1077-06-1135   **Peter R. W. McNamara*** (`peter.mcnamara@bucknell.edu`), Department of Mathematics, Bucknell University, Lewisburg, PA 17837, and **Bruce E. Sagan** (`sagan@math.msu.edu`), Department of Mathematics, Michigan State University, East Lansing, MI 48824. *The Möbius function of generalized subword order.*

Let P be a poset and let P^* be the set of all finite length words over P. Generalized subword order is the partial order on P^* obtained by letting $u \leq w$ if and only if there is a subword u' of w having the same length as u such that each element of u is less than or equal to the corresponding element of u' in the partial order on P. Classical subword order arises when P is an antichain, while letting P be a chain gives an order on compositions. For any finite poset P, we use discrete Morse theory to give a simple formula for the Möbius function of P^* in terms of the Möbius function of P. This permits us to rederive in an easy and uniform manner previous results of Björner, Sagan and Vatter, and Tomie. (Received September 16, 2011)