

Analysis of Eye Movement concerning Evaluation of Hexagonal Pattern Structure in Wire Net Craft

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1. Introduction

The wire net craft is one of the traditional crafts in Kyoto. These crafts are the handmade of the expert. The hexagonal pattern structure of the craft is made by twisting the wire. However, it is not easy to make the structure with stability.

In this paper, the feature of the shape of the hexagonal pattern structure in wire net craft made by the expert was examined. The eye movement of the expert was analyzed on making the craft. Moreover, the non-expert made the craft for measuring the proficiency of the making it. The eye movement of the non-expert was analyzed. In addition, the finish degree of the crafts made up by the many non-experts was evaluated by both of the expert and non-expert. The eye movements of both were analyzed at the same time.

2. Experimental Procedure

The expert is one man and the years of experience of the wire net making are 41 years. The non-experts are nine men of the university student. Figure 1 shows the example of the wire net craft made by the expert. The experiment to the non-expert was executed for three days once a week. The quality of the finish degree of the craft by the non-expert was determined by the expert. The eye movement was measured in these a series of evaluations.



Fig.1 An example of the wire net craft.

3. Results and Discussion

Figure 2 shows the monitor screen of the measurement of the eye movement. The trajectory and the gaze place and so on of the eye movement can be measured.

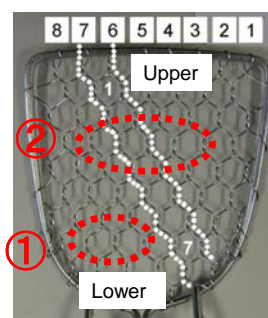
Figure 3 shows the feature of the gaze place of each subject. The expert was moving the eye line while gazing under the left of the hexagonal pattern structure in the beginning. After that, the expert was gazing to the part at the center of the craft. The expert was gazing at the place where the influence of the gap appeared and confirmed the balance of the structure. On the other hand, the non-expert almost gazed at the part at the center first or was gazing here and there.

4. Conclusion

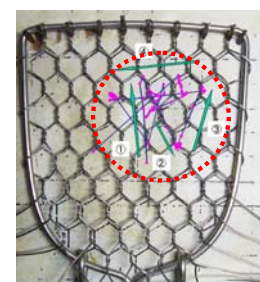
It was clear that the expert understood the viewpoint and the procedure to make it well. It is important to quantify these wisdoms. It is thought that these are the techniques to make it well.



Fig.2 The monitor screen of the measurement of the eye movement.



(a) Expert



(b) Non expert

Fig.3 The feature of gazing place.