



CONJUNCTIVE CONCEPTUAL CLUSTERING:
FURTHER RESULTS

by

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Abstracts of the Classification Society and the Psychometric Society Meeting,
Montreal, Canada, May 30–June 2, 1982.

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ABSTRACT

The conjunctive conceptual clustering method, presented at last year's meeting of the Classification Society, has been extended and used in new testing experiments. The basic idea behind the method is that objects are clustered not on the basis of a pairwise similarity function, but on the basis of conjunctive concepts that are "fitted" to object configurations. The method produces a hierarchy of subcategories, each characterized by a conjunctive concept which is disjoint from sibling subcategories (those subcategories having the same parent). The hierarchy is optimized according to a user-defined clustering quality criterion.

Experiments on data in musicology and plant pathology have produced hierarchies which have a simple conceptual interpretation and correspond closely to those produced by human experts.

Index terms: Cluster analysis, Data analysis, Learning from Observation, Learning Without Teacher, Knowledge Acquisition, Numerical Taxonomy, Pattern Recognition, Inductive Inference, Classification Theory.

This work was supported in part by the National Science Foundation grant No. MCS-79-06614.