

## Life/art lessons - origami

by Michael Lai<sup>188</sup>

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### Concept, material and technique

To describe a form of art, you need to understand its concept, and practice its technique using suitable materials. However, the more time I spend on origami, the less certain I am about whether I am doing origami. Let me explain why this is the case.

The definition of origami always includes the words ‘folding’ and ‘paper’.

Sometimes it is referred to as a Japanese art, as it is mentioned in [Japanese literature](#) as far back as 1680. This is despite the invention of paper in China being documented over 2000 years ago, and the practice of [letterlocking](#) having already been established by the 13th century in Europe. Suffice to say, since the development of origami as an art (as opposed to its more practical purposes) is not

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well documented, we have a much more modern view of its practice of this traditional art than we think.

Perhaps because of the lack of an inventor who could provide the definitive explanation, others have come in to try and fill that gap. In fact, this is exactly how a common misconception about origami came about. The idea of 'pure' (and 'pureland') origami, where the cutting, gluing and other additions to the origami model is not permitted is relatively new (something of a 19th century concept), and further helped to define other forms of papercraft such as kirigami where specific cuts are made to the paper to create the model. Yet, the idea that origami does not involve any manipulation of the material other than folding is not supported by any substantial evidence.

As to the material used in origami, much has been written about the common types of paper used, and some that are not what you would normally consider materials for folding. Paper is itself a processed organic material, so if we were to fold something that was taken directly from nature (say flower petals) or something other than paper, is it still origami? If not then all the references to the

application of origami in science (e.g. folding of molecules), engineering (e.g. folding of the solar panels in satellites) and even in everyday life (e.g. folding of clothes or hotel towels) are not strictly origami but of some other disciplines yet to be defined.

If the concept and the medium are subject to debate, and the techniques are dependent on the concept and medium, what is origami? Is it the art that most people are familiar with, the science that is hidden in everyday life, or a means to attain mindfulness that seems to be just as elusive as other forms of meditation and mental health exercises?

### **Scale and its dependencies**

The Guinness World Record for the largest origami crane ever made stood 36 m high and was 81.94 m wide. It was made using 1 ton of paper by some 800 from 29th to 30th August 2009, and required multiple cranes to lift/fold the structure. Clearly if you want to fold something much bigger than your hands, it is best to use something that matches the size of the paper, and techniques that allow you to manipulate the paper more easily.

The world's [smallest folded crane](#) was made from a 0.1 x 0.1 mm square of plastic film that was 4 microns thick (1 micron = .001 mm). Special custom made tools were required to manipulate the film under a microscope by an 82 year old man in 2004. There is no official Guinness World Record for this feat, although plenty of people have tried to claim it for themselves on Reddit and other social media platforms. At some point in the future, a scientist will figure out how to manipulate molecules with enough precision to try doing origami.

As discussed previously, there is an intrinsic connection between the concept, material and technique. And you can see from changing the scale of the origami model you want to make, the material and technique changes dramatically, while the concept remains largely unchanged. If we go back to the original definition based on the words, there is nothing to stipulate how the folding is done.

### **Abstracting the art form**

From our examination of origami as a form of art, it typically involves the use of your hands to fold paper into a certain shape or model.

There is an overlap between the visual processing of our eyes and the haptic feedback from our hands, so it is not inconceivable to practice origami without the use of our vision (i.e. blindfolding, with or without existing creases).

This also translates to the visualization of the model (i.e. mental imagery) and the process or steps involved in the folding, which means that it doesn't require a physical material in order for you to stimulate the senses involved when you are folding.

Origami is often seen as a meditative or mindful activity, but it is hard to argue that it is more so than any other forms of art. However, it is minimal in its concept, materials and techniques (therefore tools) required.

So you can practice origami by folding without using your hands, eyes or even paper. This could be as close as what people who meditate feel, and perhaps why origami is often closely associated with mindfulness.

Tsukahara Bokuden (塚原 卜伝, 1489 – March 6, 1571) the revered early Sengoku period swordsman, developed the martial arts system Kashima

Shintō-ryū (鹿島新當流) that was briefly known as Mutekatsu-ryū (無手勝流 - "winning without hands"). Bokuden also refers to his swordsmanship as the "Style of No Sword", and his teachings as the "no-sword school".

Once you know how to fold paper with your hands and eyes, you can practice origami in the style of the “no-paper school”.

### **Transcending the art form**

Imagine that you are taking a walk through a garden, and you see a flower petal that has fallen to the ground. There is very little moisture left in the petal, and the shape of the petal resembles a rough square (maybe it has been nibbled on by some insects?). You pick up the petal, and you bend it a little to see if it will hold its shape. The petal is just large enough that you wonder if you can make a flower like the one on the cover of the Origami Bonsai book.

Somewhere else in the world, there are other people who have also picked up a flower petal and wondered if they can make an origami flower from it. These are not the professional origami artists that

you see on social media posts and videos, and you'll never see their work displayed in a museum or sold in a gallery.