



## Internal Peace in Life

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### **Design Purpose:**

The design, *Internal Peace in Life*, reflects designers' current life journey with challenge, hope, and wish. The vibrant colors of this design recalls the wave of our human lives and embeds the recurrence of four different seasons – spring, summer, fall, and winter – in our lifespan. This piece overall presents peace but it also embeds the feeling of life dynamism including happiness, disappointment, and sadness. We all wish to paint our life canvas with happiness but the reality may not be like that. All diverse colors worked well together in this piece, which reflects the harmony of our life. The designers used a hand stitching, especially hand overcasting, as a therapeutic mean to overcome life challenges, which led to achieve their internal peace.

This design, consisting of sleeveless top and high waist skirt, was inspired by the work of Young Hee Lee, a pioneering fashion designer of Korean traditional clothing, called “Hanbok” (Arirang News, 2015). We took the unique, simple shape of hanbok and its authentic beauty, and then transferred those design attributes into the contemporary look of our design. This piece emphasizes on exploring the movement and color variation of the fabric as it relates to the shape and to interact with a wearer.

Another intention of this design relates to explore the way of using 3D printing for wearable fashion products. With the advancement of 3D printing technology, its applications have been extended to diverse disciplines and the use of 3D printing has been gradually increasing in the fashion-related fields; however, challenges still exist to create wearable 3D printed fashion products considering flexible functionality. To overcome the lack of flexibility of 3D printing materials (e.g., plastics), we were challenged to print 3D objects as thin and small as possible, which can supplement the hard feeling of plastics. This can be considered as a modular design approach; small pieces of 3D modular objects are printed and those pieces connected together, which leads to enhance the mobility and functionality of wearers. For the 3D printing experiment in this design, *Internal Peace in Life*, we adopted the design concept of BAO BAO ISSEY MIYAKE, which is a line of bags and pouches with the theme of "shapes made by chance," featuring a flexible functionality by intriguing geometric shapes born out of simple pieces (Miyake, n.d.).

### **Design Process and Techniques:**

The design and development of *Internal Peace in Life* involves multiple steps: design ideation, selection of material and hand stitch techniques, 3D printing of triangular objects, and assembly. The design was created by considering for the use of a simple pattern development using

geometric shapes and the visual experimentation of relationships between 2D shapes and the evolving 3D structures. Once design sketches were finalized, considering the accurate locations of 3D printed objects in the sleeveless top, simple patterns were developed, using the rectangular ramie fabrics (15" width and 36" length), which were donated by a traditional Korean artist and the waste after creating her art pieces. The fabrics' vibrant colors were derived from the natural dyes with persimmon leaves and peels, green tea leaves, tangerine peels, or red grape peels. We tried to minimize the fabric waste by using the entire donated ramie fabrics. Hand basting was first done in an attempt to stabilize the fabrics and prevent shifting prior to hand overcast each seam. Threads with yellow-gold tones were selected for hand overcasting of the design to provide decorative accents. Delicate hand stitching and crafting techniques (e.g., hand overcasting, button knot) were fully implemented for the creation of *Internal Peace in Life*.

3D triangular object with 2" weight x 1.2" height x 0.1" depth was designed using Rhino, a 3D modeling program, and printed by uPrint SE 3D printer, which uses Stratasys' patented fused deposition modeling technology and a two-part ABS*plus* plastic to create models and prints high resolution, high quality parts. After the stl file of 3D objects was printed, additional time was taken to clean each part. Each file included 16 pieces of 3D triangular objects and took around one and half hour of 3D printing. Total of 114 triangular pieces were printed and bonded to the front and back bodices of sleeveless top, considering flexible functionality.

The design, *Internal Peace in Life*, is unique in terms of application of Korean traditional hanbok into contemporary apparel design, simple pattern development, and the visual experimentation of relationships between 2D shape and the evolving 3D structures. This design also presents the beauty of hand overcasting and opens a new way to integrate 3D printed objects into wearable fashion products considering wearers' functionality.

**Materials:**

Ramie fabrics naturally dyed with persimmon leaves and peels, green tea leaves, tangerine peels, or red grape peels were used for making the sleeveless top and high waist skirt of this design. Ivory color, ABS*plus* plastic was used for 3D printing of triangular objects. 100% viscose/rayon thread was used for hand stitching and yellow-gold tones of the thread were selected for the decorative accents of the design.

Date Completed: May 17, 2017

Measurements: Female medium (size 6-8) – 34"x26x"35" (bust x waist x hip)

**References**

- Arirang News. (2015, September 22). DDP opens exhibit on hanbok designer Lee Young-Hee [Video file]. Retrieved from <https://www.youtube.com/watch?v=pmSBRiyxzwk>
- Miyake, I. (n.d.). *The BAO BAO Issey Miyake*. Retrieved from <https://www.shopbaobaouisseymiyake.com/concept>

Image A Front View



Image B Back View



Image C Side View



Image D  
Interesting  
Design

