Towards a Definition of Knowledge Art/*Wissenskunst*

Von Renée Gadsden

What is the connection between knowledge and art, and is there such a thing as 'knowledge art' itself? The term *Wissenskunst* was created by the English speaking social philosopher and author William Irwin Thompson. After a discussion with physicist Werner Heisenberg in Munich, Thompson created the word *Wissenskunst* to describe his attempt to define an essay-narrative that was not just non-fiction, but something more art-oriented for a culture that is no longer simply orally bardic or academically literate.[1] Thompson contrasted his word *Wissenskunst* with the German word for science, *Wissenschaft*, and contended: "As fiction and music are coming close to reorganizing knowledge, scholarship is becoming closer to art."[2] Other artists and thinkers found this phrase to be inspiring and accurate to describe their own attempts to move beyond rigid linguistic and perceptual boundaries. Composer David Dunn, who explores new frontiers of mathematics and synthesis, tries to contribute in his work and writings to what he calls "the longed for dream of an artist and scientist, which has yet to materialize." He includes himself and his work in Thompson's definition of *Wissenskunst* as "the play of knowledge in a world of serious data processors."[3] The word *Wissenskunst,* however, is perhaps most often used in reference to visual art.[4]

It is the consensus that science has been the official and dominant model for observing, understanding and interpreting the world since the Renaissance. This scientific view of the world is essentially dualistic and hierarchical, and is seen as being absolute and containing the "truth" about existence. In the last 400 years, non-scientific ways of recognition or knowledge (artistic, from old traditions or from non-industrialized cultures etc.) have been marginalized, labeled "un-scientific" and devalued. In the second half of the 20th century, there has been a steady increase in many sectors to revise and expand this dualistic and limited scientific conception of the world.[5] Such impulses are also coming from the side of science itself, which is discovering that the complexity of the world (quantum theory, chaos theory) cannot be explained through or contained by the traditional scientific basic assumptions.

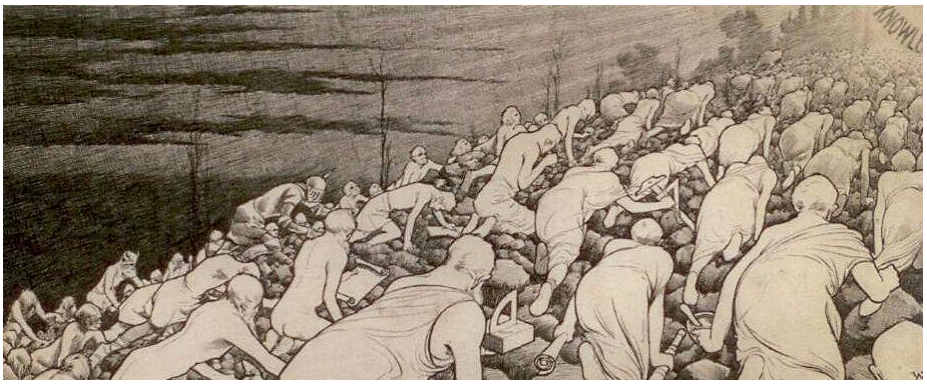
A common pattern in the consideration of these changes in Western society is beginning to emerge. There is a shift in the self-conception of science. There is a modification of the self-concept of humankind. A new understanding of ethics is evolving, and the significance of intuition and emotions is gaining new meaning. The illusion that science is value-free, and that there can be a separation between knowledge and impact, is changing.[6] All these factors have lead to a transformation in the relationship between science and art. This striving for a new

[1] William Irwin Thompson, "The Cultural Phenomenology of Literature", B.W. Powe, ed. Light Onwords/ Light Onwards. Living Literacies: Text of the November 14-16, 2002 Conference at York University. http://www.nald.ca/fulltext/ltonword/part4/thompson/thompson.pdf, p. 2.
[2] William Irwin Thompson, *The Time Falling Bodies Take to Light: Mythology, Sexuality and the Origins of Culture*. New York: St. Martin's Press, p. 4.
[3] David Dunn, "Mappings and Entrainments," http://www.davidddunn.com/~david/writings/mappings.pdf, p. 2. For the German version, "Abbildungen und Einstiege", see the Ars Electronica Festival 1989 catalogue at http://90.146.8.18/de/archives/festival_archive/festival_catalogs/festival_artikel.asp?iProjectID=9034
[4] Susanne Witzgall, *Kunst nach der Wissenschaft: Zeitgenössische Kunst im Diskurs mit den Naturwissenschaften*. Nuremberg: Verlag für moderne Kunst, 2003.
[5] Gertrud Kamper, *Kreativität und Wissenskunst. Versuch eine Entwicklungsrichtung und deren Bedeutung für eine neue Pädagogik*. Frankfurt am Main, Berlin, Bern et al: Peter Lang Europäischer Verlag der Wissenschaften, 2003.
[6] See Jared Diamond, *Kollaps: Warum Gesellschaften überleben oder untergehen*. Frankfurt am Main: S. Fischer Verlag, 2005.

modality to gain insight and to generate knowledge from the side of creative production is incorporated in the discourse on knowledge art/*Wissenskunst*. The upward revaluation of theory in artistic practice and the utilization of scientific methods in art have brought about a dislocation in the view on art.[7] More and more art can be looked upon as *Wissenskunst*, as the researching and explorative portions of art are being examined and determined. As Manfred Wagner once stated, "*Zweifellos steht aber fest, dass die Kunst an sich Wissen vermittelt*." (Definitely it is established, that art in and of itself conveys knowledge.)

What can be called knowledge art, *Wissenskunst*? Here an attempt to identify a few parameters of a possible definition.

Art that thematizes knowledge explicitly is art that selects particular topics concerning or relating to knowledge as the focus of the artistic production.



Winsor McCay, *The Quest for Knowledge*. Drawing on paper, 56 x 23 cm

This image by Winsor McCay (1869-1934) is an editorial cartoon, probably dating from the 1920s, entitled "The Quest for Knowledge." Depicted are human figures from various historical epochs (men clothed in togas, a knight in armor) holding various tools associated with scientific disciplines or the acquisition of knowledge (a geometric triangle, a mortar and pestle, scrolls of paper). The figures crawl on hands and knees over rocky ground towards a shining light where the word "KNOWLEDGE" in capital letters waits for them.

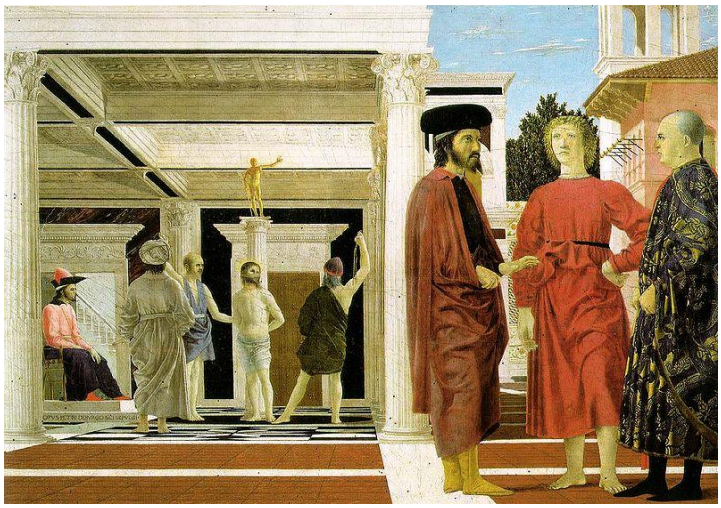
A marble relief from the *Kunsthistorisches Museum* shows a learned man at a lectern studying. The text in the book he is reading states in Latin "Believe only in the One", a reference to the prevailing thought of the time, that the accumulation and distribution of knowledge should serve God. This memorial stone for a scholar from circa 1340 is also a glorification of the intellectual and spiritual person and his environment. Since the 14th century representations of secular and ecclesiastic scholars studying have been a recurrent motif in Western art.[8] Perhaps the most well known example of such a scholar in his cabinet is the painting from circa 1440/42 "St. Hieronymus in his Cabinet" by Jan Van Eyck.

[7] Elke Bippus, "Autorschaft in künstlerischer und wissenschaftlicher Forschung", Corina Caduff, Tan Wälchli, eds. *Autorschaft in den Künsten. Konzepte – Praktiken – Medien*. Jahrbuch der Zürcher Hochschule der Künste, 2007, p. 40.

[8] *VI) Wissen, Verarbeiten, Speichern, Weitergeben: Von der Gelehrtenrepublik zur Wissensgesellschaft*, Gereon Sievernich and Hendrik Budde, eds. Exhibition catalogue of "7 Hügel: Bilder und Zeichen des 21. Jahrhunderts," an exhibition of the *Berliner Festspiele*. Berlin: Henschel, 2000, p. 106.

Gelehrter am Katheder/Scholar at a Lectern (1340c.) Marble, 58,7 x 49 x 7 cm

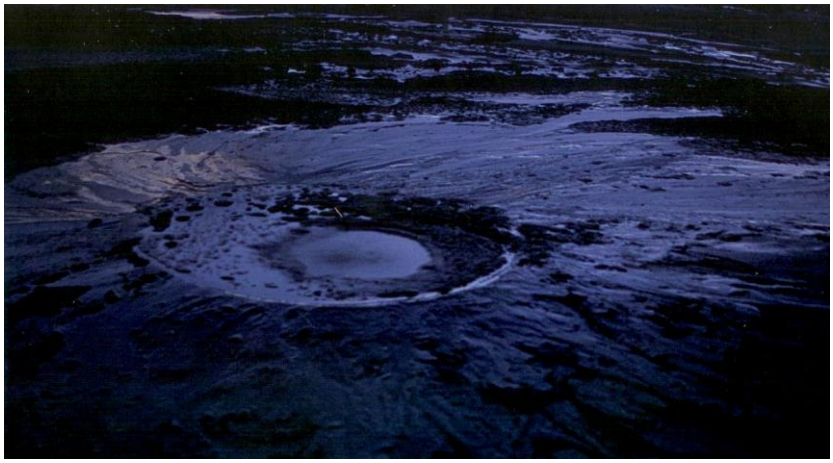
Art that thematizes knowledge implicitly is art that is capable of being understood, though the knowledge, as such, is not overtly revealed or expressed. An excellent example of art where knowledge is implied can be found in painting of the Italian Renaissance concerned with linear and one-point perspective. The depiction of perspective was a burning preoccupation of Renaissance artists, thinkers and architects. The theoretical writings of Alberti, such as the seminal *Della pittura* (On Painting), were highly influential. "The Betrothal of the Virgin" from 1504 by Raphael (to be seen at the Brera in Milan) demonstrates his mastery of perspective, as does Piero della Francesca in his painting "Flagellation of Christ," circa 1454, which is in Urbino.



Piero della Francesca, *Flagellation of Christ* (1454 c.) Oil and tempura on panel, 58 x 81 cm

A contemporary example of implicit knowledge art comes from the Hungarian photographer Gyula Fodor. He tries to capture the unseeable objects of the noosphere with his lens. The noosphere is the "sphere of human thought," an "intelligent cover" around the globe which embraces all intellectual processes. This term was created by Teilhard de Chardin and the biogeochemist Vladimir Vernadsky in the 1920s, and was picked up and repositioned by media theorists like Marshall McLuhan in the era of the World Wide Web.[9] This photograph does not depict an object from outer space, although it awakens such associations.

[9] See Gyula Fodor, *Noosphere*. Vienna: Salomon, 2007.



Gyula Fodor, from the Noosphere series, C-print on aluminum, ed. 6 + 1. 120 x 160 cm, 2006

Art that uses knowledge inherently is art where knowledge is involved in the constitution or essential character of the artistic creation. The Swiss artist Cornelia Hesse-Honegger is a scientific illustrator and considers herself a *Wissenskünstlerin*. Since the accident in the nuclear reactor at Chernobyl in 1986, Hesse-Honegger has been examining and painting damaged, altered and malformed insects from areas throughout the world where atomic reactors are in use. Based upon her observations, she is convinced that the frequency of abnormalities in creatures living in these areas is a direct result of the radioactive waste produced.

Ambush bug *Phymatidae* from Othello, Washington (near Hanford nuclear power plant.) The right foreleg is crippled. Watercolor, Cashmere. Zurich, 1998

Hesse-Honegger believes that "Jede echte Künstlerin ist automatisch auch eine Forscherin". (Every real artist is automatically also a researcher.) She has also an original and concise view on the relationship between art and science:

…so haben wir unsere Welt aufgeteilt: Ihr Künstler dürft phantasievoll sein, kindlich, emotional, wir Wissenschafter hingegen sind rational und logisch, die Erfindungen machen wir. Niemand kommt auf die Idee, dass ein Maler wie Georges Seurat mit seinem Pointillismus die Pixel erfunden hat. Wenn ein Künstler etwas Neues schafft, sprechen wir nie von einer Erfindung. Dabei waren und sind doch die Fragestellungen in der Wissenschaft und in der Kunst die gleichen.[10]

[10] "Die Natur ist ein Messapparat", interview by Christian Kaiser with Cornelia Hesse-Honegger, *EB KURS, Magazin der EB Zürich Kantonale Berufsschule für Weiterbildung*, Nr. 24, Winter 2009/2010, p. 25.

(…this is how we have divided our world: you artists can be full of fantasy, childlike, emotional while we scientists instead are rational and logical. We make the discoveries. The idea occurs to no one that a painter like Georges Seurat discovered the pixel with his Pointillism. When an artist creates something new, we do not speak about a discovery. However, the questions and problems in science and in art have been and are the same.)

An important area of inherent knowledge art/*Wissenskunst* concerns interactive, digital and media art. Sabine Flach has excellently discussed such art that also has a connection to research in life sciences in an article that can be found on netzspannung.org, "Wissensraum für digitale Kunst und Kultur" (Knowledge Space for Digital Art and Culture.)[11] The Austrian artist collective Alien Productions (Andrea Sodomka, Martin Breindl, Norbert Math and collaborators) provide with their 2007 project "Der Gedankenprojektor" (The Thought Projector) an illustrative exemplification of Flach's theoretical considerations.

In Austria, the work of Peter Weibel, Valie Export, Oswald Wiener and others in the latter part of the 20th century are groundbreaking examples of knowledge artists. The significance of their projects and experiments are only now being systematically examined and made public in this light. As a result of the initiation of the Ars Electronica Festival in Linz in 1979, and successively with the Prix Ars Electronica (1987), the Ars Electronica Center and the Future Lab (1996) and the redesigned and relaunched Museum of the Future (2009), Austria has a leading role internationally in fostering and cultivating the discourse on knowledge art. On the academic landscape in Austria, in universities in Salzburg and Linz, among other cities; with the newly implemented master's study for "Art and Science Visualization" at the University for Applied Arts Vienna; and at the Center for Art/Knowledge (CAK) and their upcoming Ph.D. program at the Academy of Fine Arts Vienna, significant impulses are being created that are furthering the international debate and discourse on knowledge art.

This brief outline is a preliminary attempt towards a definition of knowledge art/*Wissenskunst*. The three initial parameters – explicit, implicit and inherent – provide the basis for continuing investigation and serve to promote and facilitate analysis and discussion on the topic of knowledge art/*Wissenskunst*.

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[11] Sabine Flach, *"WissensKünste". Die Kunst des Wissens und das Wissen der Kunst* at http://netzspannung.org/database/254321/de