Chapter 21
Designing Emotional and Creative Motion

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Abstract We propose a method for designing emotional and creative motion that extends beyond images currently generated by human imagination and resonate with the deep feelings that reside within us. We discuss design from two perspectives: (1) the motion of natural objects are reflected in the sources of emotional motion, and (2) creative and emotional motion, which resonates more with human feelings than natural objects do, is generated by extending beyond the motion of natural objects. We also focus on another perspective of the method for designing such motion, that is, whether or not the motion can be generated using the traditional method. On the basis of these discussions, we develop a method that involves “analogy to natural objects” and “emphatic blending of motions”. We have developed this method by focusing on rhythmic features, and we will illustrate an example of designing an emotional and creative motion using the proposed method.

21.1 Introduction

21.1.1 Emotion and Design

The most significant ambition in design is to create objects that resonate with the deep feelings felt by humans. Needless to say, we (humans) are deeply impressed when we come across natural scenery that is delicate or magnificent or wonderful. We learn such emotional experiences when we “feel the beauty of nature”. However, nature is not the only thing that resonates with human feelings. In fact, we gather emotional experiences not only from nature but also from artifacts. Music is a good example – humans are sometimes deeply impressed when listening to mu-

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sic. Thus, we can say that music, which is created by humans, stimulates human feelings. Perhaps it is the musical instruments that effectively trigger human feeling with their music. Musical instruments are man-made tools, and it is difficult to play music without musical instruments. Both the creation and usage of musical instruments facilitates music’s capability of resonating with human feelings. There are many other artifacts that resonate with human feelings – paintings, movies, etc. – and we collectively identify them as “art”. True art has the power to provide special symbols that stimulates emotional experiences within humans [1]. Human feelings (emotions) must be taken into account if we aim to design a truly desired artifact. Moreover, it is necessary to develop a method for designing the truly desired artifact. This method should address the following question: “How can we create an artifact that resonates with human feeling in the same way as musical instruments?” In other words, our goal is to create artifacts that resonate with human feeling and stimulate human emotion.

21.1.2 Designing the Emotional and Creative Motion

In recent years, design has mainly targeted shapes; thus, most designs provide the shapes and forms of objects. Further, as mentioned in the previous subsection, music has been another subject of design. In this study, we challenge further developing the subject of designing the motions. There are numerous types of motion created by humans, for example, the behaviors of vehicles or robots [2], and animation and dance. Interestingly, the motions of animation are constructed from static pictures. Animation looks dynamic, but is actually motion that is stimulated on the basis of visual mechanism [3]. Thus, each animation can be separated into a time-sequential sheet that represents each static image; it is difficult to reproduce a complete image of a motion. Sequential sheets are not adequate tools for designing an animation that portrays an entire motion, since the dynamic features of motion cannot be described easily and must be recognized by reading between the lines. An entire image of the motion is stored only in the human mind. We still do not have a good instrument to describe and design motions, unlike, for example, music which is designed using musical instruments. In addition, we cannot compose the motion, in contrast to music which can be composed using music scores, nor can we play an instrument of motion in the same way that we play musical instruments.

To consider the issue of how we can create or design motions, we can take a hint from dance. A dancer probably imagines the complete motion of the dance and composes the dance by moving his/her body. However, this method limits the imagination of motion to one’s individual body. To overcome this limitation, dance directors use choreography, which is based on an expert knowledge of dance. “Choreography” implies “dance-writing” – the art of designing sequences of movements, with each movement formed by various motions. Consider, the famous choreographer, Maurice Béjart, who created an advanced style of ballet [4].