Research on the International Academic Transmission
Features of the *Art and Illusion* (1960-2017)

Jing YE
College of Humanities, Zhejiang Shuren University, No. 8, Shuren Street, Hangzhou, Zhejiang, China
65640202@qq.com

**Keywords:** *Art and Illusion*, International Data, Academic Transmission.

**Abstract.** As the important fruit of artistic psychology which represents the pictorial representation in the 20th century, the *Art and Illusion*, especially its academic transmission shows a new trend. In Big Data Era, relying on the data research with international open data platform, this article concludes the studies into three aspects: first, the *Art and Illusion* which has large influential geographic areas, wide subject coverage and diversified influenced authors obtains an important correlation with other classical works in semiology, Psychology, and Philosophy of Science. Second, after experiencing the “Golden Age” of the academic transmission in 1980s, this book received a rebounding influence climax in the first ten years of the 21st century. Third, it has a strong tendency of penetration and development especially in the psychological and artistic fields, which will acquire more critical and unique academic value in the construction of the artistic basic theory system in the future.

**Introduction**

Ernst Hans Joseph Gombrich (1909-2001) gained the important academic achievements in the field of pictorial representation of art psychology. His masterpiece that the *Art and Illusion* (published in 1960), on the basis of cognitive psychology, has a new interpretation of the history of art, which exerted an important influence in the field of the art history, psychology and philosophy. It mainly answered two core issues, why representation art has a history and why different times and countries use very different ways to represent the visible world. Gombrich thought that the difference between artists is not about imitation of nature or reality, but on their prior experience. Art is not a simple replication of objects, but an active cognition process based on hypothesis, reasoning and understanding.[1] *Art and Illusion* has been translated into 18 languages, and the English version has been printed 30 times and it has shown a strong academic dissemination and academic diffusion features around the world.

This paper takes the literatures citing *Art and Illusion* on the open data platform as the main research objects, and studies the breadth and depth of academic dissemination of *Art and Illusion* through quantitative statistics and content analysis.

**Data Selection**

Mutual citing academic literature can reflect the exchange of different thoughts between scholars. The phenomenon that scholars cite classic works reflects that they are affected by the thoughts from those works. Furthermore, the citing literature of the works also reflects the academic transmission and dissemination of the thoughts. This article selects five sub databases (SCI-EXPANDED, SSCI, A&HCI, CPCI-S, CPCI-SSH) in the international authoritative database, the Web of Science as the data platform, and the cited work retrieval terms are: "ART ILLUSION STUDY P" or "ART ILLUSION" or "ART AND ILLUSION" or "ARTE ILUSION" or "ARTE ILUSIONE ESTUDIO" or "KUNST ILLUSION PSYCH" or "KUNST ILLUSION" or "ART AND ILLUSION A S" or "ARTE ILLUSIONE".
In addition, the time set is from 1960 to 2017. Through the text by text screening, it finally got 2252 articles which citing Art and Illusion.

**Data Analysis**

The *Art and Illusion* began to be influential the very year it was published, but the extent of its academic influence is not obvious in the first ten years. Then the academic influence of the work continued to heat up from 1970s to 1980s till reaching the climax in the history. In 1990s, the quantity of citing literatures of the book did not continue to rise up. Instead, it showed a downward trend and the average amount of literatures decreased by nearly 40%. After 21st Century, the quantity of literatures gradually resumed and increased, reaching its highest peak in 2013, and then fell again, as shown in Fig.1.

Generally speaking, the *Art and Illusion* obtains a comparatively high and continuous influence. From 1970s to 1980s, this period represents the upward trend and the influence peak of the thoughts in the book. In the new century, the *Art and Illusion* has reached a high point for academic diffusion and dissemination again.

![Figure 1. The Number of Literatures (1960-2017) Citing the *Art and Illusion*.](image)

1. **The Regional Analysis under the Influence of *Art and Illusion*.**

From 1960 to 2017, the work affected more than 50 countries or regions. The influence is very distinctive in North America and Europe, followed by Asia and Oceania. The work has limited academic diffusion in South America and Africa. From the perspective of the citing literatures, the amount of literature in the United States ranks first. The UK ranks second which only has 35% of the total volume compared to the United States. Besides, Canada, Germany, France, Australia and other countries have the average literature volumes of more than 50 papers.

Before 1975, the academic influence of the book mainly concentrated in the United States, Britain, Canada, Belgium, Australia, Denmark, Hongkong, Tanzania and the Soviet Union, etc. Ten years later, it mainly had a significant impact in Europe. Meanwhile, the new affected countries and regions included European countries such as Germany, France, Switzerland, Holland, Austria, Czech, Slovakia, Finland, Ireland, Italy, Portugal and Sweden; Asia countries such as India, Asia and Israel; countries from other continents such as Zambia, New Zealand and Jamaica, etc.

In 1985-1994, the influence of the book had gradually extended to South Africa, Morocco, Greece, Japan, Singapore, China, Brazil, Hungary and Norway, which were mainly in Asia and Africa. In 1995-2004, there were a few new areas add up in this ten years, only Spain and Taiwan, China.
After 2005, the work's influence continued to expand geographically to Asia, South America, Africa and other regions, including Serbia, Romania, South Korea, Turkey, Russia, Armenia, Egypt, Fiji, Jordan, Czech, Chile, Mexico, Poland, Saudi Arabia and Slovenia, etc.

It can be seen that since 1970s the influence areas of *Art and Illusion* mainly centered on North America and Europe, then gradually expanded to Oceania, Asia, Africa and other economically developed areas.

2. The Discipline Analysis under the Influence of *Art and Illusion*

The citing literature of the *Art and Illusion* spreads to more than 80 disciplines, including: Art, literature, philosophy, psychology, art and humanities, linguistics, social sciences, history, computer science, pedagogy and philosophy of science, etc. Among those disciplines, the influence on art is most profound, and the amount of citing literature is 492, followed by literature, and philosophy and psychology are the third and the fourth respectively.

According to citing literature analysis in various disciplines, this study finds that *Art and Illusion* had a strong influence on art and literature in 1980s. After 1990s, the influence on the literary declined sharply, which the annual amount of citing literatures of the book remained at 10 papers then fell to less than 5 in 2016. Although the influence on art shows a downward trend, the overall impact of the book in this discipline is at the highest point; The influence on the philosophical direction remains stable, and there is no obvious fluctuation. The impact on psychology has shown a steady upward trend. Especially after 21st Century, the influence on psychology almost catches up with art, Fig.2.

![Figure 2. The Annual Distribution of Literatures Citing *Art and Illusion* in the Fields of Art, Literature, Philosophy and Psychology.](image)

3. The Features of Authors Influenced by the *Art and Illusion*

Among all the influential authors, David Carrier and John M. Kennedy referenced *Art and Illusion* most frequently. They are the academic influenced representatives of *Art and Illusion* in the field of art history and psychology, while other influenced authors are more scattered in different disciplines. From another aspect, it displays that the influence of the book is more noticeable in these two directions.

David Carrier is the scholar who cited the book the most with 16 articles including 2 letters, 1 editorial and 13 papers. These articles were mostly published in 1980s, involving fine arts, arts and humanities, philosophy and other fields. The main contents of his study included art history, visual theory, and art theory, such as Meditations on a Portrait of Comrade Stalin (1984), Theoretical Perspectives on the Arts, Sciences and Technology (1984), Gombrich on Art Historical Explanations (1983), and Meditations on a scroll, or The Roots of Chinese Artistic Form (2002), etc. As an American philosopher and art critic, David Carrier obtained his Ph.D. at the Columbia University.
under the guidance of Arthur Coleman Danto in 1972. He wrote historical and philosophical themes about the artistic writing by comparing the text narrative styles on the same literature and analyzing the change of the interpretation on literatures in order to question the relativity of the artistic writing in different periods. His major work, Principles of Art History Writing Principle (1991), differentiates two kinds of concepts--the "art history" and "artistic writing". David Carrier is an important scholar in the field of art history. In his professional field, He has made an indispensable contribution to the academic inheritance and development of Gombrich's works.

John M. Kennedy had a total of 8 articles citing Art and Illusion, which mainly related to the image of metaphor and symbolism, including How Minds Use Pictures (1984), Metaphor In Pictures (1982), and Metaphoric Thought and Devices in Pictures (1993).

John M. Kennedy is the Professor of psychology, Department of Life Science at Scarborough branch, University of Toronto. In 1971 he obtained a doctorate at Cornell University whose main research direction is the experimental psychology with his academic mentor Dr. James Jerome Gibson. His minors are psychological linguistics (doctoral tutor E. Lenneberg) and developmental psychology (doctoral tutor for H. Ginsburg). Kennedy's research direction focused on the special relationship between psychological factors of perception and cognition and pictorial representation, including vision and sense of touch in images, and metaphorical relationships between the language and the image. His main works are Drawing and the Blind, 1993, Psychology of Picture Perception, 1974. The Art and Illusion affected the thought of John F Kennedy in psychology. He gathered the viewpoints of psychologists such as James Gibson to some extent, which has made an important contribution to the integration and development of Art and Illusion in psychology.

4. Analysis on Affinity Literatures of Art and Illusion

The affinity literature refers to the highly co-cited literature of Art and Illusion. The research about affinity literatures can be used to studying the literatures that have affinity or high correlation with Art and Illusion in academic communication. The idea of co-cited literature was first introduced by American intelligence scientist Henry Small and Schiminovich of Soviet Union in 1970s.

Narrowly speaking, if two documents are cited by the third document at the same time, it is regarded that there is a co-citation relationship between the two documents. If the two documents are often cited at the same time, it shows that they have some similarities in studying topics, backgrounds, methods, concepts and so on. The higher the frequency they are cited, the greater the correlation between them.

By applying the method of literature co-citation analysis, this article found that the Nelson Goodman's Languages of Road Sign Art: An Approach to a Theory of Symbols, 1968, is the most important affinity literature of Art and Illusion, followed by Rudolf Arnheim's Art and Visual Perception, 1954 and Thomas Kuhn's The Structure of Scientific Revolution, 1962.

Languages of Art: An Approach to a Theory of Symbols is the only aesthetic work written by Nelson Goodman in his works. It is believed that these three works, Language of Art (Nelson Goodman), Art and Illusion (Gombrich) and Art and Its Object (Richard Arthur Wollheim), are regarded as the epoch-making books which mark the transfer of the deep study towards the art issues in the Anglo-American philosophy community.

In the Language of Art, Goodman believes that the "language" can be replaced by "symbol system". This book from the perspective of philosophy analysis re-explained "artistic symbol theory" and conducted detailed researches on the expression method of different symbols. [2]

In the sixth preface of Art and Illusion, Gombrich cited the view from Language of Art that the nature-like images never exist, and all images are based on programs just like languages or our notes. Gombrich contends that all images are symbols. Therefore, the semiotics discipline should be studied but not the psychology of perception. On the basis of it, Gombrich believes that the difference between symbols and images is that we use different psychosocial orientation when we try to understand them. It is obvious that the affinity relationships between Art and Illusion and Language of Art are very close on the issue of images and symbols.
Art and Visual Perception, 1954, is the famous work of Rudolf Arnheim's theory of applied psychology. This book systematically describes the basic theory of Gestalt psychology, which reproduced the process of the visual perception when people appreciate paintings, design, calligraphy, sculpture and other art forms. It proposes that the art forms can express emotional factors depending on the perceptive patterns and visual area of the brain respond to the perceptive patterns. The prime task of the book is to describe what kind of things that we saw can be divided into categories, and how the perceptual mechanism interpreted the visual facts. Also it needs to make a clear classification of visual materials and to extract the inherent principles that hide in the material. [3] Similarly, the subtitle of Art and Illusion is "A study in the psychology of pictorial representation ". Gombrich also emphasized the importance of perception and psychology in image interpretation and artistic style formation.

The Structure of Scientific Revolution, 1962, is Thomas Kuhn's book. The book proposed a new view of science not only negates logical empiricism, but also criticizes Popper's falsification. Based on his study of the history of science, Kuhn points out the possibility that scientific revolution will turn out to be the development of science. The scientific revolution is that a very popular science theory was overthrown by the scientific community who supports another theory and the two theories are incompatible with each other. [4] And it is contrary to Popper's situational logic.

However, in Art and Illusion, Gombrich's "schemata theory to complete the revision" is affected by Popper's Falsificationism principles; it is situational logic based and interprets the development of art representation. Thus, The Structure of Scientific Revolution and Art and Illusion have incompatible views. [5] It can be seen that the theories of the two authors has an interactive academic influence on the history of art and the history of science. It is a relationship with little sense of exclusion and conflict.

Summary

The diffusion and dissemination of Gombrich’s theory shows that it has the potential academic influence. The important thought behind the book generates the influence which has not been faded with the changes of times. It is particularly strong that the infiltration and development trend of Art and Illusion is in the field of psychology and art. And the transdisciplinary and multidimensional discipline-infiltrated ability of Art and Illusion has always been concerned.

The academic transmission route of Art and Illusion foresees the reappearance of its academic value in the new century, in the foundation to maintain a certain breadth of influence; the work has formed the dominant art psychology academic diffusion group, which will have more important and unique academic value in the construction of art theory system in the future.

Acknowledgement

This research was financially supported by the Zhejiang Provincial Department of Culture (2016).

References