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On the Concept of Form in Geographical Studies

GERALD R. PITZL*

ABSTRACT — The concept of form in its subjective (strictly qualitative) connotations is inappropriate as the organizing principle for geographical investigations. Yet, elements identified as formal (structural/morphological) which are objectively measurable are valid for study and possible integrations toward holistic conclusions. Thus, if the form-function-process approach is to be advanced, the formal segment must be stated in a clearly determinable mode in order to allow integration.

Form in philosophy traditionally denotes the assemblage of distinguishing qualities of a thing as opposed to matter, which is substance considered in abstraction from all its differentiating features (Watkin, 1951). The dichotomy between form and matter is seen by the philosopher Lancelot Law Whyte as competition between two sets of ideas. "Atomism - material analysis - quantitative precision," beginning with Democritus' ideas about atoms, and "form - unity - symmetry," as advanced by Plato and Aristotle (Whyte, 1951). Whyte suggests that complementarity may exist between form and matter rather than their being mutually exclusive properties, but,

... it is a remarkable fact that throughout this debate, that is during eighty human generations, no one has suggested how to combine them into one simple and comprehensive way of thinking; hence much of the disorder in thought (Whyte, 1951).

The fact that form is a subtle concept and difficult to define objectively only amplifies the confusion which exists in attempts at application.

A body of indefinite terminology has been used in attempts to define form. Suggesting similarity at best, terms such as shape, figure, structure, pattern, order, arrangement, configuration, plan, outline, and contour are, as psychologist J. J. Gibson suggests, without distinct meanings in themselves, if not objectively defined, when used as synonyms for or explanations of form (Gibson, 1951: 403). In a similar vein, the Augustinian view that "form is the very mode of existence, the manifestation of being," is poetically appealing but lends little to scientific explanation (Van Ginkel, 1961).

The basic problem in defining form was suggested by Fred Attneave and Malcomb D. Arnoult as follows:

Relatively few scientists have seriously applied themselves to the problems of analyzing and describing form; these problems seem to have fallen into the cracks between sciences, and no general quantitative morphonomy has ever been developed (Attneave and Arnoult, 1966).

Form in geographical writings

In geographical writings many authors have attempted to apply the concept of form in their studies. Leven

suggests that changes in population density and territorial expansion both involve a change in form; form is not defined (Leven, 1969). Hall's study of the Yamato Basin in Japan used the term form to describe the shape of ponds in an irrigation area (Hall, 1932). Eugene Van Cleef presented a method aimed at delineating the form of the center of a city through the use of profile sketches (Van Cleef, 1932). G. H. Dury partly defined form as the "identification on the map of the distributional patterns within a town ... with which map interpretation is most simply commenced." (Dury, 1967). In most studies, however, the term is not defined. In studies where it is defined, agreement among authors is entirely lacking. Catherine Bauer Wurster defines form as "the physical pattern of land use, population distribution, and service networks." (Wurster, 1963). Kazimierz Dziewonski describes three urban formal processes in the following:

... present functions creating their own forms, present function adapting the old forms for their present use, or old forms remaining as relics of the past (Dziewonski, 1964).

He states further that "functions are the basis of all urban material forms, although these in turn influence the evolution of the function." (Dziewonski, 1964). The reader is left to speculate on precisely what is meant by the term form.

Toward refinement of terminology

Form, then, is a concept that has been of little real significance in geographical studies. It is an abstraction that has defied precise definition in any significant geographical sense. Consequently, morphological works have occupied at best a tenuous position in geographical studies. However, that is not to say that the phenomena *identified* as formal are unworthy of study. On the contrary, the varied aspects of places, particularly those of a structural and physical nature that have been identified as form, remain valid ground for investigation — but preferably without a nebulous and unreadable nametag. Since the subjective meanings of form are not appropriate in terms of an objective study, it is necessary to substitute other variables, positively determinable and measurable, in order to study physical structure.

Form as essence, or as a gestalt or whole, or as idea and ideal, or in a symbolic sense, is subjective and without precise definition when applied to geographical

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studies. On the other hand, aspects of what has been called form, such as measureable spatial properties and segments of interaction patterns, are identifiable and may become the subject of study.

In this way, the original Latin usage of the term form, or forma, may be invoked. Specifically, *indices* of shape, of configuration (pattern and orientation), and the arrangement of parts, objectively determinable, would be used in studies of the physical/structural component of places (Runes, 1965).

The methodology used to derive such indices would be, for the most part, based on measureable geometric properties. On this subject Robert Sack has stated that geographic explanations are found in laws explaining the occurrence of events in general and that geometric methods alone explain only the geometric properties and not the geographical operants (Sack, 1972). Yet, if the form - function - process approach alluded to by Sack and articulated by Eichenbaum and Gale is to be advanced, the formal segment must be stated in a clearly determinable mode to insure integration (Sack, 1974; Eichenbaum and Gale, 1971). Since an integrated approach such as this would rely most heavily on quantifiable inputs, the case for measureable form indices is further strengthened.

A plea then is made for a finer sharpening of terminology and greater precision in application when dealing with formal elements in geographical studies.

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