1047-08-109 **Clifford Bergman*** (cbergman@iastate.edu), Department of Mathematics, Iowa State University, Ames, IA 50011. *Categorical Equivalence of Unary Algebras.* Preliminary report.

For an algebra $\mathbf{A}$, let $\mathcal{V}(\mathbf{A})$ represent the variety generated by $\mathbf{A}$, viewed as a category. We say that algebras $\mathbf{A}$ and $\mathbf{B}$ are *categorically equivalent* if there is an equivalence of categories $F\colon \mathcal{V}(\mathbf{A}) \to \mathcal{V}(\mathbf{B})$ such that $F(\mathbf{A}) = \mathbf{B}$. We shall consider the question of characterizing those algebras that are categorically equivalent to a finite algebra, all of whose operations are unary.

In one special case the answer is known. Let $\mathbf{B}$ be a finite algebra with no nullary operations. Then $\mathbf{B}$ is categorically equivalent to an algebra all of whose operations are (unary) permutations if and only if, for every $n > 0$, the lattice $\mathrm{Sub}(\mathbf{B}^n)$ is boolean. (Received January 22, 2009)