1043-90-97 **Douglas E. Ward*** (wardde@muohio.edu), Dept. of Mathematics and Statistics, Miami University, Oxford, OH 45056, and **Akhtar A. Khan**, School of Mathematical Sciences, Rochester Institute of Technology, 85 Lomb Memorial Drive, Rochester, NY 14623-5603. *Sensitivity analysis in set-valued optimization.* Preliminary report.

Let W, X, and Y be real normed spaces, and let $P \subset Y$ be a closed, convex, pointed cone. Let $H : W \rightrightarrows X$ and $G : W \times X \rightrightarrows Y$ be set-valued mappings. We consider the parametrized family of optimization problems defined by $Q(w) := \mathrm{Min}_P\, F(w)$, where $F(w) := \{G(w,x) \,|\, x \in H(w)\}$ and $\mathrm{Min}_P\, F(w) := \{y \in F(w) \,|\, F(w) \cap (\{y\} - P) = \{y\}\}$. There is a substantial body of work relating the contingent derivatives of the multifunctions F and Q, beginning with the work of T. Tanino in the 1980s. We show how techniques of variational analysis and insights gained from the development of sensitivity analysis in nonlinear programming can be used to extend this theory significantly. (Received August 20, 2008)