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Résumé de l'article

Partant de l’hypothèse qui veut qu’une entité culturelle reconnaisse en principe certains modèles cognitifs relatifs aux divers genres folkloriques, l’auteur tente de discerner le modèle traditionnel propre au mode de construction des vaisseaux de pèche côtière dans la communauté de Winterton, Terre-Neuve.

*"What Makes a Good Boat?": Toward Understanding of a Model of Traditional Design**

DAVID A. TAYLOR

Recognizing the shortcomings of a narrow item-oriented approach to the study of material artifacts, many scholars have forcefully argued that a far more illuminating approach is one which focuses upon the cultural process, the continual variation through time and space that material artifacts undergo as far as they continue to exist within their natural habitats.[1] Indeed, the view that seemingly disparate forms of traditional expression, such as jokes, ballads, gestures, and boat types, may be grouped together because they are all influenced by a common process is a central concept in contemporary folkloristics.

If it can be assumed that cognitive models for jokes, ballads, gestures, boat types, and other forms of folkloric expression which are held by a group are based on cultural attitudes, and that, as Toelken asserts, "our critical job [as folklorists] is to present and study the processes of folklore that exist through time in a group of people by a comparative study of the items produced from the cultural premises of that group,"[2] how do we undertake such a task?

In order to suggest one possible answer to this question in regard to material artifacts that are the products of a living tradition, in this essay I will discuss my attempt to ascertain the cultural premises, or folk model, pertaining to the design of inshore fishing boats by boat builders living in the small community of Winterton, Newfoundland located on the southern shore of Trinity Bay.[3]

How, then, does one get at the structure of a folk model? I would

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*I am grateful to Réginald Auger and Richard MacKinnon for criticisms of an earlier draft of this paper.

[1]Barre Toelken, *The Dynamics of Folklore*. Boston: Houghton Mifflin, 1979, p. 30

[2]*Ibid*, p. 31.

[3]Fieldwork was conducted in 1978 and 1979. For a detailed analysis of the community's boat building tradition, see my study *Boat Building in Winterton — Trinity Bay, Newfoundland*, Ottawa: National Museums (CCFCS Mercury Series, 41), 1982.

suggest that there are two principal methods: through observation and through the elicitation of verbal statements. Since, in the case of a model for the design of boats, we are dealing with a cognitive map which results in the production of material artifacts, it is conceivable that one could infer the structure of the model through careful scrutiny of a representative sample of craft built within the study area. However, there are obvious drawbacks in regard to inference through observation. For example, if the researcher is a cultural outsider, as he tries to discern an emic model the tendency for him to impose his own cultural models will likely be great. But a cultural insider, too, may fail to comprehend the "grammar of the natural language"[4] of local design if he has not been intimately involved with boat building himself.[5] When verbal statements are used as primary data, the researcher may be comforted by the knowledge that he is dealing with the words of cultural insiders who are well-versed in the activity he is investigating (provided, of course, that he has chosen proper informants). Nevertheless, this approach is not without its difficulties, particularly those that crop up in the interpretive stage. One of the horniest problems in the interpretation of verbal statements stems from the fact that elicited responses to the same question often display a surprising degree of variation. Holy and Stuchlik explain that variation in elicited responses is due to informants' tendency to express the structure of models in a fragmentary way:

> People formulate partial statements, situationally relevant statements or direct answers to the researcher's questions. There may be parts of models which can be verbally described only with great difficulty; also, different informants may refer to different parts of the same model.[6]

In addition to the possibility that verbal statements are only partial expressions of knowledge, further problems of interpretation may arise from the likelihood that such statements are situation-specific, and are "highly indexical," or dependent upon a wide background knowlege which is not stated.[7] It would seem that in order to keep variation to a minimum the researcher must do his best to pose questions in such a way that they are sufficiently comprehensible to each informant, yet still sufficiently uniform to ensure a reasonable "control."

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[4]Noam Chomsky, *Syntactic Structures*, Janua Linguarum, 4. The Hague: Mounton, 1957, pp. 13, 50-51.

[5]However, if the researcher is not dealing with a living tradition, or is denied access to form builders for some reason, inference through observation may be the only available approach. In such cases the work of Henry Glassie may provide valuable insight. See, for example, his remarkable work *Folk Housing in Middle Virginia: A Structural Analysis of Historic Artifacts*. Knoxville: University of Tennessee Press, 1975.

[6]Ladislav Holy and Milan Stuchlik, "The Structure of Folk Models," in L. Holy and M. Stuchlik, eds., *The Structure of Folk Models*, New York: Academic Press, 1981 (A.S.A. Monograph 20), p. 22.

[7]*Ibid*, p. 23.

Clearly, there are significant limitations to the inference of folk models through the use of either observations or oral statements. However, with these limitations in mind, I shall now describe the methodology that I used to construct what I believe is a reasonably accurate model pertaining to a localized boat design tradition.

Concluding that attempts to ascertain emic perceptions of Winterton boat design through observation would be highly problematic, I elected to rely upon oral statements from boat builders as my primary data. These statements were collected within the context of 1-1½ hour tape-recorded interviews with individual builders concerning general boat-building practices. The sample was made up of eight boat builders.[8]

I set out to investigate the builders' conceptual frames by attempting to perceive how they related aspects of hull form to aspects of hull performance. Initially, I tried to get at this information by asking: "What parts of a boat would you change if you wanted the boat to perform differently in the water?" However, this question generated much confusion, and I was soon convinced that it was rather abstruse. Consequently, I abandoned this query and replaced it with the simpler: "what makes a good boat?" My informants appeared to have no difficulty comprehending the meaning of this question, and they proceeded to relate the qualities they considered to be the most crucial for the success of a fishing boat. Sometimes their answers were long and complex, dealing with many desired performance characteristics and even identifying the aspects of hull form to which each was related. The following, collected from an experienced 60-year-old builder, is an example of one of the most detailed responses:

> Well, what makes a good boat is a good head, because most of the time we're coming home, we're coming to head wind. Winds are always western in this bay, you know. Well, you want a good flare[d], high head. Not too high now, but what I mean to say, a good flare[d] head for coming home down this bay down here. Especially [if] you got anything in your boat, and you always do when you're fishing. And a suent stern. No good to have a high stern if she's too heavy aft, like I said before, because it will shove her head down and the swell, if there's any swell on she will heave her down that much more. A good flared head [is what] I likes to have on a boat, and you got to get the right stem for that. You can't go in [the woods] and cut any kind of a stem for a flaring bow on a boat because it won't suit. If you got sort of an upright stem, you'll have a blunt head and that's all you'll have. But, if you have a long, a long flaring bow, you see, [it will be much better].[9]

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[8]I gratefully acknowledge the assistance of boat builders Marcus French, Eleazor Reid, Lionel Piercey, Herbert Harnum, Fred P. Hiscock, Reuben Reid, Wilson Reid, and Chesley Gregory. Tape recordings of my interviews with these builders are on deposit at the Memorial University of Newfoundland Folklore and Language Archive (MUNFLA).

[9]From my August 15, 1979 interview with Herbert Harnum, MUNFLA accession numbers C4636, C 4643.

Other responses to the same broad question were much shorter and often contained references to only two or three desired performance characteristics. Long or short, however, responses were usually in the form of a list of desirable performance characteristics and did not include matchings of these characteristics with aspects of hull form. While all informants did not cite identical characteristics, my combination of their statements yielded seven basic characteristics which the majority of them agreed the ideal craft should possess: performs well in high winds; throws water off its bows without wetting its occupants; has an easy motion and does not roll quickly from side to side when proceeding with weather coming from the side; has the ability to carry a large load without substantially decreasing its seaworthiness; goes before the wind without burying its bow in the waves; performs well in rough water; and, has reasonable stability for fishing.[10]

In order to discover how builders related desired performance characteristics to hull form, I then asked follow-up questions. For example, if a builder had said that one quality of a good boat was an ability to avoid burying its "head" (bow) when going before the wind, I would then asked a question such as: "If you built a boat and it turned out to have a tendency to bury its head, how would you correct this in the next boat you built?" By asking about the correction of negative performance characteristics in this way I was able to learn how builders alter certain aspects of form in order to obtain positive characteristics.[11] Next, by matching the performance characteristics of the ideal craft with the aspect or aspects of form that correlate to each, I was able to determine the "performance correlatives"[12] recognized by the builders. Finally, as I had done in the formulation of the set of desirable performance characteristics, I considered these statements *en bloc* and then arranged them in terms of a set of form/performance associations. This set is as follows:

1. Desired performance: performs well in high winds.
   Performance correlatives: long "suent" (possessing smooth, unbroken curvature) bow that holds the water; "flaring" (possessing outward curvature) bows that toss off water.
2. Desired performance: occupants do not get unnecessarily wet.
   Performance correlative: flaring bows that push waves down and away from the hull.

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[10]Other desirable qualities which one might expect to hear about, such as strength, safety, and longevity, were rarely mentioned. It is significant, perhaps, that these factors are more closely related to structural integrity than to design quality.

[11]For a discussion of the application of this procedure to the study of folk architecture, see Christopher Alexander, *Notes on the Synthesis of Form*. Cambridge: Harvard University Press, 1967, pp. 23-24.

[12]C. Richard K. Lunt, *Lobsterboat Building on the Eastern Coast of Maine: A Comparative Study*, Ph.D. Dissertation, Indiana University, 1976, pp. 106-109.

3. Desired performance: has an easy motion and does not roll quickly from side to side when proceeding with weather coming from the side.
   Performance correlatives: proper amount of "hollowing" (concave curvature in the bottom of the boat); proper amount of "rising" (distance between the bottom of the keel and the waterline), proper length-width ratio.[13]
4. Desired performance: the ability to carry a large load.
   Performance correlatives: proper length-width ratio, proper amount of hollowing, proper amount of rising.
5. Desired performance: goes before the wind without burying its head.
   Performance correlatives: proper stem-stern balance,[14] flaring bows, proper amount of "bearing" (degree to which a portion of the hull resists being pushed deeper into the water) under the bows.
6. Desired performance: performs well in rough water.
   Performance correlatives: flaring bow, proper amount of hollowing, proper amount of rising, proper stem-stern balance.
7. Desired performance: has reasonable stability for fishing.
   Performance correlatives: proper amount of hollowing.

Even though all of my informants did not formulate form/performance associations exactly in the manner in which I have presented them, I believe that my composition of the seven form/performance pairs is a reasonably accurate model. It can be viewed as the set of significant design variables (inter-related to some extent) that the builders recognize as those they attempt to manipulate to achieve combined properties resulting in hull forms that successfully meet their use requirements.

At this point, the reader may well ask how I can claim that the model presented above represents what is actually in the minds of the boat builders. Of course, I can never be absolutely certain that it does. Beginning with the assumption that the oral statements I collected are probably not only partial expressions of knowledge, but also situation-specific and indexical, I set out to combine these data as accurately as possible and fill in the missing parts of the general model that the builders use to make sense of the problems of design which confront them. As Holy and Stuchlik state cogently:

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[13]"Length-width ratio" is a term I have adopted to describe a concept well known to Winterton builders. An elementary concept, the ratio of the length of a boat to its width will determine its speed *vis-à-vis* its stability.

[14]"Stem-stern balance" is a term I have adopted to describe the way Winterton builders view how properties of the bow affect the stern, and vice versa. For example, if the bow is too bluff, waves striking it will tend to submerge the stern; if the stern is too wide, when struck by following seas it will tend to plough the bow under water; if the bow is too heavy it will tend to pull the stern out of the water and, as a result, the rudder and/or propeller will have less hold on the water; if the stern is too heavy it will tend to pull the bow out of the water and, consequently, it will be difficult to keep the boat on its course.

> Strictly speaking, "it will always be a model of a model, since it can never be 'a model in use' but a model as stated by the anthropologist. However, he can put it to the test in a similar way as he can his knowledge of rules, i.e., by formulating statements which would be considered acceptable by the actors."[15]

Despite the inherent weaknesses of the approach I have outlined, I believe this sort of exercise is still of value in that it permits greater understanding of the way knowledge is structured and manipulated within a culture.[16]

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Résumé

Partant de l'hypothèse qui veut qu'une entité culturelle reconnaisse en principe certains modèles cognitifs relatifs aux divers genres folkloriques, l'auteur tente de discerner le modèle traditionnel propre au mode de construction des vaisseaux de pèche côtière dans la communauté de Winterton, Terre-Neuve.

[15]Holy and Stuchlik, "The Structure of Folk Models," p. 23.

[16]A logical extension of the present study would be an analysis of the degree to which the design model presented here guides actual behaviour. For a discussion of the complex issues of "representational models" (those which correspond to the ways in which individuals perceive things to be) and "operational models" (those which correspond to the way individuals respond or act), see Peter Caws, "Operational, Representational, and Explanatory Models," *American Anthropologist*, 76(1974), 1-10.