



## Writing Visual Culture

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### **Preface: Ways of Knowing: Art and Science's Shared Imagination - Perspectives from the Sciences, Humanities and Creative Arts**

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This volume of *Writing Visual Culture* presents selected papers from an interdisciplinary symposium at the University of Hertfordshire hosted by the Fine Art Practices Research Group, in the School of Creative Arts. The conference was convened by myself, and held on October 1-2, 2010. It was an exciting and well-attended event, drawing in members of University of Hertfordshire staff from a variety of disciplines in the arts, humanities and sciences, and also invited external keynote speakers: Tony Longson, Professor of Art, California State University, Los Angeles; Rob Kessler, Professor of Ceramic Art & Design, Central Saint Martins College, University of the Arts, London; Anna Dumitriu, visual and performance artist; and Professor Simon Biggs, research professor at the Edinburgh School of Art.

The conference was initially convened to celebrate the first year of a new set of potential relationships between the arts and sciences, signified by the creation in 2009 of the Faculty of Science, Technology and Creative Arts at UH. While a source of interesting and valuable collaborations and interchanges, the Faculty will now be disarticulated in 2012, as a result of a restructuring plan for the University, based on Schools rather than Faculties. The relationships previously forged will, however, live on. This volume is a testament to the advances in relationships between the disciplines that had been made in that first year.

Most importantly, it is also a memorial to Dr Robert Priddey, a young and eminent astrophysicist particularly keen on bridging the 'gap' between the arts and the sciences, who was instrumental in setting up this conference. Tragically, he died suddenly in 2010 of a brain haemorrhage, before the conference took place. His colleagues and his students – both in the arts and the sciences – have a great sense of loss. This first edition of *Writing Visual Culture* has been designed as a tribute to his enthusiasm and interdisciplinary interests.



The call for papers, reproduced below, was illustrated with a reproduction of a drawing of diatoms by the evolutionary scientist Ernst Haeckel, from his book *Kunstformen der Natur*, (1899), as a way of stressing the historical relationships between artistic and scientific vision. The call itself gives a sense of the deliberately broad-based intention of the conference, to bring together professionals in the arts, humanities and sciences for a pooling of knowledge, understanding and ideas.

### **Ways of Knowing: Call for Papers**

“Imagination will carry us to worlds that never were. But without it we go nowhere.”  
(Sagan1980, 4)

“Scientists animated by the purpose of proving that they are purposeless constitute an interesting subject for study.”  
(Whitehead 1929, 16)

"A universe simple enough to be understood is too simple to produce a mind capable of understanding it."  
(Barrow 1990, 342–343)

“It is my supposition that the Universe is not only queerer than we imagine, is queerer than we can imagine.”  
(Haldane 1927, 286)

This symposium is motivated by the sense of wonder shared by artists and scientists at the complex cosmos we inhabit. It forms part of the celebration of the first anniversary of the Faculty of Science, Technology and Creative Arts and is a step toward what will hopefully be a longer-term interdisciplinary research effort in science and art within the new Faculty. This first meeting is deliberately broad in scope hoping to uncover as much work in science-art within the University as possible.

In 1975 a young artist named Tony Longson worked with the computers in the engineering department at Hatfield Polytechnic to produce what are considered to be important works in the then nascent discipline of computer aided art. In 2010 Tony will return to Hatfield to give a keynote address at this symposium reflecting on thirty-five years of engagement between art and science.

Art and science, at a fundamental level, are creative acts of imagination, invention and discovery. Until the modern period they were construed as complementary aspects of a



continuum of enquiry. In China, the Islamic world and India especially, art, philosophy and science flourished in this syncretic way (Morgan 2008) Despite the splitting of art and science into separate realms in the European enlightenment, cross-fertilisation and mutual fascination has continued to the present day. Examples of this would be the two way relationship of Cubism and relativity: artists had their world view radically altered by the mathematical discoveries of Poincaré, and Einstein's theories of relativity (Miller 2001). Another intertwining is found in the development of perspective in western painting as a way of seeing the world, locating an observer as separate from the observed, which was paralleled in the rise of empirical science (Kemp 2000). In the second half of the twentieth century artists rapidly colonized the new computational sciences, robotics and biotechnologies (see for example *Leonardo/ISAST*). Today a rich field of art-science work exists globally with numerous interdisciplinary courses being created in universities and much effort being put into interpretation and dissemination of scientific knowledge through the arts.

How do art-historical and contemporary artistic perspectives inform our understandings of science? How have the sciences informed, and been informed by music, performance, the visual and media arts? Aesthetic qualities such as symmetry and beauty are sought after in both art and science. What are the interplays between scientific visualisations and the arts? How can the abstract be made concrete? How do the aesthetics of scientific illustration and visualisation affect the public reception and understanding of science? How do political and social understandings affect the direction of science?

There has been much discussion of what theorist and curator Peter Weibel calls a "third culture" (2005) within the art-science community. This third culture is syncretic, in it science recognizes the broader culture and society within which it is embedded and is more connected to the public; there is a much greater understanding between artists and scientists of each others' fields. If art and science are understood as equally necessary and complementary ways of knowing the world, how does this understanding enrich them? What type of knowledge is produced by the numerous art-science collaborations and interdisciplinary art-science courses that have grown up internationally in the last few decades? What has been the main purpose and impact of these, to interpret and disseminate scientific knowledge or something more fundamental?

Further questions would be: do artists engaging with scientists affect the outcome of any science being done? Can art be a contribution to knowledge? Can science contribute to meaning in a way similar to the arts and humanities? What is the nature of discovery and creativity in art and science? Philosophical questions might look at how the value judgments



of the creative arts and the falsifiable statements of science interact when they come together.

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Both science and art are human attempts to understand and describe the world around us. The subjects and methods have different traditions, and the intended audiences are different, but I think the motivations and goals are fundamentally the same. I think one of the most primitive innate needs of humans is to understand the world around us, and then share that understanding. Recommended For You. Why Should Leaders Stop Obsessing About Platforms And Ecosystems? Why Is The Future Of Business About Creating A Shared Value For Everyone? How Can AI Support Small Businesses During The Pandemic?Â Quora: the place to gain and share knowledge, empowering people to learn from others and better understand the world. Print. Reprints & Permissions. Art and science, at a fundamental level, are creative acts of imagination, invention and discovery. Until the modern period they were construed as complementary aspects of a. Simeon Nelson â€”Preface: Ways of Knowingâ€™ 3 Writing Visual Culture 5 (2012). continuum of enquiry.Â If art and science are understood as equally necessary and complementary ways of knowing the world, how does this understanding enrich them? What type of knowledge is produced by the numerous art-science collaborations and interdisciplinary art-science courses that have grown up internationally in the last few decades?Â Can science contribute to meaning in a way similar to the arts and humanities? What is the nature of discovery and creativity in art and science? Every scientist knows this, but for two centuries we have been quiet about the imaginative first step of science, preferring stories that stress the empirical method or the logic of scientific discovery. Science education is full of it, focussing on final results, rather than the journeys toward them. Human stories of wonder, imagination, failed ideas, and glorious moments of illumination thread through the lives of all who actually do science. No wonder my young colleagues became disillusioned.Â As George Steiner wrote in his wonderful account of art and meaning, Real Presences: â€œOnly art can go some way towards making accessible, towards waking into some measure of communicability, the sheer inhuman otherness of matter.â€ Precisely the same could be said of science.