CHAPTER VI: REVIEW

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The most appropriate comment on this chapter appears to be that one should not become overly involved in thinking that TN 14 and 37 have practical implications. The TN on "Distance as a Function of Distance" while clarifying something about how decisions may be made does not dwell on the fact that all the distance functions considered are so close in shape (as can be seen from Figure 1 in the article) that it makes little difference which function is used in a particular modelling effort. One function may be better than another for predicting trips made by people who come from a long distance, but this depends on the type of trip being considered.

Certainly, there appears to be merit in using a function like the exponential function which does not show extremely high use levels when a park is very close to people. However, just because the exponential function does not become infinite when the distance to travel to a park equals zero does not mean it has the appropriate shape to reflect behaviour. It seems to this writer that in fact, as the distance to a park becomes shorter and shorter, after the park is already close the number of recreation trips made into a park would not change very much and this is the case with exponentials and linear "gravity" functions. But selecting the correct distance function is of minor importance compared to other problems in specifying the correct structure in modelling travel flow.

None of the articles in this volume (with the possible exception of TN 20) are explicit about "magnitudes of the problem" associated with different structural difficulties with models. TN 19 and 35 present results which are typical of what is found when one proceeds to use a simulation approach to test how well models are working. The fact that they are not working well is apparent, particularly when one tests the Cesario model (TN 4) or Cheung's Day-Use model (TN 1) in this way (see TN 4). If the models were structurally sound an R^2 of .99 rather than the lower R^2 found should be expected. The major reason for the structural problems is not because of errors in the distance function: at least this is indicated by the fact that R^2 changes little when a variety of distance functions are considered. Problems with the way attractivity is measured, with the way alternative factors are considered, with the total structure of models (addition or multiplication etc.) and with the desegregation of visitors are among the factors cited in this volume that need to be dealt with much more than the esoteric indulgence of choosing distance functions to reflect behaviour.

Turning to TN 37, this reviewer can look back to his own 1970 work and there he can find statements that the problem of substitutability is so complicated that it is not likely that in the near future (1) sufficiently large data sets and (2) necessary theoretical development will take place to allow one to make effective use of this "property behaviour" in planning. Still, if unclear about the consideration just noted, TN 37 is definitive in pointing out the confusion that presently exists about how substitutability analysis should proceed. Incidentally, cluster analysis results are not simple to interpret and, around 1975, getting them involved use of mammoth amount of computer time when a reasonably large number of cases were to be dealt with. A large number of cases was necessary so that a population could be split into a number of meaningful groups.

Regarding the matter of interpretation of clustering results, one should note that the discussion of TN 37 totally ignores the influence of supply on substitutability. One cannot simply move ahead using the methods described in TN 10 to do clustering and then examine clusters to find out about substitutability. The reasons that activities are substitutes in one place and are not in another relates to the availability of supply. Availability of supply does not simply relate to whether supply exists or does not exist. One must consider levels of supply, its attractivity and programs that encourage or discourage use among certain groups (among other things). From a practical perspective, traditional discussions of substitutability ignore the fact that education is one of the primary mechanisms that can be used to change behaviour. Substitution as it exists presently may relate very much to what is available, but that does not

mean that substitution in the future cannot relate very much to how we teach people to respond to different opportunities.

Moving on to TN 32, a primary criticism that may be laid against it is that it should have included practical examples. Since the note was prepared, a practical example of the application of clustering to National Park User Survey information has occurred (see Honours Project by L. Lee, Department of Recreation, University of Waterloo, 1975). This analysis did result in some important findings for planning. It showed, for example, that only about 5 percent of the visitors to a particular park participated in three or more interpretive activities. These visitors came primarily from the people who stayed two, three or more nights in the park. But, little more was found out about these visitors for a very important reason. The cluster analysis study, because of how little could be said about visitors, showed that many of the questions asked in the study had little value in understanding the visitor to the park. In contrast to what was asked, such important questions as questions about visits to the town sites within Banff or Jasper, and motivational questions about the why and wherefore of a park visit were not asked.

Further comment on TN 32 might be appropriate if it were not for the fact that TN 13 (which appears in Chapter 9) presents some comments on the importance of clustering in making projections of future recreation behaviour that elaborate on the points made in TN 32.

Regarding equity considerations and other applications of cluster analysis raised in the article, it is fair to say that the more detailed reference could be made to TN 10 results. Nevertheless, in such a review it is probably sufficient to suggest that some article in the CORD Study should have made more of the fact that a very high percentage of Canadians do not participate in more than a few of the more than 18 outdoor activities receiving consistent consideration in CORD Study National Surveys. The justification for not pursuing the policy implications of the "equity of participation" findings is the problem of whose policy to consider. It seems to the reviewer that descriptive findings of practical interest could have been presented without getting too involved in policy matters.