

Origami - from ancient tradition to global art

Diffusion of Origami to the USA and Germany in the 1980s

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March 2018

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Introduction

Origami is the ancient Art of paper-folding that originated in Japan. This art-form has been practised for centuries. In Germany and the USA however, Origami has entered public consciousness only in the early 1980s. This paper explores why the diffusion of Japanese paper-folding occurred with such great delay.

The first chapter describes the development of paper-folding as a craft itself and the history of its adoption in Germany and the U.S. This is followed by a section that applies the theory of the diffusion of innovation to the popularisation of origami. The next chapter uses this theory to argue for a sociological explanation for the timing of the popularisation of origami. The subsequent conclusion summarises the argument. Finally a small amount of figures that were used in the main-chapter is reproduced, to be followed by a list of references.

Development of Origami and paper-folding

Before World War II there were several folding traditions that might have had a common root but were developing quite independently.

The oldest historically documented paper folding tradition is the Japanese one (Lang 2003, 3).

A short poem composed by Ihara Saikaku in 1680 mentions folded origami butterflies in the context of a wedding ceremony (Hatori n.d.).

In Germany, Friedrich Fröbel, the founder of the Kindergarden, promoted folding exercises in his activities for children (Barth and Niederley 1887). The earliest creator of paper-folding design we know is painter Adolf Senff who created a model of two sheets that form a horse and its rider in the early 19th century (Sallas 2010, 128). In German books on Fröbel's teachings, a model that is widely known in Spain as „Pajarita“ can be found under the name “Rabe” (the raven). Both the horse and the raven model start with the same folding steps, known as the windmill base. The windmill base itself starts with folding all corners to the centre and repeating this once. This base form is called a “blinz-fold”. All of Fröbelian area folding that can be accounted for start with the blinz fold and the windmill base respectively. That was also known in the rest of Europe. Even before Fröbel it was customary at the high courts of Europe to fold linen and other fabrics for

decoration and representation, the oldest record dating back to 1529. Both kinds of were folding not present in Japan at the time (Sallas 2010, 23).

Meanwhile the Origami crane was and still is popular in Japan (Davis Thomas M. and Yehieli Michele 2009). "Hiden Senbazuru Oriката ("Secret to Folding One-thousand Cranes") published in Japan in 1797 is the oldest origami book of which copies were preserved ('Hiden Senbazuru Oriката' 2008). The cranes started with completely different base-forms that were unknown in Europe at the time. From this fact a separated development of the European and the Japanese folding practices can be inferred (Sallas 2010, 24f).

In the 1950s Akira Yoshizawa developed several new base-forms and a new technique of shaping origami pieces by dampening the paper, called wet folding. This was accompanied by his invention of a notation system for Origami folding sequences. With the addition of arrows to Yoshizawa's notation by American folder Randlett in 1961 the system became known as the Yoshizawa-Randlett-System and is today's most commonly used form of conveying origami instructions in two dimensions (Lang 2003, 13).

This new notation made it possible to share more complex folding sequences. It was picked up quickly around the world. The first German Origami publication, as listed by the German National Library, to use the word „Origami“ in its title was released by the publishing house "Ravensburger" in 1964 and already contained instructions in Yoshizawa's notation (Kneißler 1964).

While the practice and the term Origami spread across the globe by means of printed publications and private interest-groups it wasn't until the 1980s that public awareness of Origami rose ([figure 1](#) and [figure 2](#) and Lang 2003, 3).

The history of the adoption of origami that has been outlined in this chapter has not been subject to scholarly analyses yet. In contrast to that, the study of diffusion of innovation has produced a wide body of research. Those theories will be used to explain the popularisation of origami in the following chapters.

Application of diffusion theory to origami

The main subject of the study of diffusion of innovation is concerned with the adoption of subjects that can be objectively qualified as an improvement to the status quo (see Rogers 2010).

The practice of Origami is different in some important aspects, from technical innovations. Paper-

folding had no commercial applications or benefits when it spread (Origami style folding found applications in engineering, but only after its popularisation).

This different nature makes it difficult to apply theories that imply an economical value of the subject of diffusion (see e.g. Sadanand 1989). Origami is not inherently superior to other forms of artistic creation. There is no “relative advantage” endogenous to it, which is one of the characteristics that can explain a quick adoption according to Rogers and other scholars of diffusion of innovations (Rogers 2010, 15). Origami however has other features that are theorised to be advantageous to its acceptance (Rogers 2010, 15): It is highly *compatible* with the value systems of the two countries in this case study. There is nothing offensive or taboo about folding paper. The perceived *complexity* of origami is so low that it is considered an ideal activity for kids. Modern origami models reach hundreds of steps and take hours to fold, but traditional models can be folded in minutes (Lang 2003, 3–6). This leads to a high *trialability*, no special tools or resources are necessary to produce simple models. The *visibility* of the finished modules stimulates adoption further (see Rogers 2010, 16). The other important elements of diffusion processes, next to the mentioned characteristics of the innovation itself, are *time*, *communication channels* and the *social system*, writes Rogers (see Rogers 2010, 35).

This paper will explore the aspect of the social system which was the only aspect that changed significantly in the 80s in respect to origami.

The rise of Origami in Germany and the USA

This chapter builds the argument, that changes within the social system of Germany and the U.S. explain the rapid growth in the popularity of origami in the 1980s.

One might argue that random encounters between people are the reason for the diffusion of Origami into the USA and Germany (and other parts of the world). While there is an argument to be made for endogenous diffusion, to say the rise of Origami was due to the fact that „the time was simply right for Origami“ just begs the question, which factors determine whether the time is right for a cultural practice.

One reason for the adoption of Japanese paper-folding could be increased international trade. While the amount of Japanese citizens moving permanently to the U.S. did only slightly increase (see [figure 3](#)) the number of U.S. citizens in Japan almost doubled over the course of the 80s (see [figure 4](#)). Almost by the same factor the amount of Japanese exports grew up to the middle of the 80s (see [figure 5](#)). It is plausible to assume that the increase in foreign trade in Japan brought increased opportunities for cultural exchange. But Japan’s foreign population was and still is much smaller in

comparison to almost any other country (Akira Ishikawa and Motomi Beppu 2008, 107). Also, foreign trade is hardly a new phenomenon and Origami became popular when the economic export-boom in Japan already cooled off (see [figure 1](#) and [figure 5](#) respectively) This indicates that other factors played a more important role in the diffusion of origami.

A case in point is the 1983 film “Blade Runner” which features¹ an Origami Unicorn (Greenwald 2007; Abbott 2000). This Unicorn was an Origami model and not just some other toy because in the future the movie envisioned, globalisation led to one large mixed culture consisting of influences from all important industry nations, and Japan had been recently added to that list.

If the growth of origami was due to an endogenous process, i.e. caused by changes within, we should have seen the growth immediately after the innovation of modern origami in the 50s and 60s. This however did not occur.

In the late 70s Japanese car-manufacturers were starting to reach and even excel European Car makers. This resulted in a shift of mindset in how the older traditional industry nations thought about their own business culture and in how Asia and the Japanese Culture in particular were perceived. The Time magazine titled „how to cope with the japan business invasion“ in 1971, referring to the new economic position as the world's number one in electronics (Time n.d.). The lead article goes on to explain the development of the Japanese success and largely attributes it to “Japan's economic psychology“, the Japanese work ethics and a more collectivist society resulting in prosperous collaboration within Japan as opposed to the individualism and fierce competition practised among companies in the USA and the west in general (Byron, Chang, and Reingold 1981). In 1980, the German pendant of Time, “Der Spiegel“, opens with the headline „Japanautos - Europa gerät unter die Räder“ (Japanese cars – Europe is getting under the wheels). The accompanying article refers to the threat to the American and German car-manufacturers posed by Japan but also stresses the Japanese work ethics and superior efficiency that have led to the success, according to its author and the many managers of the automotive industry quoted within (Der Spiegel 1980).

Cars are not like any other product as both the United States and Germany attach their national pride and identity in a significant manner to their cars and the related industries (Böhme 2011). The reaction in Germany and the U.S. to the Japanese threat was to adopt parts of what was believed to be the successful Japanese management-culture in order to yield the same results, a new philosophy, known as „Lean Management“ (Emiliani 2006). The adoption of those practices was seen as the legitimate choice in the face of the crises American and European car-makers were facing (Smith 1981). See DiMaggio and Powell (DiMaggio and Powell 1983) for a detailed explanation of the mechanisms that drove this adaptation. It was this interest in Japanese culture that brought people to Origami in the 1980s. While car-makers were dreaming of being “Big in Japan” people in

¹In some Versions of the film like the Director’s Cut (Abbott 2000).

Germany and the U.S. found themselves “turning Japanese” - like two successful pop-songs of the time suggest.

Conclusion

While innovations like easily shareable instructions for cultural artefacts and a greater variety of crafting techniques can facilitate the diffusion of an art-form, those innovations are by no means sufficient to produce mainstream adoption. Origami successfully removed itself from an obscure hobby not only because of the transformative and adaptable nature of the craft itself or the fact that its material is ubiquitous. No, the success of Japanese paper-folding over the other folding traditions was due to increased interest in the whole of Japan’s culture and the perception of it’s superiority in the economic sphere. The rise of origami is an example of how success in one sphere of society can lead to diffusion in a different one.

Figures

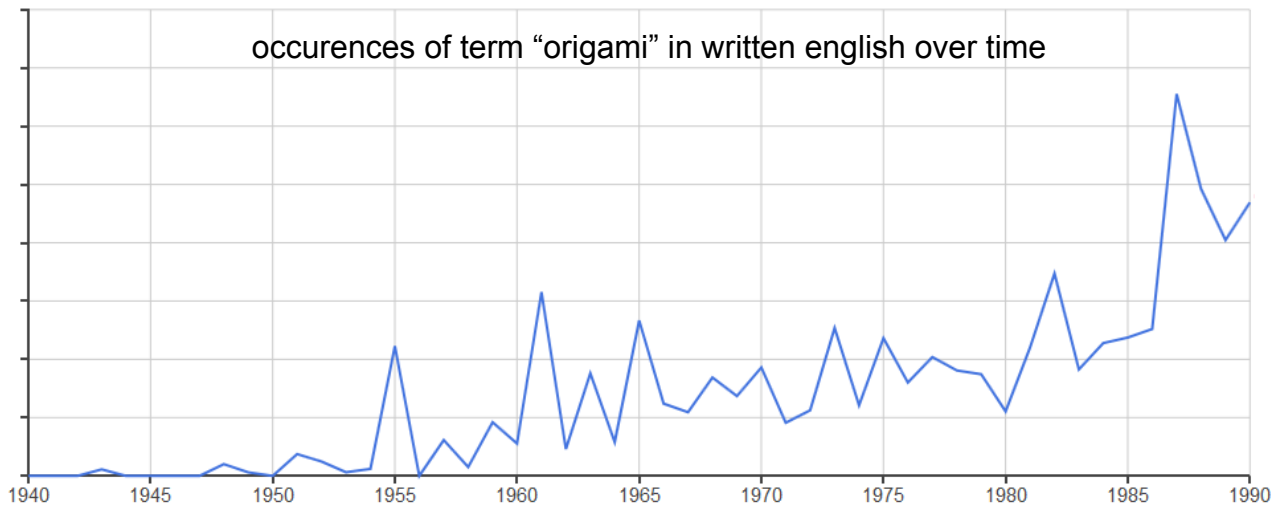


figure 1: relative use of the term origami in written English over time – data and image (Michel et al. 2011; Google 2013) -<https://books.google.com/ngrams>

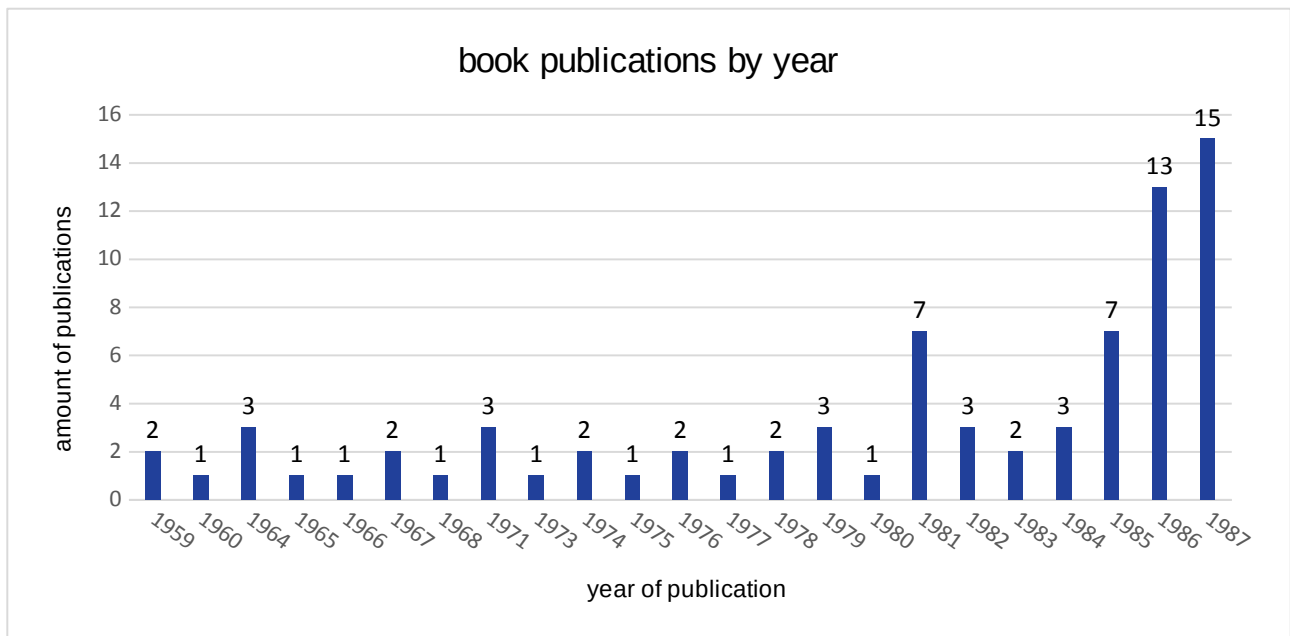


figure 2: book publications by year with "Origami" in title as listed by the German National Library - data: Catalogue of the German National Library - <https://portal.dnb.de>

Japanese persons obtaining lawful permanent residence in the U.S.A.

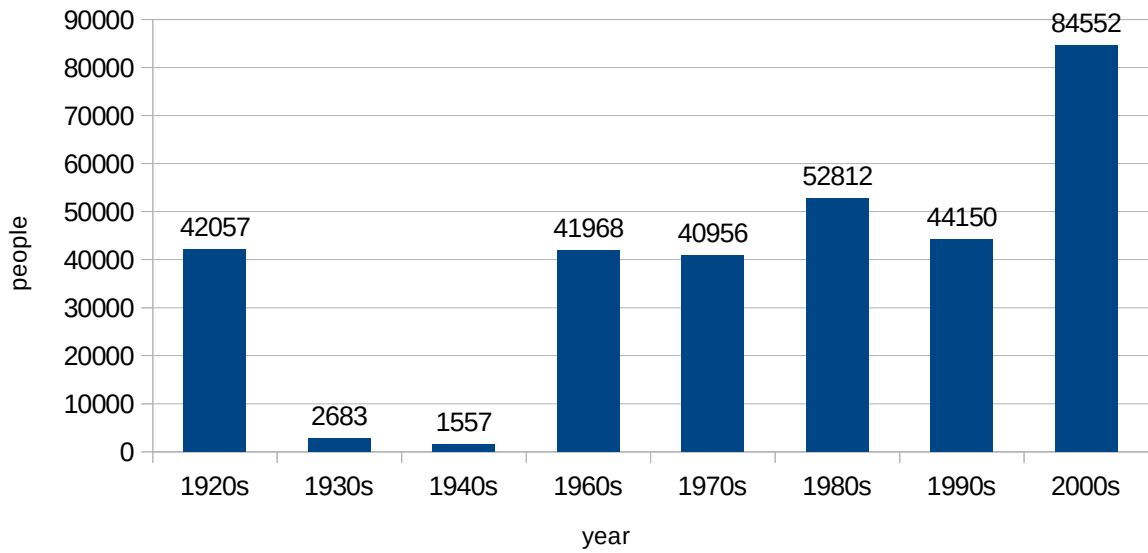


figure 3 Japanese persons obtaining lawful residence over time. Data: (Department of Homeland Security 2016)

U.S. citizen in Japan over Time

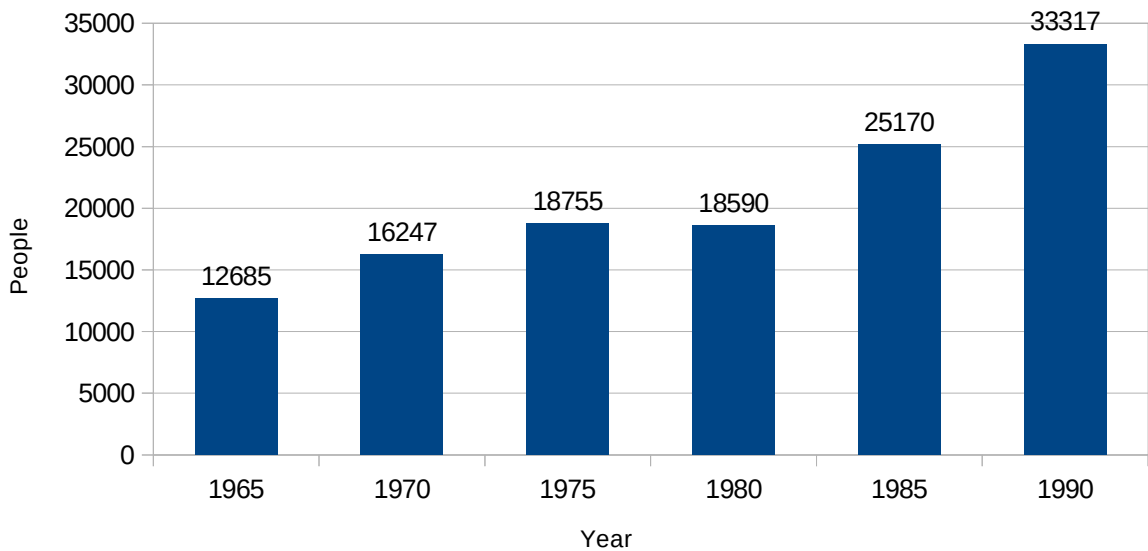


figure 4: U.S. citizens living in Japan over time Data: (Statistics Bureau Japan 1996a)

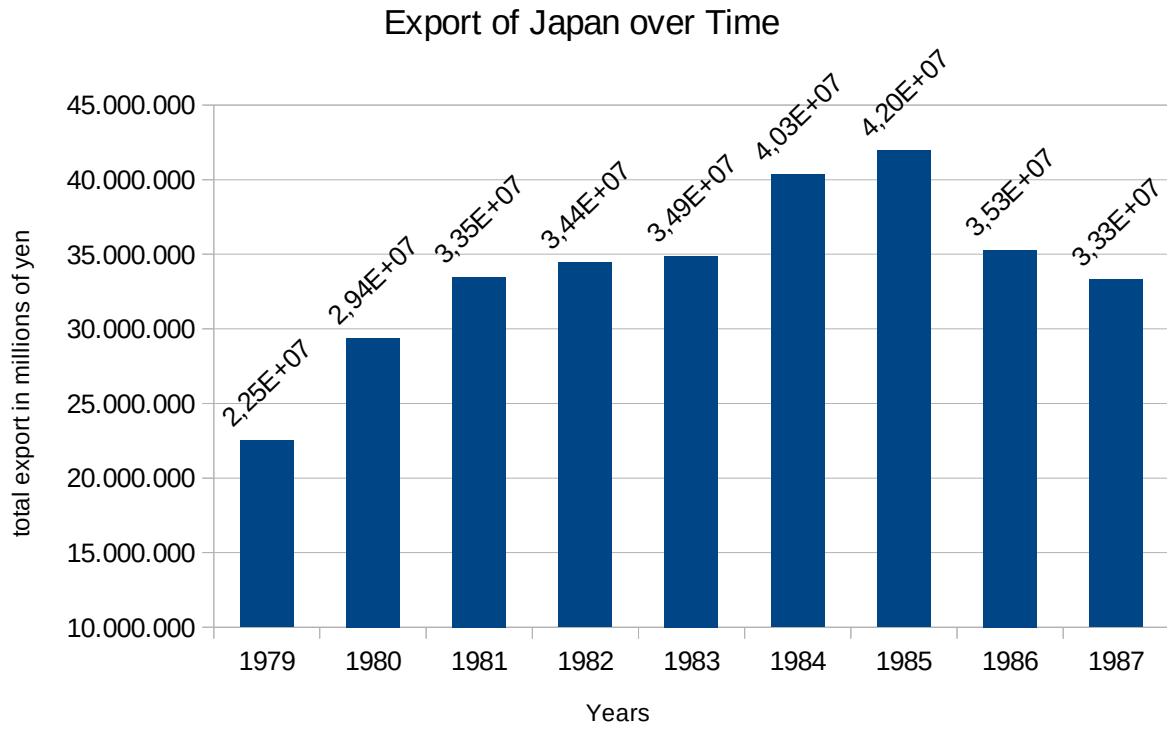


figure 5 Export of Japan over time. Data: (Statistics Bureau Japan 1996b)

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