

Dr Robert Christian Pepperell FRSA

University address:

Robert Pepperell
Professor of Fine Art
Fovolab
Cardiff School of Art and Design
Llandaff Campus
Cardiff CF5 2YB, UK

rpepperell@cardiffmet.ac.uk

www.robertpepperell.com

Education:

2009 University of Wales, PhD.

1986-88 Slade School of Art, University College, London.

1983-86 Newport School of Art, 1st class BA(Hons) in Fine Art.

1982-83 Gloucestershire College of Art and Technology, Cheltenham.
Foundation diploma.

Teaching experience:

2009 to date: Professor of Fine Art, Cardiff School of Art and Design.

2006-2009: Head of Fine Art, Cardiff School of Art and Design, University of Wales Institute Cardiff. Responsible for leading BA (Hons) Fine Art department, MA Fine Art tuition and PhD supervision.

2004-2006: Senior Lecturer in Fine Art, School of Art & Performance, University of Plymouth. Responsibilities included leadership of painting and print department. research group co-ordination, undergraduate and postgraduate teaching and PhD/MPhil supervision.

1999-2006: Senior Lecturer, School of Art, Media and Design, University of Wales College, Newport. Responsibilities included MA Fine Art programme leadership, research group co-ordination, undergraduate teaching in Fine Art, Design and MPhil/PhD supervision. Academic management tasks include course writing, validation and marketing.

1988-90: Visiting Lecturer at Leicester Polytechnic, BA Fine Art. 1986-88: Visiting Lecturer at Newport School of Art, BA Fine Art.

Current positions:

Co-Executive Editor of the journal *Art & Perception*

Fellow of the Royal Society of Arts

Member of the Higher Education Academy

Member of the Association for the Scientific Study of Consciousness.

Member of the British Psychological Society

Member of the International Society for Arts, Sciences, and Technology

Member of the Performing Rights Society

Member of the International Association of Experimental Aesthetics

2005-2009 Advisory panel member for Kinetica Museum of Kinetic, Electronic and Experimental Art, London

2000-2008 Associate Editor and web manager of Leonardo Reviews, the International Society for Arts, Sciences, and Technology

Member of Peer Review College for the Arts and Humanities Research Council

Director Fovolab

Books, chapters and peer-reviewed articles:

Ruta, N., Burleigh, A. & Pepperell, R. (in press). Image and imagination: How figure scale in medieval painting reflects visual perception. *Art & Perception*.

Vañó, J., Pepperell, R., Munar, R., Rosselló, J. & Nadal, M. (in press) The role of Curvature in the appreciation of visual artworks, *Art & Perception*.

Ruta, N., Burleigh, A., Barratt, E. & Pepperell, R. (in press). How does image geometry affect attention? Developing a novel gamified version of spatial orienting paradigm, *Perception*.

Smith, C., Burleigh, A., Lambert, N., Pepperell, R., Langford, T. and Veltman, K. (2017). Natural Media Workshop, *Electronic Visualisation and the Arts*, doi.org/10.14236/ewic/EVA2017.90.

Pepperell, R. (2017). Imaging Human Vision: An Artistic Perspective, in *Human Vision and Electronic Imaging 2017*, edited by Bernice E. Rogowitz,

Thrasyvoulos N. Pappas, Huib de Ridder, Proceedings of SPIE-IS&T Electronic Imaging.

Ruta, N., Burleigh, A., Vigars, R., Barratt, E. & Pepperell, R. (2016). Evaluating an artistic method for depicting human visual space, *Applied Vision Association meeting*, London, 19th December 2016.

Ruta, N., Burleigh, A. & Pepperell, R. (2016). Smaller hands, bigger head: a perceptual trend in artistic portraits, *Experimental Psychology Society meeting*, London, 4th – 6th January 2017.

Pepperell, R. (2016). Sargy Mann, Euan Uglow and subjective realism: the revolutionary achievement of modern British painting, in *Sargy Mann/Euan Uglow*, The Collection, Lincoln/Cadogan Contemporary, London.

Pepperell, R. (2016). Where do we see? *Perception*, Vol. 44(51), p. 73.

Pepperell, R. (2016). Always Learning to See: The Art and Thought of Sargy Mann, *Art & Perception*, Volume 4, Issue 4.

Baldwin, J., Burleigh, A., Pepperell, R. & Ruta, N. (2016). The Perceived Size and Shape of Objects in Peripheral Vision, *i-Perception*, July-August 2016 vol. 7 no. 4, DOI: 10.1177/2041669516661900.

Koenderink, J., van Doorn, A., Pinna, B. & Pepperell, R. (2016). Facing the Spectator, *i-Perception*, November-December 2016, pp. 1–29, DOI: 10.1177/2041669516675181

Zhu, Z., Martin, R. R., Pepperell, R. & Burleigh, A. (2016). 3D Modeling and Motion Parallax for Improved Videoconferencing. *Computational Visual Media*, Volume 2, Issue 2, pp. 131-142. DOI: 10.1007/s41095-016-0038-4

Pepperell, R. (2016). Neuroscience and Posthuman Memory, in *Memory in the Twenty-first Century: New Critical Perspectives from the Arts, Humanities and Sciences*, Sebastian Groes (ed.). London: Palgrave Macmillan. pp. 330-33.

Koenderink, J., van Doorn, A., Pinna, B. & Pepperell, R. (2016). Armchair perspective preferences, *Art & Perception*, 4(1-2), pp. 39-56. DOI: 10.1163/22134913-00002044.

Koenderink, J., van Doorn, A., Pinna, B., & Pepperell, R. (2016). On right and wrong drawings, *Art & Perception*, 4(1-2), pp. 1-38. DOI: 10.1163/22134913-00002043.

Pepperell, R. and Hughes, L. (2015). As Seen: Modern British Painting and Visual Experience. *Tate Papers*, Spring 2015.

Vano-Vinuales, J., Pepperell, R., Corradi, G. & Munar, E. (2015). Visual Preference for Curvature and Art Paintings: Some Data, *Perception*, Volume 44, p. 30.

Pepperell, R. (2015). Artworks as Dichotomous Objects: Implications for the scientific study of aesthetic experience. *Frontiers in Human Neuroscience*, <http://dx.doi.org/10.3389/fnhum.2015.00295>.

Pepperell, R. & Ishai, A. (2015). 'Indeterminate Artworks and the Human Brain', *Art, Aesthetics and the Brain*, eds. M. Nadal, J. Houston, L. Agnati, F. Mora and C. J. Cela Conde. Oxford: Oxford University Press, pp. 143-153.

Pepperell, R. (2015). Egocentric perspective: Depicting the body from its own point of view, *Leonardo* 48(5), pp. 424-429.

Pepperell, R. and Burleigh, A. (2014). Improvements in and relating to image making. *International Patent Treaty Cooperation*, WO2014122477 A1.

Baldwin, J, Burleigh, A. and Pepperell, R. (2014). Comparing artistic and geometrical perspective depictions of space in the visual field. *i-Perception*. Vol. 5, pp. 536-547.

Pepperell, R and Haertel, M. (2014). Do artists use linear perspective to depict visual space? in *Perception*, 43(5), pp. 395-416

Green, J. and Pepperell, R. (2013). How can visual experience be depicted? A study of close-up double vision, in *Arts and Humanities in Higher Education*.

Pepperell, R. and Ruschkowski, A. (2013). 'Double Vision as a Pictorial Depth Cue', in *Art & Perception* 1:1.

Manzotti, R. and Pepperell, R. (2013). 'Denying the content-vehicle distinction: a response to 'The New Mind Revisited'', in *AI & Society*, 28:4.

Muth, C., Pepperell, R. and Carbon, C. C. (2013) 'Give me Gestalt! Preference for cubist artworks revealing high detectability of objects', in *Leonardo*, 46:5.

Pepperell, R. (2012). Art and Externalism, *Journal of Consciousness Studies*, Vol. 19, No. 11, Pp. 107-127.

Pepperell, R. (2012). The Perception of Art and the Science of Perception, in *Human Vision and Electronic Imaging XVII*, edited by Bernice E. Rogowitz, Thrasyvoulos N. Pappas, Huib de Ridder, Proc. of SPIE-IS&T Electronic Imaging, SPIE Vol. 8291, 829113.

Manzotti, R. and Pepperell, R. (2012). The New Mind: Thinking beyond the head, *AI & Society*.

- Pepperell, R. (2012) 'Indeterminacy and Realism in Cinema and Art' in *Realism After the European Avant-Garde*, ed. Ohlschlager, C., Perrone Capano and Borso, V., Verlag Transcript: Bielefeld.
- Pepperell, R. (2011) 'Connecting Art and the Brain', *Frontiers in Human Neuroscience*.
- Pepperell, R. (2011) 'Art and Extensionism' in *Situated Aesthetics: Art Beyond the Skin*, (ed. Riccardo Manzotti), Exeter: Imprint Academic.
- Pepperell, R. (2010) 'Art Connections to Literature and Science', in *The Routledge Companion to Art, Literature and Science*. London: Routledge.
- Pepperell, R. (2009). 'The Conscious Act of Looking at a Painting' in *Consciousness Literature and the Arts*, Vol. 10 No. 2.
- Pepperell, R. (2009). 'An Information Sublime', editorial in *Leonardo*, Vol. 42 No. 5.
- Pepperell, R. (2009). 'Art and the fractured unity of consciousness' in *New Realities: Being Syncretic Consciousness Reframed: The Planetary Collegium's IXth International Research Conference Series: Edition Angewandte*. Ascott, R.; Bast, G.; Fiel, W.; Jahrmann, M.; Schnell, R. (eds.). New York, Vienna: Springer.
- Wallraven, C., Kaulard, K., Kürner, C. and Pepperell, R. (2008). In the Eye of the Beholder: The Perception of Indeterminate Art. *Leonardo Vol. 41, No. 2*.
- Wallraven, C., Kaulard, K., Kürner, C., Pepperell, R and Bülthoff, H. (2007). Psychophysics for perception of (in)determinate art. In APGV 2007. New York, NY: ACM Press, pp. 115–122.
- Pepperell, R. (2007). *Art, Perception and Indeterminacy*. Journal of Contemporary Aesthetics, Volume 5.
- Pepperell, R. (2007). *Manifesto del Posthumano*. Dopo l'umano, Kainos 2. Milano: Edizione Punto Rosso.
- Ishai, A., Fairhall, S. & Pepperell, R. (2007) Perception, memory and aesthetics of indeterminate art. *Brain Research Bulletin*, Volume 73, Issues 4-6, pp. 319-324.
- Pepperell, R. (2007). *Posthumanismi manifest*. Vihik: Journal of the Estonian Literary Society. No. 12: 14-24. Tartu: Eesti Kirjanduse Selts.
- Pepperell, R. (2007). Putting Art to the Test. *Dialogue*, Issue 2. Axis Publications.
- Pepperell, R. (2007). Applications for Conscious Systems. *AI & Society*. Volume 21:3.

- Pepperell, R. (2006). Seeing Without Objects: Visual Indeterminacy and Art. *Leonardo*. Vol. 39:5.
- Pepperell, R and Punt, M., (eds) (2006). *Screen Consciousness: Mind, World and Cinema*. Amsterdam/New York: Rodopi.
- Pepperell, R. (2005). Towards a Conscious Art. in Ascott, R. (ed.) (2005) *Engineering Nature: Art and Consciousness in the Post-Biological Era*. Bristol: Intellect Books.
- Pepperell, R. (2005). Consciousness and the Screen. In *Consciousness Literature and the Arts*. Cambridge Scholars Press: Cambridge.
- Pepperell, R. (2005). Visual Indeterminacy. In *Proceedings of Altered States: transformations of perception, place, and performance*. University of Plymouth.
- Pepperell, R. (2005). Posthumans and Extended Experience, *Journal of Evolution and Technology*. (Volume 4, 1).
- Pepperell, R. (2004). *Towards a Self-Aware Art*. Consciousness, Literature and the Arts, (Volume 5, 4).
- Pepperell, R. (2004). The Applications of Self-Aware Systems. *Proceedings of the First International Conference on Usability and Engagability*, Birmingham: University of Central England.
- Pepperell, R. and Punt, M., (2003). *Art at the Boundary of Science and Consciousness*. In: Remote. Ed. Emma Posey. Cardiff: Bloc Press.
- Pepperell, R. (2003). *Towards a Conscious Art*, Technoetic Arts. (Volume 1,2).
- Pepperell, R. (2003). *The Posthuman Condition: Consciousness beyond the brain*. Bristol: Intellect Books.
- Pepperell, R. (2003). *The Posthuman Condition*. 5 Magazine, Exeter: Permanent Gold.
- Pepperell, R. (2002). Computer Aided Creativity: Practical Experience and Theoretical Concerns. Paper delivered and proceedings of *Creativity and Cognition 2002*. New York: ACM Press.
- Pepperell, R. (2000). The Posthuman Conception of Consciousness. In: *Art, Technology and Consciousness: Mind at Large*. ed. Roy Ascott. Bristol: Intellect Books.
- Pepperell, R. and Punt, M. (2000 and 2003). *The Postdigital Membrane: Imagination Technology and Desire*. Bristol: Intellect Books.

Pepperell, R. (1995 and 1997). *The Posthuman Condition*. Oxford: Intellect Books.

Patent publications

Pepperell, R. and Burleigh, A.

Pepperell, R. and Burleigh, A.

Pepperell, R. and Burleigh, A.

Pepperell, R. and Burleigh, A.

Pepperell, R., Burleigh, A. and Ruta, N, (2017)

Pepperell, R. and Burleigh, A. (2013/4) Improvements in and relating to Image Making, PCT/UK Patent Office.

Pepperell, R. and Burleigh, A. (2014). Improvements in and relating to image making. *International Patent Treaty Cooperation*, WO2014122477 A1.

Conference papers, articles, invited talks and peer-reviewed posters:

Ruta, N., Burleigh, A., Vigers, R., Barratt, E. & Pepperell, R. (2016). Evaluating an artistic method for depicting human visual space, Applied Vision Association meeting, London, 19th December 2016.

Ruta, N., Burleigh, A. & Pepperell, R. (2016). Smaller hands, bigger head: a perceptual trend in artistic portraits, Experimental Psychology Society meeting, London, 4th - 6th January 2017.

Pepperell, R. (2016). The art and science of perception, Cardiff Science Society.

Pepperell, R. (2016) The art and thought of Sargy Mann, Visual Science of Art Conference, Barcelona.

(2015) Beyond Veridicalism: Where do we see? European Conference on Visual Perception, Liverpool.

(2015) How British challenged the conventions of linear perspective, Visual Science of Art Conference, Liverpool.

(2013) 'As Seen: Modern British Art and Visual Experience', National Museum Wales.

2013) 'Give me Gestalt! Preference for cubist artworks revealing high detectability of objects' with Muth, C. and Carbon, C. C. ECVP, Bremen.

- (2013) 'The Egocentric Perspective in Art and Science' Aesthetics and Embodiment Conference, Delmenhorst,
- (2013) 'The art and science of perception' European Conference on Visual Perception, Bremen.
- (2012) 'Depicting the Visual Field in Science and Art', *European Conference on Visual Perception*, Alghero, Italy.
- (2012) 'Depicting Visual Perception in Science and Art', *First Visual Science of Art Conference*, Alghero, Italy.
- (2012) 'The art of perception and the perception of art' *International Symposium of Art and Perception*, Institute for Advanced Studies, Paris.
- (2012) 'Rethinking Posthumanism', *Rethinking Humanism*, University of St. Andrews.
- (2012) The Perception of Art and the science of perception, *Human Vision and Electronic Imaging XVII*, SPIE, San Francisco.
- (2011) Art, Neuroscience and Ontology, *Psycho-Ontology Conference*, Jerusalem.
- (2011) Art and Externalism, *Towards a Science of Consciousness*, Stockholm
- (2011) A Vision-Space Model of Perception, (with John Jupe), *Towards a Science of Consciousness*, Stockholm
- (2011) *Kinetica Art Fair*, London
- (2010) *First International Symposium on Illustration*, Cardiff
- (2010) *COGS Research Seminar*, University of Sussex.
- (2010) *Realism and the Avant-Garde*, University of Paderborn, Germany.
- (2010) *Consciousness and Experiential Psychology Annual Conference*, University of Oxford,
- (2010) *The Emergence of the Posthuman Subject*, University of Surrey (2010) *Zoototechnics*, University of Cardiff
- (2010) *Art, perception and indeterminacy*. Towards a Science of Consciousness, Tucson, University of Arizona.
- (2009) Art, indeterminacy and non-duality. Science and Non-Duality
- (2008) Ishai A., Wiesmann M., and Pepperell R. Training Facilitates Object Perception in Cubist Paintings. 17th Annual Meeting of The Israel Society for

Neuroscience, Eilat.

(2008) *Art and the Fractured Unity of Consciousness*. Consciousness Reframed 2008, Vienna.

(2007) *Posthumanism and the challenge of new ideas*. Catalogue text for *Hylozoic Soil* exhibition by Phillip Beesley, *e-art: New Technologies and Contemporary Art*, Montreal Museum of Fine Art, 2007.

(2007) *From the Human to the Posthuman*. Conference of the Science, Technology & Culture Research Group, University of Nottingham.

(2007) *Reflections on Looking at a* Conference of the Consciousness and Experiential Psychology Section of the British Psychological Society, Oxford.

(2007) *Conscious Awareness of Objects in Indeterminate Art* Fairhall, S., Pepperell, R. & Ishai, A. Association for the Scientific Study of Consciousness Annual Conference 11, Las Vegas.

(2007) *Psychophysics for Perception of (In)determinate Art*. Wallraven, C., Kaulard, K., Kürner, C., Pepperell, R and Bülthoff, H.. Applied Perception in Graphics and Visualisation Symposium, Max Planck Institute.

(2007) *In the Eye of the Beholder—Perception of Indeterminate Art*. Wallraven, C., Kaulard, K., Kürner, C., Pepperell, R and Bülthoff, H. International Symposium on Computational Aesthetics in Graphics, Visualization, and Imaging. Canada.

(2007) *The Future of Art*. Kinetica Museum, London.

(2007). *The Conscious Act of Looking at a Painting*. Art and Science Week, University of Exeter.

(2007). *Art and Perception*. School of Psychology, Cardiff University. (2006). *Mind-Machine-Art*. Inaugural lecture, Kinetica Museum, London. (2006). *Object indeterminacy in art compositions*, with Ishia, A. and Fairhall, S. Society for Neuroscience Annual Meeting, Atlanta.

(2006). *An Interdisciplinary Study of Visual Indeterminacy in Painting*, with Ishia, A. and Fairhall, S. European Conference on Visual Perception, St Petersburg, Russia.

(2006). *An Interdisciplinary Study of Visual Indeterminacy*, International Conference, University of Oxford.

(2006). *The Future of Humanity*. Chair of Royal Society of Arts Lecture, London.

(2006). *Seeing and Knowing*. Department of Neuroradiology. University of Zurich.

- (2006). *Visual Indeterminacy and Art*. Max Planck Institute for Biological Cybernetics, Tübingen, Germany.
- (2006). *Art and Perception*. Science in the Dock – Art in the Stocks, National Science Week, Exeter University.
- (2005). *Mind, World and Paradox*. Reconstructing Mind and Body Conference, British Psychological Society, University of Oxford.
- (2005). *The Fullest Possible Use: Applications for Self-Aware Systems*. Wearable Futures Conference, University of Wales.
- (2005). *Visual Indeterminacy and Paradox*. Altered States Conference, University of Plymouth.
- (2005) *Screens, consciousness and paradox*. Delivered to the Consciousness, Literature and the Arts Conference, University of Aberystwyth.
- (2005). *Consciousness and Cinema*. Delivered to Interfacing Theory and Practice, University of Exeter.
- (2004). *The Self-Aware Image in the Wireless Obscura*, New Forms Conference, Vancouver.
- (2004). *Extended Minds and Conscious Artifacts*. Delivered to the Theatres of Science Conference, University of Glamorgan, UK.
- (2004). *The Applications of Self-Aware Systems*. Delivered to the First International Conference on Usability and Engagability, UCE, UK.
- (2004). *Art and Reflexivity*. Delivered to the Society for Literature and Science Conference, Paris.
- (2004). *The Paradoxes of Consciousness*. Delivered to the Society for Literature and Science Conference, Paris.
- (2003). *Interdimensional Images*. Delivered to the Society for Literature and Science Conference, Austin, Texas.
- (2003). *Towards a Theory of Conscious Art*. Delivered to the Towards a Science of Consciousness Conference 2003, Between Phenomenology and Neuroscience, Prague, Czech Republic.
- (2003). *Towards a Theory of Conscious Art*. Delivered to Consciousness Reframed, CAiiA Conference, UWCN.
- (2003). *Towards a Theory of Conscious Art*. Delivered to the Consciousness and Experiential Psychology Section of the British Psychological Society Annual Conference, St. Anne's College, Oxford.

(2002). *Computer Aided Creativity: Practical Experience and Theoretical Concerns*. Delivered to Creativity and Cognition 2002. University of Loughborough.

(2002). *Art at the Boundary of the Science of Consciousness*. Towards a Science of Consciousness, Tucson, USA.

(2001). *At the Interface of Consciousness: The Postdigital Membrane*. in Towards a Science of Consciousness: Consciousness and its Place in Nature, Skövde, Sweden: University of Skövde.

Research degree supervision completions:

Art and Text, Linda Carreiro, 2017 (PhD), Cardiff Metropolitan University

Hybrid Arts, Alise Piebalga, 2106 (PhD), Cardiff Metropolitan University

An Artistic Method to Improve the Perception of Depth in Pictures, Joseph Baldwin, 2015 (PhD), Cardiff Metropolitan University

Cinema and the Extended Mind, Christopher de Selincourt, 2015 (PhD)

Play, Autonomy and the Creative Process, Gina Deininger, April 2013 (PhD) Cardiff Metropolitan University

Scientists, Monsters and Other Allies: Hybrid Becomings, Jan Bennett, February 2013 (PhD) Cardiff Metropolitan University.

An investigation into the fluidity and stability of the 'ScreenPage' in new media with particular reference to OuLiPo-ian techniques. Phillip Ellis, January 2007, (MPhil), University of Plymouth.

Military Themes in the work of Marcel Duchamp, Kieran Lyons, June 2007, (PhD), University of Wales, Newport.

Refiguring the 'spiritual dimension' of cinema in the 'human apparatus'. Martha Blassnigg, July 2007, (PhD), University of Wales, Newport.

Artefacts, technicity and humanisation: Industrial Design and the problem of anoetic technologies. Stephen Thompson, July 2008. (PhD). University of Plymouth.

The Transparent Act: A New Model of Media Art Practice. Brigitta Zics, November 2008 (PhD). University of Wales, Newport.

PhD Examinations:

University of Paris Descartes

University of Southampton

University of Winchester

University of Reading

University of Wales

Selected Peer Review:

Art & Perception

Perception

Leonardo

Oxford University Press Polity Press

Cambridge University Press

Journal of Vision

Scholarly reviews:

- Conference, University of Oxford. Leonardo Vol. 40 No. 1. MIT Press.
(2005). The Psychology of Art and the Evolution of the Conscious Brain by Robert Solso. Leonardo Vol. 38 No. 5. MIT Press.
(2005). Beyond the Limits of Thought by Graham Priest. Leonardo Vol. 38 No. 4. MIT Press
(2005). Essential Sources in the Scientific Study of Consciousness. ed Bernard Baars. Leonardo Vol. 38 No. 1. MIT Press
(2004). Spectral Evidence: The Photography of Trauma by Ulrich Baer. Leonardo Vol. 37 No. 5. MIT Press.
(2004). Philosophizing Art: Selected Essays by Arthur C. Danto. Leonardo Vol. 37 No. 5. MIT Press.
(2004). Seeing/Hearing/Speaking by Takahiko iimura. Technoetic Arts, 2:1.
(2004). Potential Images: Ambiguity and Indeterminacy in Modern Art by Dario Gamboni, Leonardo Vol 37 No. 3. MIT Press.
(2004). Husserl's Phenomenology by Dan Zahavi, Leonardo Vol 36 No. 4. MIT Press.
(2004). Einstein Picasso: Space, Time, and the Beauty that Causes Havoc by Arthur I. Miller and Inner Vision: An Exploration of Art and the Brain by Semir Zeki, Leonardo Vol 37 No. 3. MIT Press.
(2004). Frankenstein: Penetrating the Secrets of Nature by Susan E. Lederer. Leonardo Vol 37 No. 2. MIT Press
(2004). Fantasies of Fetishism: From Decadence to the Post-Human by Amanda Fernbach, Leonardo Vol 36 No. 2. MIT Press.
(2003). Between Phenomenology and Neuroscience. Journal of Consciousness Studies, (Volume 10:11).
(2003). From Energy to Information: Representation in Science and Technology, Art, and Literature by Bruce Clarke and Linda Dalrymple Henderson Leonardo Vol 37 No. 1. MIT Press
(2003). What is it to be Human? What Science can and cannot tell us by Kenan Malik, Leonardo Vol 36 No. 4. MIT Press.
(2003). Body and World by Samuel Todes, Leonardo Vol 36 No. 4. MIT Press

- (2003). Where the Action Is: The Foundations of Embodied Interaction by Paul Dourish, Leonardo Vol 36 No. 3. MIT Press
- (2003). The Metaphysics of Beauty by Nick Zangwill, Leonardo Vol 36 No. 2. MIT Press.
- (2003). Culture in Practice: Selected Essays by Marshall Sahlins, Leonardo Vol 36 No. 1. MIT Press
- (2002). The Body/Body Problem: Selected Essays by Arthur C. Danto, Leonardo Vol 35 No. 4. MIT Press.
- (2002). Art, obsession and possession: Is Freud is still interesting? A review article, Leonardo Vol 35 No. 4. MIT Press.
- (2002). Metaphors of Memory: A history of ideas about the mind by Douwe Draaisma, Leonardo Vol 35 No. 3. MIT Press
- (2002). Music and Memory: An Introduction by Bob Snyder, Leonardo Vol 35 No. 3. MIT Press.
- (2002). I levitate. What's Next... Ed. Aleksandra Kosti, Leonardo Vol 35 No. 2. MIT Press.
- (2002). How to Build a Mind: Toward Machines with Imagination by Igor Aleksander, Leonardo Vol 35 No. 2. MIT Press.
- (2002). Playtime by National Health and Barcode Music by Günter Schroth, Leonardo Vol 35 No. 2. MIT Press.
- (2002). Global Interests: Renaissance Art between East & West by Lisa Jardine and Jerry Brotton, Leonardo Vol 35 No. 1. MIT Press.
- (2002). Robosapiens by Faith D'Aluisio & Peter Menzel, Leonardo Vol 35 No. 1. MIT Press.
- (2002). New Wombs: Electronic Bodies and Architectural Disorders by Maria Luisa Palumbo, Leonardo Vol 35 No. 1. MIT Press
- (2002). The Life of a Style: Beginnings and Endings in the Narrative History of Art by Jonathan Gilmore, Leonardo Vol 35 No. 1. MIT Press.
- (2001). Teleporting an Unknown State by Eduardo Kac, Leonardo Vol 34 No. 2. MIT Press.
- (2000). Africa: Art of a Continent ed. Tom Phillips, Leonardo Vol 33 No. 2. MIT Press.
- (2000). The Alphabet Goddess by Leonard Shlain, Leonardo Vol 33 No. 2. MIT Press.

(Further reviews are published online at Leonardo Reviews and in the Leonardo Electronic Almanac.)

Exhibitions and events:

- (2014) The Mind is the World Looking at Itself, Bonington Gallery, Nottingham.
- (2012) HEX Retrospective, SPACE, London
- (2008) 'I don't know where I am', UWIC Gallery, Cardiff
- (2008) 'BOCS' Canearfon, Wales.
- (2008). 'Perception', Terracina Gallery, Exeter.
- (2007). 'Three Painters', Howard Gardens Gallery, Cardiff
- (2007). 'Arcadia', TactileBosch, Cardiff.
- (2006). 'Paradise: A Turn to the Left', More Front/Tactilebosch, Cardiff.
- (2006). 'Seeing Without Objects', Riverfront Arts Centre, Newport

(2006). 'Endless Forms: Engaging Evolution', Group show. Slusser Gallery, Michigan, USA.

(2006). 'Faith'. Tactile Bosch Gallery, Cardiff.

(2004). 'Antistatic'. Sonarfiles. 10 Years of Digital Art. Exhibition, Sala de Exposiciones Temporales de Fundación Telefónica, Madrid.

(2003). 'Musical Pods' installation at The Luminaries, London.

(2003). 'Escape' Interactive exhibition at Sonar Music Festival, Barcelona, Spain.

(2002). 'Musical Pods' installation, Leipzig, Dusseldorf, and Berlin (Sponsored by the British Council).

(2000-01). 'Natural Phenomena' installation (with Dianne Harris), Nottingham Now Festival 2000 and Goldbourne Church, London

(1999-2000). 'Musical Pods' and 'Cyborg Guides', installations in Millennium Dome, Greenwich

(1999). 'RAMJAM2' and 'Pratyahara', installation at the Nerve Show, ICA, London.

(1998). 'Aquasphere', installation at London Aquarium, with Dianne Harris.

(1997). 'Sonar', installation and performance at Barcelona new music festival. 'RAMJAM', installation at Nottingham Now 1997 Festival.

(1997). 'Coldcut World Tour', multimedia performance in various venues across Europe, North America and Japan.

(1996). 'Generator', installation at Glasgow Gallery of Modern Art.

'Synopticon', installation at 'JAM' exhibition at the Barbican, London.

(1995). 'Eyeball', installation at The Forum, London. Funded by London Arts Board.

(1994). 'Terminal Futures', installation at ICA, London, - interactive computer installation.

(1994). Foster's Ice 'Street Art' campaign, installed in Camden, London.

(1991). 'Binary Engine' - experimental computer animation, London Film Festival and touring programme.

(1990). 'Making the invisible visible', installation at PIXIM with Roy Ascott, Paris.

(1989). 'Aspects of Gaia: digital pathways across the whole earth', with Roy Ascott, installation at Ars Electronica, Linz 1989.

Commercial Work Experience:

(2001 and 2003). Design, writing and production of School of Art, Media and Design prospectus and web site. University of Wales, Newport.

(2000). Produced 'Kids Can Dance' track, video and interactive CD-Rom games for Hexstatic's 'Rewind' audio-visual album (1997). Produced and directed the CD-Rom for Coldcut's 'Let Us Play' album. (1995). Produced various videographics and animations for British Telecom, LWT, BBC and MTV.

(1995). 'Digital Dreamware' produced on CD-Rom and 3DO, published by Virgin. (1994). Produced various videographics for Channel 4, MTV, BBC and LWT. (1994). 'AntiStatic' and 'Headcrash' produced CD-i products, published by Philips Interactive Media.

(1993). 'Global Chaos', produced long-form video published by Imagine.

(1993). 'Digital Love', produced CD-Rom, published by Mindscape. (1993).

'Escape', produced CD-i published by Philips Interactive Media. (1992). 'Top Banana', produced computer game on various formats. (1992). 'Global Chaos' produced a product for the CDTV format.

(1991). Formed Hex multimedia production company with Matt Black, Jon More and Miles Visman; Director and Head of Production. (1989). Formed 'Hardwire' videographics production company. (1988). Formed BUG, a multimedia and DTP partnership.