts you find, and full-coverage survey by definition covers more ground than do samples. The second claim is provocative, begging the detailed analysis that establishes FCS's superiority.

Despite ceremonial acknowledgment of sampling's value, contributors argue that FCS finds more things and therefore more variation, rare things of great interpretive value, cultural boundaries, and reveals spatial patterns and hierarchical and functional links. A corollary theme channels the Real Mesoamerican Archaeologist. Jeffrey S. Dean, for instance, spurns simplistic "cookbook adjustments in sampling fractions" (p. 180) and "arcane mathematical manipulations" (p. 186) that make sampling, apparently, as difficult as studying calculus in Linear B. Thus, sampling is objectionable for two reasons: it is too easy, and it is too hard.

Short of shoulder-to-shoulder crawling armed with magnifying glasses, all survey is sampling, which some of *Regions'* contributors acknowledge but do not act upon. This makes "FCS" a misnomer, especially considering the transect spacing of 30 m that chapters report; as George L. Cowgill notes, it "isn't full coverage at all . . . [but] a form of systematic sampling with rather closely spaced and narrow transects" (p. 254). Strongly critical of sampling despite practicing it, *Regions* is unreflexive both on FCS's own limitations and its opportunity costs. One FCS problem, largely unappreciated in *Regions*, is its neglect of its own data as samples, which could be assessed for their accuracy and reliability but instead are treated as unproblematic complete data. And the claim that FCS recovers rare targets rings hollow considering the transect intervals typical of contributors; for every rare site or object

that FCS might find, at such intervals it is apt to miss more rare occurrences that might bear as crucially upon interpretation as those encountered. Whatever sampling's flaws, it demands less time and effort than does FCS (unfair to criticize in a 1990 volume, any reservation about locating sample units in regions sparse in landmarks now is mooted by GPS technology). *Regions* celebrates the amount and quality of FCS data but ignores its opportunity costs, i.e., what more or different data, perhaps from other regions, might have been acquired by intelligent sampling or in high-intensity probabilistic samples of the same region, but was invested instead in FCS.

Fred Plog's and Cowgill's are two of *Region's* most revealing chapters. Plog questions nearly every claim for FCS's superiority, noting that sampling, properly designed, achieves the same results (Michael E. Whalen's chapter on the Hueco Bolson includes a resampling exercise that is at least as favorable to sampling as to FCS). Cowgill stresses that all data collection is sampling, which must be designed to minimize bias. Unfortunately, FCS taken at face value cannot measure, let alone control, sample bias, although FCS *qua* sampling could try. Cowgill then considers the relationship between survey intensity and probabilities of discovery that vary with target ("site," artifact, etc.) size, familiar ground to midcontinental archaeologists who have thought seriously about survey sampling (e.g., Krakker et al. 1983).

Contributors do not explore these or related issues. In *Regions*, FCS is an unproblematic process that finds everything of value. There is little discussion of what sites are, how they are defined, or how to parse them as long-term accumulations. One result is to beg but not resolve the pernicious "map overestimation" (Ammerman 1981) of population size that treats all sites of a phase as simultaneously occupied. More broadly, *Regions* ignores nonsite artifact distributions, and is innocent of methodological concerns like weathering and surface visibility, the challenges of survey on plowed surfaces, and the virtues of repeated collection of surfaces. It is unfair to expect modern methodological sophistication of *Regions*, but all of these issues were raised by 1990.

However naïve, archaeology's initial enthusiasm for sampling was a sincere effort to improve data collection and quality. There was much to criticize in early applications, and *Regions* serves well as partial critique. But the tragedy is the reaction that *Regions* exemplifies, which closed, not advanced, the debate. *Regions* proclaims but does not prove FCS's many unequivocal superiorities to sampling. The introduction's assertion of greater efficiency than sampling is repeated in several chapters and the editors' conclusion (p. 274), but without adequate documentation. A detailed study of efficiency, both in cost and data-quality terms, remains to be done. *Regions'*

introduction assails the “programmatic dismissal” (p. 3) of FCS, yet its tone and content amount to equivalent treatment of sampling. A better response, as Cowgill suggests, is balanced appraisal of sampling’s strengths and weaknesses, for instance probabilistic samples that by size, number, shape and coverage of units yield the data sought, hybrid samples that combine low-intensity quasi-complete coverage for the large settlements that figure so prominently in many contributors’ chapters with higher-intensity probabilistic sampling, or adaptive sampling (Orton 2000:34).

*Regions* is not calculated to renew enthusiasm for intelligent sampling, but perhaps this polemic will inspire archaeologists to again take seriously the need for sampling. If so, then the book will have served a higher purpose than it intended. Until then, *Regions* serves as reminder of the value of sampling, of the fact that there is archaeology beyond “nuclear” areas, and of the unresolved challenges to improved sampling and survey. *Regions* is an artifact of its time; archaeology’s challenge is to see that it does not become an artifact for all time.

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