



Portfolio

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Natural Cycles (joint work with Martin Demaine). Hand-folded elephant hide paper. 2010, 9" x 9" x 9".

Shown at the juried Exhibition of Mathematical Art, Joint Mathematics Meetings of the American Mathematical Society and Mathematical Association of America, January 2010, San Francisco, California.





“The Circle” series (joint work with Martin Demaine). Three pieces, in reading order: **Circling the Square** (8" × 8" × 8"), **Bending the Circle** (8" × 8" × 10"), and **Circling the Circle** (10" × 10" × 10"). Hand-folded elephant hide paper. 2011.

Currently on display by invitation at the exhibit “Measure for Measure”, Central Booking, Brooklyn, New York, February 2011–April 2011.



Circling the Square, part of **"The Circle" series** (joint work with Martin Demaine) and the beginning of a new series. Hand-folded elephant hide paper. 2011, 8" × 8" × 8".

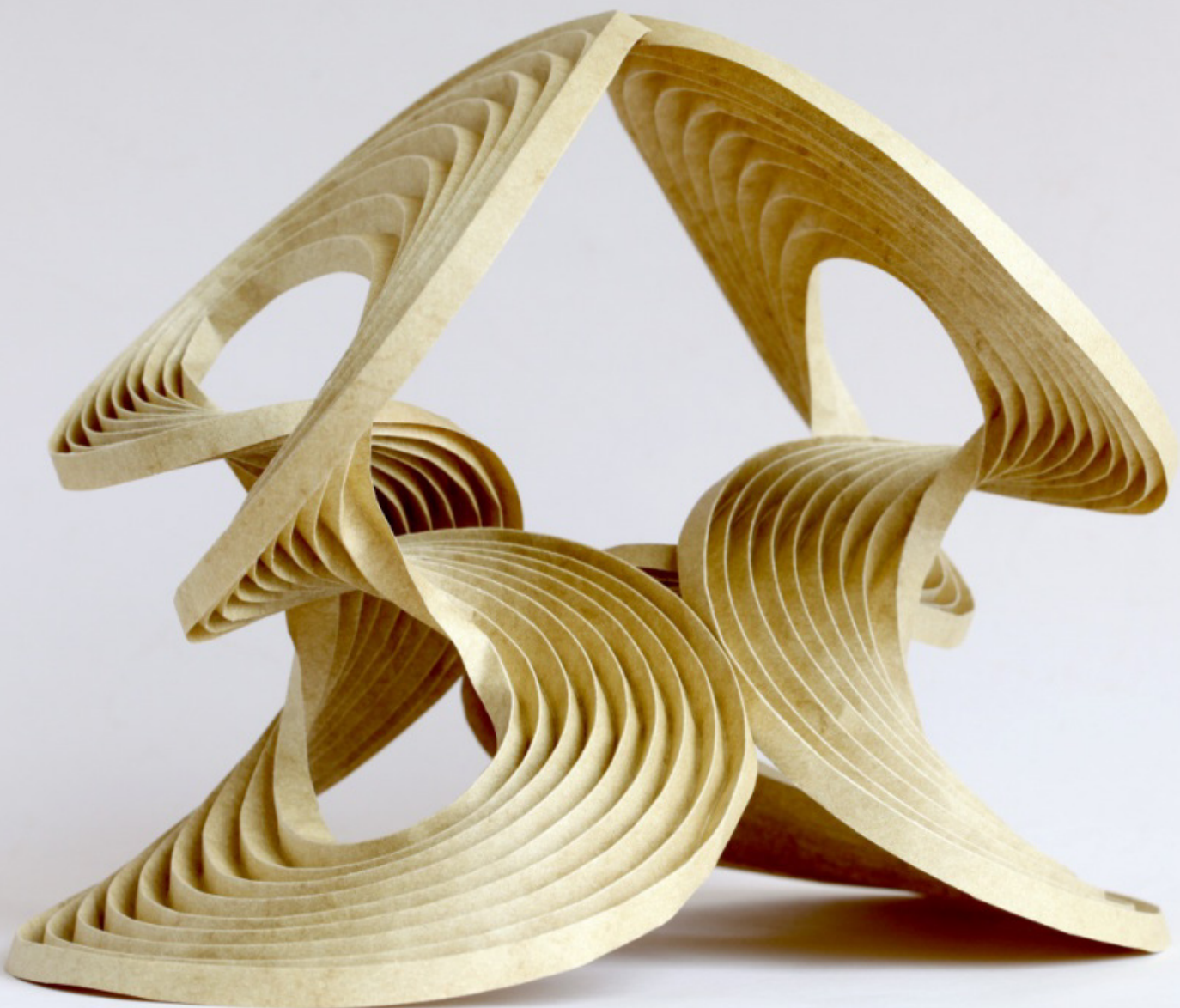
Folded from a single piece of paper, with concentric circular creases and a circular hole in the center. The paper folds itself a natural equilibrium form determined by these creases.

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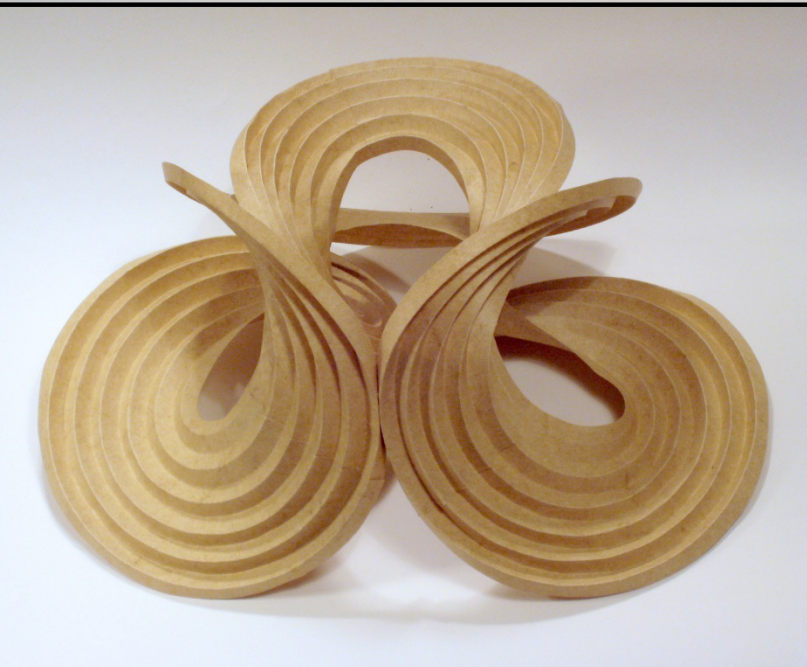
Pushing Curves to the Limit (joint work with Martin Demaine). Series of seven pieces. Five shown, in reading order: 10" × 10" × 8", 9" × 8" × 10", 13" × 8" × 10", 6" × 10" × 7", 11" × 10" × 12". Hand-folded elephant hide paper. 2009.

Shown by invitation at the exhibit "paper: torn twisted & cut", Peel Gallery, Houston, Texas, November 2009–January 2010.



Pushing Curves to the Limit (joint work with Martin Demaine). Series of seven pieces. One shown, 13" × 8" × 10". Hand-folded elephant hide paper. 2009.

Shown by invitation at the exhibit "paper: torn twisted & cut", Peel Gallery, Houston, Texas, November 2009–January 2010.



Waves (joint work with Martin Demaine). Series of five pieces, in reading order: **Wave**, **Inner Wave**, **Splash**, **Three Waves Meeting**, **Tsunami**. Hand-folded elephant hide paper. 2009, heights from 8" to 16".

Shown by invitation at the exhibit "Papier, Vergankelijke materie, Blijvende indrukken (Paper, Transient matter, Lasting impressions)", Art C  zar gallery, Rotselaar, Belgium, March 2009.



Computational Origami (joint work with Martin Demaine). Three pieces, in reading order: 9" × 13" × 7", 8.5" × 13" × 7", 8" × 7" × 8.5". Hand-folded elephant hide paper. 2008.

Belongs to the permanent collection of the Museum of Modern Art (MoMA), New York. Shown in two MoMA exhibits: Design and the Elastic Mind exhibit (February–May 2008) and Rough Cut: Design Takes a Sharp Edge (November 2008–October 2009).



Waves in Glass (joint work with Martin Demaine). Series of several pieces (three shown), each $8'' \times 8'' \times 10''$. Hand-blown soda lime glass and hand-folded elephant hide paper, 2010.

The glass is blown after experiencing blindfold glass blowing, to make the communication with both materials primarily through touch.

A one-minute video documents the blindfold glass blowing, paper folding, and how the paper naturally expands to an equilibrium within the glass form.

<http://erikdemaine.org/curved/BlindGlass/>



Waves in Glass (joint work with Martin Demaine). Series of several pieces (two shown), each 8" × 8" × 10". Hand-blown soda lime glass and hand-folded elephant hide paper, 2010.

Frame from the video documenting the blindfold glass blowing, paper folding, and how the paper naturally expands to an equilibrium within the glass form.



Connection series (joint work with Martin Demaine). Series of pieces in progress. One shown, 9" × 18" × 14". Hand-blown soda lime glass and hand-folded elephant hide paper. 2011.



Multimedia series (joint work Martin Demaine). Series of pieces in progress. Two shown, in reading order: 8" × 16" × 10", 9" × 9" × 6". Hand-blown soda lime glass and hand-folded elephant hide paper. 2011.



Fluency (joint work with Martin Demaine). Series of several pieces. Two shown, in reading order: **Fire** (4" × 4" × 8"), **Dancer** (4" × 4" × 10"). Hand-blown glass. 2007.

Colored glass connections, interior to the hollow form, suggest fire (left) or a dancer (right). These pieces are made entirely while the glass is hot, and serve as puzzles to other glassblowers as to how they were made.

Shown by invitation in one-artist show, Andrew and Laura McCain Gallery, Florenceville, Canada, February–March 2007.



Fluency (joint work with Martin Demaine). Series of several pieces. Three shown, in reading order: 6" × 6" × 10", 5" × 5" × 10", 4" × 4" × 4". Hand-blown glass. 2007.

Shown by invitation in one-artist show, Andrew and Laura McCain Gallery, Florenceville, Canada, February–March 2007.



Gravity spirals (joint work with Martin Demaine). Series of several pieces. Two shown, in reading order: 6" × 3" × 13", 3" × 7" × 13". Hand-blown glass. 2011.



Holding Hands series
(joint work with Martin Demaine). Series of several pieces. Three shown, in reading order: 4" x 4" x 8", 4" x 4" x 8", 5" x 6" x 4". Hand-blown and mirrored glass. 2011.



Stacked and Cracked series. Series of several pieces. Two stacked pieces (top): 5" x 5" x 5", 2.5" x 2.5" x 9". One cracked piece (bottom left): 4" x 4" x 5". Hand-blown glass. 2011.

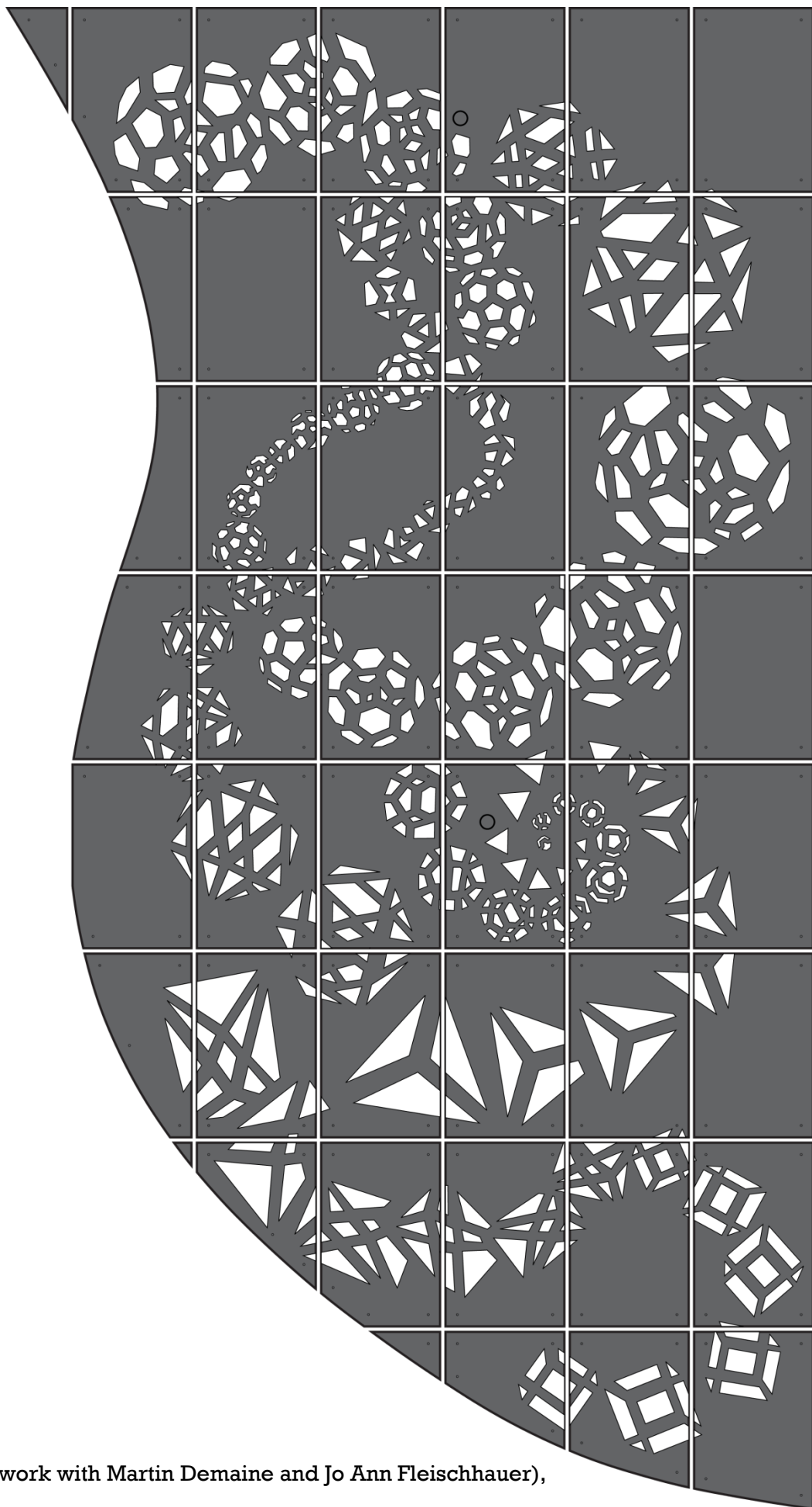


Genus One series (joint work with Martin Demaine). Series of several pieces. Two shown, in reading order: 4" × 11" × 12", 4" × 4" × 14". Hand-blown glass. 2011.

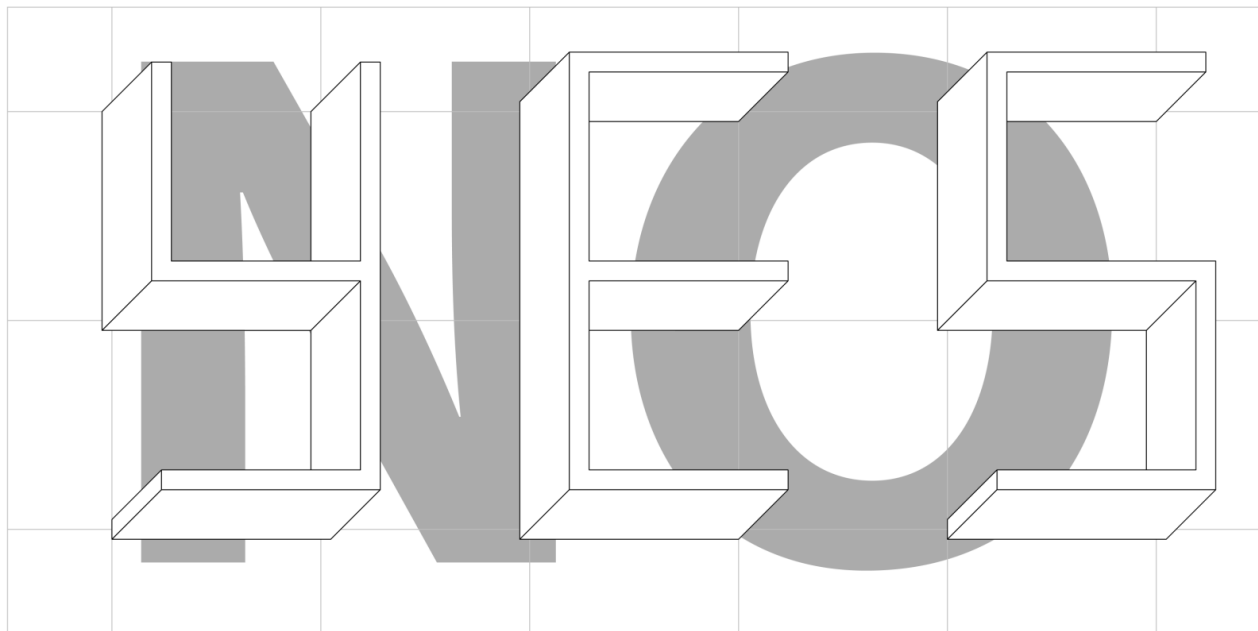
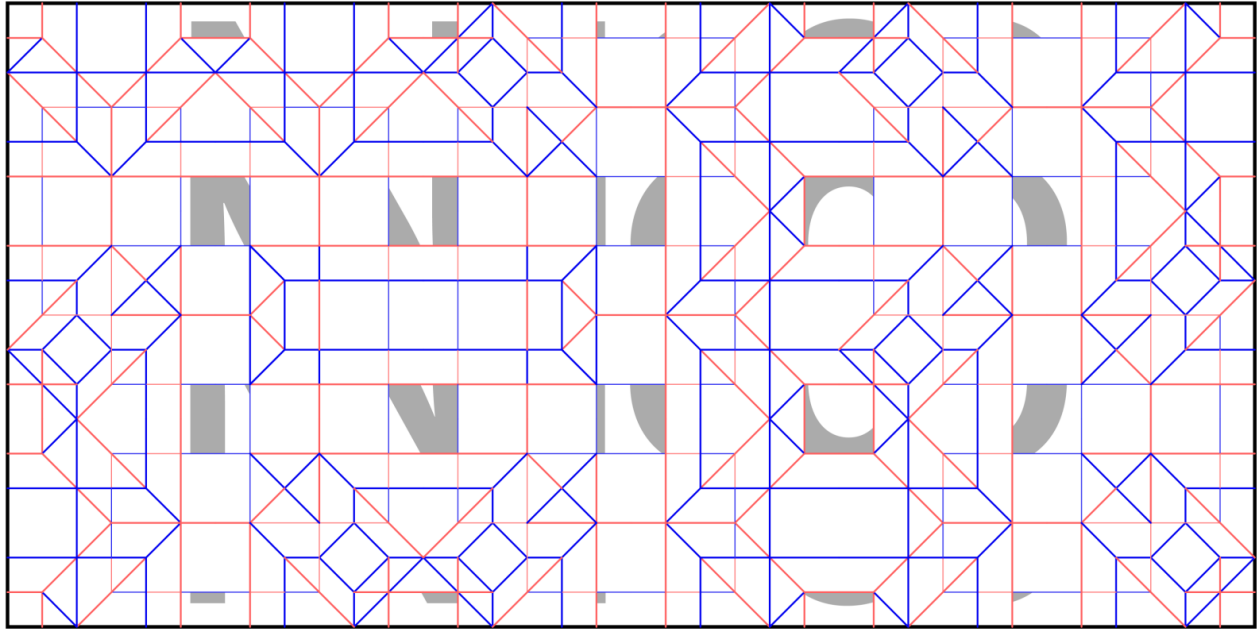


photos by Ken Frederick and Jimmy Hemphill

Floating glass ceiling (joint work with Martin Demaine and Jo Ann Fleischhauer), part of *Leonardo Dialogo*, an installation at UT Health Science Center, MD Anderson Cancer Center, Houston, Texas. Waterjet-cut hand-blown glass, low-iron sheet glass, stainless steel rods, LED lights. 2010, 24' × 13'. The labyrinthine pattern of spiraling polyhedra symbolizes the researcher's journey to find answers and ask new questions, and the patient's journey to healing.



Floating glass ceiling (joint work with Martin Demaine and Jo Ann Fleischhauer),
design drawings, 2010.



Yes/No (joint work with Martin Demaine and Sarah Stengle). Print on elephant hide paper. Limited edition of 50, 2011, 24.4" × 27.6".

The crease pattern on shaded paper (in the top drawing) folds into the shape of a 3D "yes" while the shading forms "no" (as in the bottom drawing). In this way both answers simultaneously come into focus.

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