

Folded Light, Folded Words: Origami Photography and Poetry

Premiered at the Aylward Gallery, 17 June 2015

Photography by John Beaver
Text and Models by Elizabeth Breese and Meredith Mason

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Overview

Photography uses glass and geometry to redirect rays of light from the 3-dimensional world to a 2-dimensional surface. Origami is the art of folding flat paper into a 3-dimensional structure. We are 3-dimensional, with all our complexity and baggage, but others see us by way of our 2-dimensional surfaces. And we are folded and creased by what has happened to us.

The act of folding rearranges parts, placing opposites and complements next to each other. Unfolding takes apart the big picture and separates it into pieces. Folding is like a mantra. There is, as with all art, a tediousness to the process that can bring comfort.

Using a variety of film and alternative-process techniques – silver gelatin, Polaroid, cyanotype, image transfers, emulsion lifts – all of the photographs in *Folded Light, Folded Words* incorporate origami in some way, either as subject matter or, more-often, as an integral part of the photographic process itself. In some cases, origami techniques are used to fold the flat light-sensitive material into the very camera used to take the photograph. And so the print was the camera. Other examples allow the folding or unfolding process, in the darkroom, to juxtapose or separate elements of an image, to make something entirely new out of an old negative.

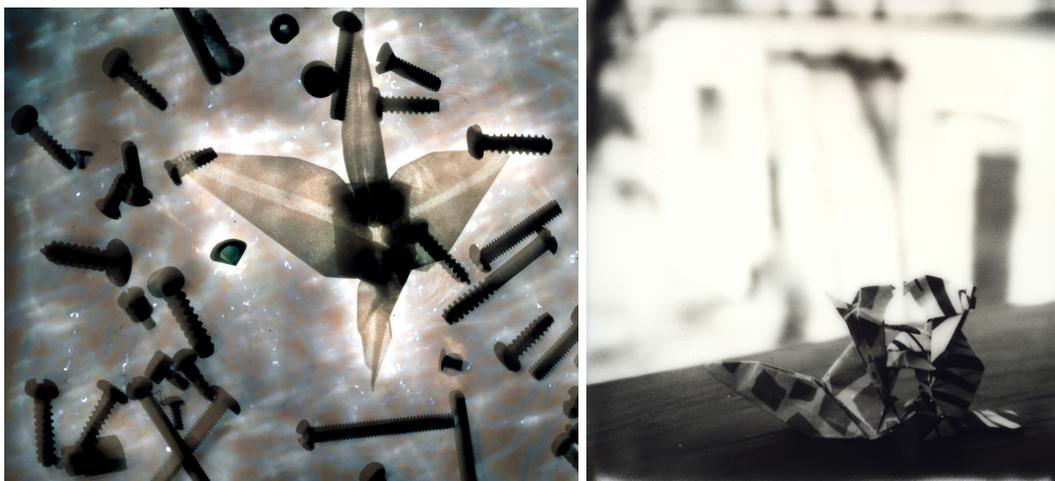
The photographs are accompanied by poems and text by Ohio-based poet Elizabeth Breese, and Wisconsin poet Meredith Mason. The photographer and two poets worked both together and independently, sometimes responding to each others work, sometimes not. The only "rule" was that there be a connection, even if roundabout, to origami. Breese and Mason were natural choices to be part of this project; not only are they excellent poets, but they are also both accomplished origamists. In addition to the photographs and poems, the exhibition includes displays of the various origami models used to create the photographs, with credit given to their inventors.

Because of the many different photographic processes used, *Folded Light, Folded Words* would be incoherent if not for the use of origami as a unifying element. Nonetheless, a bit of help may be needed to make sense of it all, and so the exhibition is divided into six sections, described below.



Origami as Subject

Origami makes for interesting subject matter, both as still-life imaged by an ordinary camera lens and as a photogram (camera-less shadow print). The seven images in this section were all made using techniques I have explored extensively in my previous exhibitions. All are straightforward digital chromogenic color prints, but they all originated from some type of alternative-process *negative* – a cyanotype photogram on paper, or the peeled-off throw-away part of Polaroid, for example. Some of these techniques (*Endangered #1*, below, for example) are of my own invention. This section includes the poem *Dear John*, by Elizabeth Breese.



3-D from 2-D

Origami is traditionally folded from paper that is white on one side and a solid color on the other, although patterned paper is also used occasionally. But some kinds of photographic prints can successfully be folded. The result is a three-dimensional sculpture that began as a two-dimensional image. Much of the original image is then hidden forever (unless the model is unfolded), and previously disparate parts of the picture are now juxtaposed.

Cyanotypes on thin art paper are especially suitable for folding into origami, and I provided such prints to both Elizabeth Breese and Meredith Mason to fold. I also used the unit origami technique of Tomoko Fuse to fold an old stack of chromogenic prints into eight-sided boxes with lids. Sixteen 8 × 8 inch prints (cut down from the 8 × 12 inch originals) were used for each. The prints themselves were made years ago, early in my photographic career, and I never particularly liked them as individual prints.

The origami boxes contain short poems by Meredith Mason.



2-D on 3-D

One of the biggest technical challenges in making *Folded Light*, *Folded Words* was to invent ways to put continuous 2-d photographic images onto the 3-d surface of completed origami. In *Celebration*, I lifted emulsions from Polaroid-compatible integral film (now made by Impossible Project) onto completed origami tessellations (from a design by Eric

Gjerde). Tessellation techniques are a fairly new advance in origami. Flat paper is turned into something that is still roughly flat, but richly textured. The process is not unlike a two-dimensional version of knitting. I was introduced to this technique by poet and origamist Elizabeth Breese, and her poem *Difficulty Low* accompanies this piece, which combines two of my emulsion-lift tessellations with two more-complex tessellations folded by Breese from my cyanotypes.

Jorge, with Seraphim and Fireplace proved to be one of the biggest challenges of the show. Nine cranes were folded, in the darkroom, from fiber-based black and white photographic print paper. The paper must be folded wet, or else the emulsion cracks. The cranes were arranged under the enlarger, and a single black-and-white negative was projected onto them. The cranes were then unfolded and processed normally. After processing, the paper was refolded into cranes along the existing creases, and after drying, they were arranged into the same configuration as when they were exposed under the enlarger.

As seen from most angles, it is a 3-dimensional jumble of disjointed bits of an image. But if viewed from just one particular vantage point, the original image is visible.



Tree of Life

Origami is an intriguing subject for photograms (direct-contact shadow prints), and cyanotype was the obvious process to use for the blue background of *Tree of Life (Detail)*. The models were folded from designs by John Montroll and Peter Engle, as well as a couple of traditional designs. An X-ray effect is evident, showing hints of the 3-dimensional structure of the flattened models. *Tree of Life* is accompanied by the poem *Prayer*, by Elizabeth Breese.



Fold, Expose, Unfold, Develop

I am intrigued by how origami both juxtaposes separate parts of a sheet of paper, while it also separates adjacent parts. For the diptych *Pagoda and Duck* (*preliminary fold and bird base*) and the triptych *Whooping Crane* (*preliminary fold, bird base and crane*), the photographic print paper was folded before exposure under the photographic enlarger.

The preliminary fold (the first step in folding a crane) is so-called because it begins many different origami models. The square of paper is folded into one fourth its original size, but in such a way that all parts of the paper are easily accessible. Thus different parts of the folded paper were exposed in the darkroom four separate times, to four different parts of the original negative. The paper was then unfolded, processed and displayed flat.

The so-called bird base is the next major step in folding a crane, and a similar process reveals a more complex pattern. For the triptych *Whooping Crane* I made a complete crane from print paper, and exposed its top and bottom separately to different parts of the negative. It is accompanied by the poem *Rare Bird*, by Meredith Mason.



Day of Creation

Here a series of nine color and eight black and white Polaroid-compatible Fuji instant prints were composed to show a day in the creation and unraveling of a crane. The overall structure was carefully pre-planned, but the exposures were made in order, each composed separately in light of the the previous ones.

Day of Creation is straddled by *The Eight Hour* and *The Tenth Hour*, two digital chromogenic prints made from the throw-away negative side from two of the instant black and white prints.

This series is displayed alongside the poem *Sighting*, by Meredith Mason.



Origami Pinhole Camera

I have always been intrigued by the tension that results in photography between the “original” touched-by-light negative, and the (in principle) exactly-reproducible print. Early in the planning for *Folded Light, Folded Words* I realized that origami provides a way to sidestep this all together, to make an oddly pure form of photography.

Two sheets of photographic print paper are folded, in the darkroom, to make a single box (using a simple but ingenious model design by Maruo Hosoya). Pinholes are placed on opposite sides of the box (one in the center of each sheet - a precision hole in a small piece of sheet-brass is placed over a larger hole punched directly in the paper). A second box is made using the same technique, but out of opaque paper, and the light-sensitive box is placed inside.

Thus a pinhole camera is made out of the very material used to record the light. The camera is then used to take two simultaneous exposures, in opposite directions. After exposure, the camera is brought back to the darkroom, disassembled and unfolded. The now-exposed light-sensitive paper is reversal processed to form a direct positive image (instead of the negative that would result with normal processing).

Thus the print on the wall is the only existing image (there is no separate negative), but it was also the very *camera* used to record the image onto itself. It seemed appropriate to display these as a hinged diptych. When folded together, the two prints go back to a flattened version of their original configuration when the image was exposed.

Because there are folds on the inside of the box, and it is not possible to know exactly how those internal folds will be positioned, there is a strong random element to exactly how the image will be distorted. In some cases different parts of the same sheet of paper may end up with parts of the image from *both* pinholes (and thus in opposite directions).

This technique is very difficult and time-consuming, and as often as not fails to produce a usable picture at all; taking only a few pictures is an all-day project, even with careful planning and preparation ahead of time. But I am intrigued by the notion of looking at an original image on the wall that was made from nothing but folded paper and the rules of geometry.

The two diptychs *The Greenhouse* (below) and *The Rabbit Fence* (and a single chromogenic print, *Folded Light*, made from a scan from my first semi-successful test) are accompanied by the poem *Clutter* by Elizabeth Breese and *Cyclops* by Meredith Mason.



Clutter

by Elizabeth Breese

Like corners (or no), the scent
of given peonies, or dust plush
enough to bury the marbled husk
of a March beetle, a place
can be thoughts thought. So this

would be Monet's beard—
how full is it, still? And it would be
pig bones—the dusty sign
of a settling people. Together with
a bag marked *nails*, it would be

the memory of nothing wrong.

Cyclops

by Meredith Mason

Riding in the car, age 6,
fingers splayed
in front of my face, I declared,
Mom! I can see through my hand!
Alert the press.
Your daughter is a super hero.
No, you can't. That's just . . .
her voice trailed off,
because how do you explain
your eyes' magical feat
of fabricated consensus?
She might have said,
That's just binocular disparity.
Your eyes are located at different spots on your head.
She could have told me
You will never completely agree
even with yourself,
or more instructively,
The moment you become single-minded you lose
all sense of depth.
That's why the Cyclops is so scary.