Cultural Effects on Pictorial Perception: How Many Words Is One Picture Really Worth?

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1. Introduction

Why would anyone study pictorial perception cross-culturally? Two reasons are given in the literature. The first is to identify group differences among cultures in their understanding of pictorial materials. This reason is pragmatic. Pictures are ubiquitous in urban, industrialized cultures and we rely on their information-carrying value in teaching, testing, transportation, communications, industry, etc. In the past, the unspoken assumption has been that specific experience with pictures was not a necessary prerequisite to understanding them since it was commonly held that a picture was indeed worth at least a thousand words. However, this unspoken assumption was not always supported by the experiences of people in nonurban/industrialized cultures. Reports began to appear on the general inadequacy of pictorial materials as universal and culture-independent instruments of communication and the cross-cultural picture work was begun. The aim of the work is to identify groups failing to perceive in the previously expected manner and to isolate the causes of that failure, e.g., absence of Western schooling.

The second reason for studying picture perception cross-culturally is less...
immediately pragmatic and more general in scope. The aim is to understand pictorial perception *per se*, to specify the nature of depiction itself and the perceptual processes involved in its comprehension. This endeavor addresses the problem of the relationship between picture and pictured reality and the question of the special character of pictorial perception within a larger characterization of the perceptual process in general.

We would like to argue that one cannot adequately identify and describe group differences in pictorial perception without a careful specification of the nature of the depiction employed in the determination of those differences. Further, in order to adequately specify the nature of the depiction used, one must know where the picture fits into a systematic, theoretical analysis of pictures and pictorial perception in general. The field offers a range of such analyses, the two extremes of which are represented by the positions occupied by Gibson (1950, 1966, 1971) and Goodman (1968). Gibson argues that there is a physical resemblance of some order between a picture and its subject. The information contained in the delimited optic array coming from a picture is the same kind of information as that found in the optic array of the ordinary environment, according to Gibson. Thus, such pictorial components as size, linear, texture and aerial perspective, overlapping, shadows, and projective height all bear a specifiable geometric relationship to the scene generating them. Work on the specification of such monocular information for size, distance, slant, etc. was begun by Gibson and has been continued by his students, e.g., Purdy (1960), Sedgwick (1973), and Kennedy (1974). That such monocular information can function as well in pictures as in real scenes is evident from the success of *trompe-l'oeil* art wherein pictures are often mistaken for their models. That is, observers can not tell the picture from the “real thing.”

In diametric opposition to Gibson’s position is that of Goodman (1968), who rejects absolutely and explicitly any notion of resemblance between pictures and the world they represent. A picture as a representation is an instance of a system of arbitrarily assigned pictorial labels. It is only through understanding of the pictorial label system that pictures are given meaning and informative function. Goodman rejects any attempt to root pictorial labels in an objective analysis of the structure of the visible world. For him, realism, and thus resemblance, is relative, determined solely by the system of the pictorial labels standard for a given culture or person at a given time. All pictures must be read according to a culturally standardized system. We read pictures painted in ordinary perspective and normal color almost effortlessly because practice has made our pictorial symbol system so automatic that we have lost awareness of its order-giving functions. We can see no other alternatives and the ease of interpretation of a picture depends only on how stereotyped the mode of representation has become. According to Goodman, realism is a matter of habit and that a picture looks like nature often means only that it looks the way nature is usually painted.