Implicit and explicit features of paintings

SLOBODAN MARKOVIĆ 1,∗ and ANA RADONJIĆ 2

1 Laboratory of Experimental Psychology, Department of Psychology, University of Belgrade, Serbia
2 Rutgers University, Newark, New Jersey, USA

Received 14 June 2006; accepted 9 January 2007

Abstract—Implicit features of the paintings are properties that are imposed by the observer (e.g. how pleasant, interesting, tense a painting appears), whereas explicit features refer to properties that can be directly perceived (form, color, depth, etc.). The aim of Experiments 1 and 2 was to investigate the underlying structure of implicit and explicit features of paintings using the factor analysis of elementary judgments. In the preliminary studies, representative sets of paintings and elementary implicit and explicit dimensions (in the form of bipolar scales) were selected. Four implicit factors were extracted: Regularity, Relaxation, Hedonic Tone and Arousal. Four explicit factors were extracted: Form, Color, Space and Complexity. The following significant correlations between implicit and explicit factors were obtained: Regularity–Form, Regularity–Space, Hedonic Tone–Form and Arousal–Complexity. In Experiment 3 the role of implicit and explicit factors in similarity–dissimilarity ratings was specified. Significant correlations between the position of paintings in MDS space and mean judgments of explicit factors Color, Space and Complexity and implicit factor Relaxation were obtained, suggesting that similarity ratings of paintings are primarily based on explicit features. The causal relation of explicit and implicit features is discussed.

Keywords: Implicit and explicit features; paintings; factor analysis; multidimensional scaling.

INTRODUCTION

Visual art is attractive for visual science in two general ways. First, it can serve as a rich source of examples of various visual phenomena, such as color perception, contrast sensitivity, spatial vision, perceptual organization, constancies and illusions, and so on (see Solso, 1996; Zeki, 1999). On the other hand, visual art can be studied as a scientific problem itself. Some of these studies concern the compositional aspects of visual arts perception, such as symmetry, complexity, golden section, and the other, more sophisticated forms of an artistic composition (for review see Arnheim, 1969; Green, 1995; also see Berlyne, 1971; Martindale et al., 1988; Ramachandran and Hirstein, 1999). Other studies address the question of

∗To whom correspondence should be addressed. E-mail: smarkovi@f.bg.ac.yu
pictorial representation, i.e. how do the artists code and transmit certain information to the observers (cf. Berlyne, 1971; Gombrich, 1969).

In this paper we will investigate the relationship between the two phenomena which are closely related to, but not identical with, the compositional and representational domain of paintings: explicit and implicit features of paintings. While explicit features could be classified in the domain of composition, the implicit features are close to the representational domain. In the next section the concepts of explicit and implicit features will be explained in more detail.

**BASIC CONCEPTS: EXPLICIT AND IMPLICIT FEATURES**

Generally speaking, our immediate perceptual experience of the visual world can be described in terms of features which belong to the two complementary domains: objective (explicit) and subjective (implicit). The objective domain refers to explicitly seen physical features of the visual scene, such as shape, color, size, position, orientation, etc. The subjective domain includes implicit features imposed to the scene by the perceiver himself. Some of these features can be affective and motivational (e.g. some objects may look more or less pleasant, interesting, etc.). Others are pseudo-physical, i.e. they refer to some physical features that do not exist in a given scene. For example, a diagonal line is judged as implicitly more dynamic than a horizontal one despite the fact that both lines are physically still and static. Similarly, the configuration shown in Fig. 1 may induce the perception of an aggressive triangle, which attacks the square.

While precise detection of explicit, physical properties of visual scenes is crucial for sensory-motor coordination and action control in everyday life (e.g. eating, driving, playing football, etc.), the implicit features play a dominant role in aesthetic experience. Dominance does not, however, mean exclusiveness, because both classes of features exist in every perceptual experience. For instance, implicit features are intrinsically involved in complex experience of planning and execution of all daily activities: food we are eating is judged as tasty or disgusting (these features are subjective by definition), playing football can be judged as elegant, and so on.

On the other hand, both implicit and explicit features are necessary for the articulation of the aesthetic experience. If we look, for instance, at the two drawings

Figure 1. Configuration of a triangle and square (see the text for explanation).