

Introduction to the debate

LEONARDO

Gibson and Gombrich on Picture Perception

On March 22nd 2000 I exchanged emails with Roger Malina, Editor of *Leonardo*, about a project to develop the debate between Gombrich and Gibson that had started in its pages in 1971. My concern was that the debate had become marginalised in the psychological literature. I suspected that there were two main difficulties, both revolving around the professionalisation of psychology as an academic discipline. First, psychologists are extraordinarily clannish about their activities and don't welcome the intrusions of outsiders. Second, Gombrich's critique of Gibson's theories about the image didn't work in favour of an alternative acceptable psychological approach. He couldn't be claimed for the empiricist or computational approaches. He was already on the record as a critic of gestalt psychology though, like many other psychologists, he welcomed many of its discoveries. And he certainly didn't fall into the neurophysiologists' camp.

What counts as a qualification to enter into psychologists' disputes? Surely not just the fact that one has taken a degree in psychology and then gone on to teach it. The German academic tradition, in which Gombrich was trained, encouraged eclecticism. *Lehr-und Lern-Freiheit* could be a pick-and-mix affair. It wasn't automatic that one's interests would be channelled into a single direction. In his time at the University of Vienna Gombrich struck up a friendship with Ernst Kris, an art historian psychoanalyst disciple of Sigmund Freud, and attended the lectures of Karl Bühler, its Professor of Psychology, and the experiments of his students. After completing his PhD he became first Kris's assistant and then his collaborator in a projected book on caricature, which bore its first fruits in the pages of the *British Journal of Medical Psychology* XVII, 1938, republished with an important qualification in Kris's *Psychoanalytic Explorations in Art* (1952):

A good deal of further investigation concerned with the relation of word and image in ontogenetic development and in historical contexts may prove rewarding. (p. 200)

By 1952 Gombrich was working on the ideas that finally made their way into print as *Art and Illusion: A study in the psychology of pictorial representation* New York 1960. In its preface he mentioned the works he had benefited from reading: C. E. Osgood, *Method and Theory in Experimental Psychology* (1953), R.S. Woodworth and Harold Schlosberg, *Experimental Psychology* (1954); O. L. Zangwill, *An Introduction to Modern Psychology* (1950) and others acknowledging a special debt to J. J. Gibson, *The Perception of the Visual World* (1950) 'which, I hope, prevented me from underrating what the author calls "the awe-inspiring intricacy of vision".' (p. xi) He admitted that his

selection was not without a bias of its own. If any student of the subject should wish to know at this stage what direction this bias took, [he] would refer him to the famous joint paper by E. C. Tolman and E. Brunswick, "The Organism and the Causal Texture of the Environment," *Psychological Review*, 1935, which stresses the hypothetical character of all perceptual processes." (pp. xi-xii)

According to Edwin G. Boring, *Sensation and Perception in the History of Experimental Psychology* (1942)

There was an extensive quantitative study of "constancy" of size and shape by Brunswick and his associates in 1933. Brunswick made it clear that, since it serves to stabilize the ever-changing perceptual world, object-constancy has biological value for the organism. (p. 256)

Brunswick worked under Karl Bühler in the Psychologisches Institut in Vienna, obtaining his doctorate in 1927. Gombrich met him in the course of his work on caricature with Kris.

Bühler, who Gombrich didn't mention in *Art and Illusion*, was a highly distinctive thinker in his own right. Besides his interests in psychology, which extended to Gestalt psychology, he was also interested in what he called "sematology", in contrast to Saussure's semiology, and *Sprachtheorie*. This connection has initially been explored by Klaus Lepsky in 'Art and Language: Ernst H. Gombrich and Karl Bühler's theory of language' in Richard Woodfield (ed.), *Gombrich on Art and Psychology* (Manchester U.P. 1996).

During World War II Gombrich became interested in the phenomenon of projection in his work with the BBC's Monitoring Service (discussed in Olive Renier and Vladimir Rubinstein, *Assigned to Listen, The Evesham Experience 1939-43* (BBC 1986). His experiences with the practicalities of perception can be matched with Gibson's own experiences in training pilots for the U.S. Airforce). In 'Some Axioms, Musings and Hints on Hearing' he suggested the following axioms:

1. Good hearing does not only depend on keen ears.
2. Hearing depends on knowledge.
3. In hearing the 'whole comes before the part'.
4. The mechanism of 'projection' plays a major part in hearing. (pp. 75-6)

After the war he turned his interests in hearing into an investigation of picture perception, making use of the most up to date psychological investigations available in the library of the British Psychological Society at London University's Senate House. Gibson's experience of

using pictures with pilots led him to appreciate the importance of motion and textural gradients for the perception of objects in space. This led him to reject the notion of inference from sensory experience to develop a theory of information pickup. He offered an initial account of his theory in *The Perception of the Visual World* (Riverside Press 1950), which Gombrich subsequently used in developing his own ideas.

For the moment I will leave the story there. Gibson reviewed *Art and Illusion: A Study in the Psychology of Pictorial Representation* in the *American Journal of Psychology* 73 (1960), pp. 653. A few years later he published *The Senses Considered as Perceptual Systems* (Houghton Mifflin 1966) and Gombrich questioned his most radical formulations in 'The Evidence of Images: The Variability of Vision' in C. S. Singleton (ed.) *Interpretation, Theory and Practice* (The John Hopkins Press 1969). Gibson returned to the fray in the *Leonardo* article published on this website and a dialogue ensued. I am grateful to Roger Malina at *Leonardo* for allowing me to publish this debate and to Ernst Gombrich, Phaidon and *The New York Review of Books* for additional material.

It is intended that this website will grow. I will add additional relevant material by Sir Ernst and will also solicit contributions from friends and scholars who would be interested in contributing to this debate. I will also add analytical material myself as well as transcripts of relevant conversations. I would welcome suggestions for hotlinks to relevant sites.

If you are interested in contributing to this debate yourself please send material for posting on this website to **richard.woodfield@ntu.ac.uk**. Texts should be no more than 5,000 words long with a maximum of 12 illustrations. They are best submitted in Microsoft Word with illustrations in the form of JPEGs. You will be expected to have received copyright clearance where relevant. Hotlinks can be included and are a convenient device for using illustrative material.

Richard Woodfield