1062-20-243 **Daniel J. Kelleher*** (`kelleher@math.uconn.edu`), Department of Mathematics, University of Connecticut, Storrs, CT 06269, **Benjamin A. Steinhurst**, Department of Mathematics, Cornell University, Ithaca, NY 14853, and **Chuen-Ming M. Wong** (`chuenw@princeton.edu`), Department of Mathematics, Princeton University, Princeton, NJ 08544. *From self-similar structures to self-similar groups.*

We explore the relationship between limit spaces of contracting self-similar groups and fractals. Exact conditions on a group are given under which its limit space has a self-similar structure and a p.c.f. self-similar structure. We explore which self-similar structures can be realized as limit spaces; this includes some non-p.c.f. structures. In particular we give a construction which produces, for a suitable class of p.c.f. fractal, a self-similar group which has a given fractal as its limit space. Examples illustrating our results are included (Received August 10, 2010)