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**Marjorie Senechal\*** ([senechal@smith.edu](mailto:senechal@smith.edu)), Department of Mathematics, Smith College,  
Northampton, MA 01060. *Another Look at Matching Rules.*

In the late 20th century, the study of shapes which, juxtaposed by matching rules, tile space only non-periodically became a mini-growth industry. But today the mathematical literature on "aperiodic order" relegates matching rules to the background. In this new era of nanostructures and self-assembly, they deserve another look. "Simple local rules" are anything but that, and local and global order may not be separable. (Received February 25, 2009)