RAI2018: Art, Materiality and Representation - Communicating and Thinking Through Drawing

Picasso once said at an exhibition of children's drawings that;

"When I was the age of these children I could draw like Raphael; it took me many years to draw like these children". (Read, 1956; McMahon; 2002; Chamberlain, Riley, et al., 2010)

This comment captured changing views in Europe during the early 20th century when the usefulness of drawing as a method of accurately rendering the world on a flat surface gave way to an emerging modernist perspective. (Speed, 1913; Chamberlain, Riley, et al., 2010) (Chamberlain, Riley, et al., 2010) During this change, drawing as a useful arts based activity, familiar to the 'plastic arts,' the academy style, publicly and academically become less clear and increasingly misunderstood by recent generations concerned with abstract and symbolic meaning. (Hyman, H. 2015) The later emergence of postmodernism and digital has rendered the activity less useful again, particularly in the graphic arts due to the rapid adoption of CAD and the computer mouse. (Zaher, M. 2018) Increasingly we see designers occupying their attention less and less with paper, pencil and pen, potentially rendering the act of drawing as a solitary, niche, pastoral activity that 'only some people can do", or less useful nor necessary for achieving acclaim within changing modernist academic, educational and social trends.

Throughout history we have found ways of communicating, thoughts, beliefs, ideas, values using the common materials of the earth. Why we might ask, should our time be wasted drawing, or copying nature, when this has already been accomplished many thousands of times before? What can drawing hope to achieve between the generations outside of stylistic trends in regard to representation vs realism? Does appropriating such techniques mean we have nothing to say by doing so, that illustration is no more than storytelling or more aligned to the commercial arts? (Ross, F, 2014) Is there something significant, missing from the modernist approach? Are we at risk of teaching a confused abstract language which skimps too readily something very useful due to a persistent misunderstanding of drawings potential within the academic arts? Or should we try to reconsider drawing as a form of intellectual play, a method of gathering data or a mode for expressing new ideas that might help children create and understand complex narratives/concepts, particularly within an educational context, a tool for learning across the curriculum; or a new wave of practical and theoretical modal thinking outside of contemporary arts training? New online communities and virtual learning spaces seem to indicate this is happening, challenging concerns of educational and cultural silos, automation and a knowledge economy. While numeracy and literacy are key toward developing our capacity to understand, communicate and participate in the world, policy making continues to frustrate much of the academic discourse as to the usefulness of drawing especially, as an appropriate method for transmitting knowledge, interpreting and seeing the world accurately and the resulting academic confidence and improvement that might occur of such a meaningful 'sense making' activity. (Anning, A. Ring, K. 2004; Papandreou, M. 2013)

Some students, despite being at art school, cannot draw very well and would like to be able to draw well and that in particular, practical problems arose for students who practiced very competently in their particular medium, but could not draw. (Chamberlain, Riley, et al., 2010) Simultaneously an emergence of digital art made possible by the ubiquitous advancement of powerful computing and screen based drawing technology has greatly accelerated a shared view within the commercial creative industries as to the usefulness of formal line drawing (disegno) technique and a new creative wave of which the author has become drawn toward and what has become an

inspiration not only for this paper but a general academic view in the potential power of drawing to unlock creative potential and intellectual enquiry.

The professional artist's community 'The Monster Project' (themonsterproject.org, 2016) has shared a common goal to help children to recognise the power of their own imaginations by reimagining children's drawings at the hand of a professional artist. The outcome is then presented back to the child in order to introduce drawing techniques within the child's original idea. The organizations belief is that a decreasing emphasis on arts in schools is having a detrimental impact on children's creative exploration, (themonsterproject.org, 2016) a sentiment expressed in the 2011 Ofsted report entitled, 'Making a Mark: Art, Craft and Design' which noted the following, ''Children's ability to appreciate and interpret what they observe, communicate what they think and feel, or make what they imagine and invent, is influenced by the quality of their art, craft and design education" and that ""Drawing can no longer remain a concern without a cause". (Ofsted, 2012) This is not only specific to the state of modern arts education but a misunderstanding as to the usefulness of design sketching as a critical problem solving discipline within the broader curriculum.

Drawing action can be associated as a distinct problem solving exercise considered against the context of a students, broader learning activities, everyday lives and experiences. Children typically see the world in a very uninhibited way, unburdened by more complex issues which can dull the creative senses. They will typically delight in the tactile nature of media, the way in which things have colour, sound, form and taste. Conversely an adept illustrator or designer might be practically constrained by design purpose and aesthetic. Drawing requires an ability to reach out externally into a domain related to direct experiences, critical to how a child might begin to understand the world. However we also live in an increasingly mediated culture where digital techniques provide possibilities which while aesthetically real, are less referent in nature endorsing form over content, the ephemeral and superficial over permanence and depth. (Darley, A) Drawing in digital media presents unique opportunities which might consider the way in which children of a certain age might begin 'designing' or drawing in a 'designerly way' and in connection with not only this digital media culture but how our changing world functions in different ways. A child's drawing can stand for something else outside of immediate experience which they may actually wish into being. This is achieved by their looking and closely observing certain media forms. However it might be useful to look at drawing activity in other ways for example in children's play, not as a separate activity but an everyday occurrence in the context of learning, making and doing which reflects the context of their lives and interests. It is in this way that communities of drawing and culture might occur that are distinct to children's immediate experience. For older students, drawing can be incorporated into learning in many ways, including visual mapping, cartography, grouping information, reflective thinking, organising and presenting information transcending language barriers, (globalisation) branding, visual communication and storytelling. The imagined concept however is useful, drawing attention to the powerful way in which the young mind is less burdened by design orthodoxy. More formal learning experience has to accommodate a capacity to give children a deeper understanding facilitated by less siloed expert knowledge which encourages an interdisciplinary approach of so called 'hard' and 'soft' subject areas. (Russell Group, 2017) The immediate urgency to do this is also reflected by the fact that communities of drawing are increasingly moving online, are digital and away from the traditional spaces of art and design schools where 'learning to draw' is no longer considered critical to success, or "drawing would be an absolute necessity for modern life even if there were no art to it." (Maynard, 2005; Chamberlain, Riley, et al., 2010)

Conflicting philosophies about the practical nature of drawing as a sociocultural activity, or recognise the purpose and ways in which children do it or its potential function as a learning and teaching tool continue to expand the debate about drawings usefulness. For example Betty Edwards' popular bestselling book, Drawing on the Right Side of the Brain

posits that drawing depends on perceptual skill that can be learned most easily by making a cognitive shift, from a verbal declarative mode to a visual spatial mode, or a new way of looking, distinct from everyday vision. Or Ruskin's 'innocent eye theories' that contend that we can see beyond, or under, our accumulated experience to achieve a pure vision (Fava, M. 2014) and more recently John Tchalenko's proposition that the execution of drawing is founded not on visual memory but on encoding of visual information into a motor plan for the hand. (Brew, A, C. 2015) A great deal more has and is being researched about the broader educational potential of drawing, as an essential and very human physical skill. This also contrasts with the relationship of accurate drawing ability and dyslexia and the exceptionally detailed and structural drawing cityscapes of artistic savants such as Stephen Wiltshire who appear to benefit from a heightened 'locally oriented' processing skill typically associated with ASD and an ability to see the 'wood for the trees' or by a bias toward visual processing that focused on local, concept-independent features of images. (Chamberlain, Riley, et al., 2010) There remain unanswered questions as to how general drawing practice by various techniques might develop an appropriate expert approach in given contexts and a complimentary usefulness of the activity in respect of STEM classrooms and advancing academic achievement.

Drawing skill is typically related to the efficiency of the person drawing and their ability to encode object structure and proportion in the mind as observed 'tasks' which rates the angular accuracy of geometric shape demonstrable by a person's degree of drawing experience. (Chamberlain, R. Riley, H. Mcmanus, I. Rankin, Q. 2014) The mass of academic interest has identified such methods of recording as a way of better understanding the differences between biological species, anthropomorphic measures and geometric, morphometric analysis and likeness in portraiture. Much of this is also made subjective by the need to deliberately skew or enhance a drawings likeness. Debate is also concerned about a spontaneous or habitual opportunity of drawing as a common place learning activity for example drawing on the back of an envelope when resources might be limited. (Chamberlain, R. Riley, H. Mcmanus, I. Rankin, Q. 2014)

Drawing is also an unpredictable process. What can the sketching process offer? Clearly there is a link between the idea, a moment of thought, the mental image and the sketch. The 'Experimental Method' asks not what the sketching process can offer but what limitations does the mental process present that requires sketching? Sketching is needed if the operation cannot be done through mental imaging alone or made easier by externalisation. (Chamberlain, R. Riley, H. Mcmanus, I. Rankin, Q. 2014) In early years drawing education we might need to know what is taking part and how ideas might be externalised and played with by simply 'combining' primitive shapes in a comprehensible capacity. At a higher level of cognitive function, existing beyond copying, reorganisation of more complex ideas may need to emerge in order to render onto a plane surface. A student may need to solve a complex design problem by 'restructuring,' imposing different loads on mental imaging tasks. Evidence from Verstijnen and Hennessey (1998) and others, suggest that distinctions of combining and restructuring vertically and longitudinally when recalling a mental image in the mind, throws new light on the power of sketching which are beyond our capabilities of mental imaging. (Verstijnen, I. Hennessey; J. M. et al., 2009) Combining concepts is easily achieved by the novice but a restructuring process of visual concepts can only be achieved by a process of mental imaging and enhanced sketching. When our short term memory is faced with this dilemma it cannot cope and, so the argument goes, we need to externalise some of this. "This mental imaging is done within what has been called the visuo-spatial sketch pad, a facility of cognition within the short term memory." (Hare, R. 2008) Varying outcomes might be considered, appropriate, definitions withstanding, against the expert, the non-expert and child and the manner in which sketching might take place within formal and informal settings. How does working memory, or the 'visio-spatial' sketchpad, the temporal storage and manipulation of visio-spatial material compare to the sketched concept?

Drawing can have a visual language, like writing which has its own vocabulary and a grammar which can be shared between guided hand and student. In the fine arts this typically expresses views about the way we live life and how we feel about all aspects of life. However writing, the basic function of symbolic ideas is simply about transference of knowledge. Conversely drawing is the development of a more complex 'skills' oriented thinking process informed by knowledge or an example of mental recall and physical performance. One might argue that in order to sufficiently render a thing whether imagined or observed we need to know how to do so in order to afford all the skills at our disposal to make this possible. Is drawing then an activity special to just some people? Clearly we are pre-equipped biologically to draw even the simplest concepts and our brains are equally equipped to handle narrative structures familiar to a drawing. Evidence suggests that unlike recording by using a computer, physically writing and drawing remains more permanently located in the mind. (Vincent, J. Haddon, L. 2018) One assumes that the activity, doing the task and environment are important to neuroplasticity and our evolved biology. Could very young children begin to draw by first recording narrative and culture familiar to their immediate environment and through simple symbolic and primitive shape, imbue them with further meaning? With a guiding hand, could this move to a more complex system which observes and interrogates the natural world through a process of combining and restructuring, heightening the potential for generative opportunity? Ingold states *"that every human being is a centre of awareness and agency in a field of practice",* and continues, *"Skills, I suggest, are best understood as properties of this kind. It is through a process of enskilment, not enculturation, that every generation grows into - and beyond - the wisdom of its predecessors. This leads me to conclude that in the growth of human knowledge, the contribution that each generation makes to the next is not an accumulated stock of representations but an education of attention".* (Ingold, T. 1997) Drawing is reflective in nature, we attend to it by making a mark, lightly, then refine, responding to a series of mistakes. This characterises a mind-set of self-learning and an opportunity for innovation to occur, unique to each person and their generation, a process parallel to the most powerful aspects of teaching and learning.

At the World Economic Forum in 2018 experts expressed the need for "a skills revolution" which might open up a raft of new opportunities. "If we do not change the way we teach, 30 years from now, we're going to be in trouble." "The knowledge-based approach of 200 years ago, would fail our kids, who would never be able to compete with machines. Children should be taught "soft skills" like independent thinking, values and teamwork. (Ma, J. 2018) The growth of Artificial Intelligence and robotics will likely make many semi-skilled and repetitive jobs obsolete. While STEM rightly dominates within education, there could and should be an equally weighted debate around a natural capacity to be expressive, curious and creative. Ken Robinson states, "The problem with current processes of educational reform is that we are trying to tackle the future by doing what we did in the past and we are alienating millions of kids in the process". (Robinson, K. 2012) Such debate may also be centred around the role of computer technology in contemporary aesthetic practice and the development of synthetic ideas in the mass cultural system of the late 20th and early 21st century. (Baudrillard, J. 1996; Darley, A. 2000) The computer has become a replacement for sketching, a subject difficult to rationalise and champion in modern curricula where IT and CAD are easier to promote and understand. Creative and critical thinking, the ability to value beyond what might be conceived in the mind alone by drawing and advances in technology must work together in order to both emulate and sustain forms of practice which respect traditional art making methods. The digital world continues to define how we learn, democratising creative practice in less conventional ways. The various interpretations and general observation of continued theories into drawing made above have sought to engender a view that learning to draw does not obviate but enhance technology and an ability to design and understand the world. It is not an alternate practice missing from a whole system of the transfer and development of new knowledge but a process of enskillment

that gives shape to an idea in the mind, important whether applied by the child or the practised hand, regardless of environment, technology, skill or outcome. While there is continuing useful scientific debate in respect of cognition and drawing skill, like any discipline it requires guidance, an opportunity to begin by applying simple technique, like copying or learning mnemonic scales in music, accurately representing proportion and geometry, the association and combination of simple ideas which might finally give way to restructured complexity, representation and narrative. However this can only occur so long as the discipline is championed by a single coordinated voice by not only the arts, humanities and creative industries but by an interdisciplinary view that might drive our innate ability to “look at the object”, to dissect it in the mind’s eye and put it together again” (Ruskin, J. 1857; Berger, 2005; Chamberlain, R. et al., 2010) a skill critical toward innovation, research and meeting our full potential.

References

Anning, A. and Ring, K. 2004. Making sense of children's drawings, Maidenhead, UK: Open University Press. & Google Scholar.

Berger, J. (2005). Berger on drawing (Edited by Jim Savage). Aghabullogue, County Cork: Occasional Press.

Brew, A, C. (2015) Learning to draw: an active perceptual approach to observational drawing synchronising the eye and hand in time and space. University of Arts London.

Chamberlain, R. Riley, H. Mcmanus, I. Rankin, Q. (2014) Cain's House Task Revisited and Revived: Extending Theory and Methodology for Quantifying Drawing Accuracy. Psychology of Aesthetics and the Arts.

Chamberlain, R; Loo, P; Riley; H, Rankin; Brunswick, N. (2010) Art Students Who Cannot Draw: Exploring the Relations Between Drawing Ability, Visual Memory, Accuracy of Copying, and Dyslexia. Psychology of Aesthetics, Creativity, and the Arts.

Darley, A. (2000) Visual Digital Culture. Surface Play and Spectacle in New Media Genres. (2nd Ed.) Routledge, London and New York.

Fava, M. (2014) Understanding Drawing: a cognitive account of observational process. Loughborough University.

Hare, R. (2008) Drawing Knowledge. The act of sketching in learning and teaching the design of environments: a total skill for complex expression: Richard Hare.

Hyman, H. (2005) Realism and Relativism in the Theory of Art. Oxford University Press, Oxford.

Ingold, T. (2009) From the Transmission of Representation to the education of Attention. University of Manchester.

Ma, J. (2018) Jack Ma on the IQ of love - and other top quotes from his Davos interview. www.weforum.org

Ofsted. (2012) Making a mark: art, craft and design education. Gov.UK.

Papandreou, M (2013) Communicating and Thinking Through Drawing Activity in Early Childhood. Journal of Research in Childhood Education. Taylor Francis Online.

Read, H. (1956) Picasso at 75. The Times, October 27th, 7.

Robinson, K. (2012) Ed Tech Now. edtechhnow.net

Ross, F. (2014) Why Realism? Connecticut Society of Portrait Artists.

Russell Group. (2017. 6th Ed) Informed Choices. www.russellgroup.ac.uk

Speed, H. (1913). The practice and science of drawing. London: Seeley, Service & Co.

The Monster Project. (2016) www.themonsterproject.org

Verstijnen, I. Hennessey; J. M. et al., (2008) Sketching and creative discovery. Design Studies 19(4):519-546

Vincent, J. Haddon, L. (2018) Smartphone Cultures. Routledge, Oxon.

Zaher, M. (2018) The Impact Of Digital Technology On Art And Artists. Midan Masr.