

# Cubist Ways of Seeing

*Maria Hayes*

*me@mariahayes.info*

John Berger writes that 'The Cubists created a system by which they could reveal visually the interlocking of phenomena'. (Berger, 1965, p.59) It 'created the possibility in art of revealing *processes* instead of static states of being' (Berger, 1965, p.59). This shift of emphasis from single point perspective to multi-perspective explicit realizations of the interactions of interlocking phenomena, was, and remains, revolutionary. In 1965 Berger confidently predicted that 'the next serious innovators' would need to return to Cubism. (Berger, 1965, p.70) The revolutionary nature of the Cubist way of seeing lies in the graphic revelation of human agency.

Man's relationship with the natural observable world altered forever at the beginning of the twentieth century when science proposed that the nature of reality, although complex, was knowable. This proposition transformed our understanding of our world and we now know that reality is both interconnected and multilayered. Even looking at something alters it. Stephen Hawkins writes 'that according to quantum physics, you cannot 'just' observe something.... to make an observation, you must interact with the object you are observing.' (Hawkins and Mlodinow, 2010, p.80)

Berger tells us that it was the Cubists who first proposed that a work of art could be a new object in the world, rather than an 'expression of its subject' (2001, p.91 [1969]). He describes how their methods of structuring an image could 'admit the coexistence of different modes of space and time', could include objects and collage, and how forms could be dislocated if they functioned to reveal movement or change. (Berger, 2001, p.91 [1969]) According to Arthur I. Miller (2001, p.157) the significant thing about Cubist works is how they illuminate a subject's deeper structure. The use of these means to explore a totality of seeing - of being - was unprecedented, as were the concurrent technological developments and scientific discoveries. The beginning of the twentieth

century also reverberated with economic and political upheavals throughout Europe on a scale, and of a type, never before experienced.



Plate 1. *Ma Jolie* Pablo Picasso 1910/11

Oil on canvas 100 x 64.5cm

MOMA collection (no. 176.1945)

The Cubists wanted political revolution to bring about the realization of what had now been proposed - the unity of the world. 'Today we know that the world should be unified' Berger states in 1969 'just as we know that all men should have equal rights.' He goes on to say that:

Insofar as a man denies this or acquiesces in its denial, he denies the unity of his own self. Hence the profound psychological sickness of the imperialist countries, hence the corruption implicit in so much of their learning - when knowledge is used to deny knowledge.

(Berger, 2001, p.76 [1969])

We now know that no one and nothing is separate. We know everything is interconnected. It should follow that how we act is transformed. The Cubists had a moment of optimistic vision, even

without the scientific verification we have today, but the fulfillment of that vision was smashed in the horror of the Great War. Berger identifies this time as the beginning of a 'new kind of suffering ... an inverted suffering'. (Berger, 2001, p.79 [1969]) The new knowledge of interconnectedness had to be repressed and denied for the sake of preserving imperialist structures and economic systems (Berger, 2001, p.79 [1969]). People were encouraged to passively accept ideologies that held them in separation from the world. Berger describes how the people of post-war Europe 'had been forced to devour God, heaven and hell and live for ever with the fragments inside themselves.' (Berger, 2001, p.79 [1969]) This use of false ideological propaganda has the purpose of making a people 'deny and then abandon themselves.' (Berger, 2001, p.76 [1969]) However, accepting and acting on the knowledge that each of us are indivisible from the world, and each other, offers back an agency.

#### Cubism and energy

Berger notes how Cubist sculptor Ossip Zadkine (1890-1967) uses fixed moments, or points of stasis, in his sculptures of figures and then allows all potentialities of movement to unfold from them. (Berger, 1985 [1960]) The fixed points correspond to the structural anatomy of the figure, such as knee joints, elbows and pelvic bones, while the expression of energy emanating from those places is less defined, more in the process of becoming (Berger, 1985, p.117 [1960]). While Jacques Lipchitz (1891-1973) allows a quality of energy to form the core of his work (Berger, 1985, p.115 [1960]). Berger writes that Lipchitz is 'concerned with processes rather than substances' and that 'movement is the very mode of being for his figures' (Berger, 1985, p.116 [1960]). However, Noam Gabo rejected Cubism on the grounds that it broke up reality (Berger, 1985, p.95 [1960]). He complained that although the Cubist's analyzed the world, they did not organize it. Marcel Duchamp (1887 - 1968), in an interview with Katherine Kuh, concurs with Gabo, saying that: In the beginning, the Cubists broke up form without even knowing they were doing it. Probably the compulsion to show multiple sides of an object forced us to break the object up - or even better to project a panorama that unfolded different facets of the same object. ... It was only later we

discovered that we were breaking something; it didn't make a noise when it happened. (Kuh, 1990,



p.88)

Plate 2. Kim Vincs and John McCormick, Dancer Lisa Bolte performs with real-time motion-capture generated single marker trace stereo created using Unity game engine. A single marker (in this case the wrist marker) is used to generate a standing trace of an entire sequence of movement. The image is composited to give a sense of effect, due to the difficulty in recreating the 3D illusion, 2010

Contemporary artists Kim Vincs and John McCormick, working with the problem of how to image movement, found ways to harness a Cubist way of seeing to modern technologies. In 2010, Vincs and McCormick used dancers and motion capture technology to visualize trajectory, velocity and acceleration. They designed 'an interactive dance performance system to touch 'space with kinematics' (Vincs, McCormick 2010, p360). Their system included wide screens to provide life-size stereoscopic projections and a customized projector with polarized lens, plus a 24-camera Motion Analysis optical system. The audience viewed the performance wearing polarized glasses and saw 3D imagery, driven in real time by dancers' motion capture data, projected both behind and in front of the projection plane. The 3D imagery appeared to expand the dimensions of the performance space behind the projection screen, and to come forward off the screen to swirl

around the dancers. They used three approaches to generate the movement trails in real time 3D projection. The first created particle systems that made traces, mapping and amplifying the movements from the motion capture markers worn by the dancers. The second generated a continuous trail from a single marker and the third approach made geometric shapes that expanded and contracted around the dancers. Vincs and McCormick report that the resulting imagery was one of 'influence, in which one's own sense of physical agency radiates outwards and imposes itself on the surrounding space.' (2010, p362) This system allowed for nuances of movement by manipulating the data of the motion capture. The impressive two-dimensional images documenting the project have, by the author's admission, been 'composited to give a sense of the effect, due to the difficulty in recreating the 3D illusion.' (Vincs, McCormick 2010, p363)



Plate 3. *Dance* Maria Hayes 2011  
Ink on paper (by video projection drawing)

## Drawing movement

In my drawing practice I harness technology to the unique qualities of the human sensing system engaged in a Cubist way of seeing. The lines in *Dance* (2011) are pure movement traces, generated by observing and mapping the tracks of a particular point on a body in motion. I use a video projection system that allows me to observe my hand on the subject at all times. The emergent drawn image is revealed simultaneously. Video Projection Drawing (VPD) involves a camera trained on the page, connected to a video mixer, which in turn is connected to a projector. I can either draw live subjects in the projection, or draw into a video mixed into the projected image, or both simultaneously. With the hand and eye continuously on the subject total immersion in a state of 'connected looking' is achieved. (Hayes, M. 2013 PhD, Aberystwyth, Aberystwyth University)



Plate 4. *Skin Deep* Maria Hayes 2009

Drawing in performance with video projection system

Qualities of energy behind continuously unfolding events are obscure. Drawing movement from observation in the video projection allows the artist to reveal what would otherwise remain invisible and indivisible. It redefines embodied responses to enable a sustained connection with the energy

necessary for learning to dance on the page. The lines are generated through direct observation of phenomena and by kinesthetic tracing. In this mode the artist does not break eye contact with the subject, but allows a direct, embodied connection to form between eye and hand. The hand tracing the line on the paper works as closely to the observing eye as possible. There is a sequential hierarchy: the dancer moves, the eye observes, the hand draws - but the connection between all three is unbroken, undisrupted, and to an external observer the action may appear simultaneous. The artist does not refer to the drawing on the page between making marks as she can see the emergent drawing on the screen. Integrity of observation is maintained throughout. Therefore, the drawn image is a direct, interpreted observation that aims to illuminate the subject's deeper structure and the form's interactions with space and time. The drawing reenacts the quality of energy observed in the moving beings. That quality is further observed, reenacted and newly created when the viewer reads the drawing.

Drawing in performance allows the viewer to be part of the generative process, and the resulting drawing is then reactivated, or redrawn, through the viewer's gaze. Still (or stilled) images can bring us into a moment-by-moment consideration of what we are looking at, with time to reflect on the implications of interconnection. A still image, created in time with the observed phenomena, gives us back time to look at a version of that phenomenon. As we look at a still image of movement our eyes roam over and around it continuously, and a form of wayfaring occurs. Tim Ingold writes that the 'wayfarer is continually on the move' and that 'he is his movement' (Ingold, 2010, p.75). The passage through and around an image, gathering and collating information and sensory experience, reforms the image. We don't take it in in a single glance, but rather through a series of sweeps, rounds and journeys. The still image is not still because we are not still. Our eyes never stop moving. Working with a Cubist way of seeing not only engages with the constant motion of our world, but with the constant possibility of motion. 'Rather than ask of a Cubist picture: Is it true? or: Is it sincere?' Berger says 'one should ask: Does it continue?' (Berger, 2001 p.86 [1969]).

Writing on mindfulness, Jon Kabat-Zin observes that feeling connected to something gives a purpose for living. He states that 'meaning and relationship are strands of connectedness. They

weave your life as an individual into a larger tapestry, a larger whole, which you might say, actually gives your life its individuality.' (Kabat-Zin, 2012, p220) I propose that a drawing made in a condition of connected looking requires a Cubist way of seeing and is mindfulness drawing, which connects us to the underlying energies that make the world, at a quantum level.

Initially making a drawing in this way questioned the relevance of the material outcome, that is, the drawing as product. However, a drawing made in this way captures, accumulates and articulates the immaterial process of an energy exchange in material form, and offers a new way to experience and reflect on that experience. The drawings remain as tangible evidence of an immaterial process. It is significant that the drawings work with two traces, the gesture of the subject and the interpretive mark of the observing artist.

## Conclusion

Berger writes that at the beginning of the twentieth century 'the nature of capitalism had changed. Competition still existed, but it was no longer free and open. The era of monopoly had begun' (Berger, 1965 p.60). Today, that era has taken on extreme proportions with almost no effective political or economic alternative or challenge. The current climate of extreme capitalism not only increasingly threatens social and economic structures, but it is hastening the global environmental crisis. We are committed to committing ecocide. Research into formal aesthetic qualities in relation to observable phenomena may seem irrelevant in such a climate. However, developing new ways of seeing remains vital because it serves to raise consciousness. Contemporary artists who harness their opportunities of a plural practice to a Cubist way of seeing are able to re-present deep realities of existence and offer themselves and the viewer an opportunity to raise their consciousness. A Cubist way of seeing requires an in the moment, moment-to-moment response to the constantly evolving interactions of interlocking phenomena and energies. There can be no rehearsal for the presentation or performance. The practice is the interpreted re-presentation of the observed and felt interactive observation.

In 2008 Mel Alexenberg speculates that 'significant developments in future art will occur at the interface between cyberspace and real space where virtual worlds interact with our bodies moving in our physical environments to shape consciousness' (Alexenberg, 2008, p.321) Alexenberg writes this in the context of high-tech systems, where 'emergent self-organizing systems and nanotechnologies will become increasingly "moist" and more closely related to the wetness of organic biocomputers such as the human brain' (Alexenberg, 2003, p.2). However, as many artists, schools, colleges and communities cannot afford to be equipped with the latest developments in moist computer systems, these systems will only be available to an elite. But we do all inhabit a body. Combining observational drawing and a Cubist way of seeing can harness the human sensing and thinking systems to shape consciousness through transformative drawing and looking experiences. Roy Ascott writes that: 'Art education must in its teaching and research put its emphasis on subject before object; process before system; behavior before form; intuition before reason; mind before matter' (Ascott, 2008, p.59). From Cave Art to drawing on touch sensitive screens, the haptic gesture is a primary means of mark-marking: it is the human trace. Maureen Nappi reminds us that 'the constancy of the artistic gesture holds great art historical significance for our praxis and our theory. As we echo our prehistoric beginnings, the constant trajectory of the gesture becomes increasingly linguistically meaningful in our lives, our art and our technology.' (Nappi, 2011, p.12)

Autographic development lies in training the artist how to elicit the personalised gesture. Observational drawing connects reality beyond the body with the embodied experience, and draws on an individual's capacities for empathy, perception and analysis in image making. When observational drawing is performed with a Cubist way of seeing, it enables conscious awareness of our agency in the world, and the drawing re-presents that act of agency to be re-drawn through the viewer's wayfaring. The works continue.



Plate 5. *Dance* Maria Hayes 2011  
Drawing superimposed on still from dance performance *Skin Deep* 2009

## References

Alexenberg, Mel. 2008 *From Awesome Immersion to Holistic Integration in Educating Artists for the Future*, ed. Mel Alexenberg. UK: Intellect.

Ascott, Roy. 2008 *Pixels and Particles: The Path to Syncretism in Educating Artists for the Future*, Edited by Mel Alexenberg. UK: Intellect.

Berger, John. 1969 *The Moment of Cubism*. In: Dyer, Geoff (ed) *John Berger Selected Essays* 2001. London: Bloomsbury. p71-92.

Berger, John. 1985 *Permanent Red* [1960] London: Writers and Readers.

Berger, John. 1980 *The Success and Failure of Picasso*. [1965] London: Writers and Readers.

Bolt, Barbara. 2011 *Heidegger Reframed* London: I.B. Taurus.

Hawking, Stephen & Mlodinow, Leonard. 2010 *The Grand Design*. London: Bantam Press.

Hayes, Maria 2013 *Learning to Dance on the Page* PhD, Aberystwyth University

Ingold, Tim. 2007 *Lines, A Brief History* London: Routledge.

Kabat-Zin, Jon. 2004 (2012) *Full Catastrophe Living* [1991] London: Piatkus.

Kuh, Katherine. 2000 *The Artist's Voice* [1962] NY: Da Capo.

Miller, Arthur I. 2001 *Einstein, Picasso* NY: Perseus.

Nappi, Maureen. 2011 "Drawing with Digits, Painting with Pixels: The Gesture Broadly Stroked Over Fifty Years" accepted by Leonardo to be published in Vol 45, No 5 (October 2012) (1-14) 12.

Shanken, Edward A. 2003 *From Cybernetics to Telematics*, introduction to Roy Ascott, *Telematic Embrace*, ed. Edward A. Shanken, London: U of California P.

Symposium, "Drawing: The Future" Chaired by Professor Stephen Farthing. Rootstein Hopkins Chair of Drawing, University of the Arts London. March 22nd 2006 National Gallery London. UK: PMS, U of the Arts.

Vincs, Kim. & McCormick, John. 2010 "Touching Space: Using Motion Capture and Stereo Projection to Create a "Virtual Haptics" of Dance", Leonardo Vol. 43 No4 MIT Press: 359-366.

## Illustrations

Plate 1. Ma Jolie Pablo Picasso 1910/11 Oil on canvas 100 x 64.5cm MOMA collection (no. 176.1945)

(Photo taken by Maria Hayes at MOMA 19th March 2010)

For more information see: [http://www.moma.org/collection/provenance/provenance\\_object.php?object\\_id=79051](http://www.moma.org/collection/provenance/provenance_object.php?object_id=79051)

Plate 2. Photo by James Lauritz Photography 2010 (reproduced with permission)

Plate 3. *Dance* Maria Hayes 2011 ink on paper (by video projection drawing) Author's image.

Plate 4. Photo by Brian Tarr 2009 (reproduced with permission) from performance of *Skin Deep* 2009, Riverfront Arts Centre, Newport.

Plate 5. Photoshop image by author 2011