THE VISUAL REALISM CONTINUUM
THE ROLES OF HIGH AND LOW-FIDELITY PICTURES

Stuart Medley
Edith Cowan University
School of Arts and Humanities
s.medley@ecu.edu.au

The human brain has a tolerance for varied views of objects which allows it to regard new impressions in the eye as objects perhaps previously seen but under different viewing conditions. This tolerance is a function of visual constancies, where the brain knows that the eye is looking at a familiar object but under changed ambient lighting conditions, position or distance, and so on. Lower fidelity pictures, deployed by the image-maker, allow for these more generalized views of objects to be presented to the viewer rather than the decontextualized moment of reality captured in the photograph. Pictures, either representing visual reality faithfully, or reduced in fidelity, away from their referents, connect to two key aspects of the psychology of seeing: *identification*—where the picture helps the beholder to see the difference between things in the same class (for example, in the class "humans": discerning Marco from Alessandro); and *categorization*—telling the difference between one class of things and another (for example, "buildings" and "vehicles": discerning a house from a lorry). Knowledge of these faculties of human vision will help to build an appreciation of the special advantages of communicating with pictures, especially pictures of reduced visual realism, and should be as central to a theory on visual communication as semiotics.

Humans have evolved seeing their surroundings in sharp detail. So, one could be forgiven for assuming that pictures which faithfully reproduce that detail should be the choice for all visual communication. Depending on the visual communication task however, a high-fidelity photograph is often out-performed by pictures of lower fidelity. How is it that we can see and understand pictures that don't look exactly like things look in the world, and what is the significance of this for visual communication?

The human brain has a tolerance for varied views of objects which allows it to regard new impressions in the eye as objects perhaps previously seen but under different viewing conditions. This tolerance is a function of visual constancies, such as shape constancy –where the brain knows that the eye is looking at a familiar object but from an unfamiliar angle– or size constancy –where the brain knows that the eye is looking at a familiar object but from a novel distance– or colour constancy –where the brain knows that the eye is looking at a familiar object but under changed ambient lighting conditions– and so on. Lower fidelity pictures, deployed by the image-maker, allow for these more generalized views of objects to be presented to the viewer rather than the decontextualized moment of reality captured in the photograph. Knowledge of these faculties of human vision will help to build an appreciation of the special advantages of communicating with pictures, especially pictures of reduced visual realism.

Pictures, either representing visual reality faithfully, or reduced in fidelity, away from their referents, connect to two key aspects of the psychology of seeing: identification –where the picture helps the beholder to see the difference between things in the same class (for example, in the class "humans": discerning Marco from Alessandro); and categorization– telling the difference between one class of things and another (for example, "buildings" and "vehicles": discerning a house from a lorry).

The first task, identification, is a very fine-grained problem for the human visual system. It requires a level of detail

to overcome the problem of visual homogeneity. People are of relatively similar shapes. Detail interior to their silhouettes –the short contours within the longer contour of a person's outline– is necessary to enable this discernment. The second task, categorization, is a simpler problem. To be sure of its object-hypothesis, the human visual system needs only the longer contours to discern the difference between two objects from different classes. Hence, the silhouettes typical in pictograms are ample to communicate a general human form, a building or a vehicle.

In graphic design there has always been a separation between words, which are usually supplied by the client, and typography, the inaudible 'voice' that the designer gives to the client's words. A parallel separation (borrowed from W.J.T Mitchell, 2008) can be made between "image" and "picture". For visual choices designers and illustrators should concern themselves equally with image; with what is shown, as with picture; how that thing is shown.

The visual realism continuum, an imaginary scale upon which pictures of the same image may have their fidelity compared, is a conceptual instrument that makes this distinction more clear. Any image (whether seen in the real world with the eyes, or imagined in the mind) can be captured with varying degrees of fidelity in a picture, with the photograph at the very realistic end of the scale and the chirograph, or hand-made picture supplying all the other possibilities of depiction. The continuum very roughly parallels Peirce's semiotics of icon, index and symbol but sidesteps their association with linguistics and writing, while also reminding us that a picture's function is a matter of degree and context.

Furthermore, the continuum is an effective way to demonstrate that pictures have a role to play in deliberate communication, and that some kinds of pictures (of higher fidelity) are better at helping us identify specific examples within a class of objects and others (of lower fidelity) are better at helping us categorise things into classes. An understanding

of the human psychological faculties through which we com-
prehend pictures of reduced fidelity should be as central to a
theory on visual communication as semiotics.

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ADDITIONAL READINGS

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