

of accuracy, as exercising his right to personalize a naval record. So today in the absence of both an exotic and a culturally shared sense of a new frontier, recorders are consigned to work somewhere between the prosaic and their own imaginations. At one end of the scale is our instinct to record with photography our friends and families eating and playing, and at the other, our imaginations searching out new ways of making records and new things to record.

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10

DRAWING: TOWARDS AN INTELLIGENCE OF SEEING

Howard Riley

This chapter explores the notion of a pedagogy of drawing, and the alternative philosophical bases on which it might be built, in art schools today. A matrix is offered that charts functions of drawing, enabling users to put sense into drawings and to make sense out of drawings through a process of intelligent seeing. The chapter is primarily aimed at those who seek to teach drawing but it is equally provocative for those who seek to learn drawing. Using examples of recent studio practice the chapter offers reflection on student drawings, suggesting they reveal elements of an intelligence of seeing. It begins by sidestepping a contentious issue concerning definitions.

Concept and percept

The ethos of a drawing pedagogy for our times elaborated here is derived from the Hegelian concept of art: Hegel's elaboration of a normative philosophy of art provides an opportunity for avoiding the difficulties in defining art *per se*, by exploiting the notion of a *determination*. The difference between a definition and a determination is explained by Stephen Bungay:

A determination is not a definition because a definition excludes possible examples delimiting the object at the outset. A determination is a theory, a framework of universal explanation, which then must demonstrate its own explanatory power through its differences and its instantiation.¹

Within such a framework of universal explanation, Hegel identifies a place for art: halfway between intellectual understanding and sensual experience. For Hegel, the distinguishing feature of art is the 'sensual presentation of the Idea'.² This is here construed in practical terms as a balance between *conceptual intrigue*; the degree to which a work can afford viewers fresh mental insights on the theme or concept to which it alludes, and *perceptual intrigue*; the degree

to which the manipulation of the material qualities of the work might stimulate perceptual experiences which cause the viewer's gaze to linger, and perceptual complacencies to be challenged. The degree of balance between conceptual intrigue and perceptual intrigue is here advanced as a useful criterion with which to assess qualities of drawing (as process) and drawings (as outputs).

Studio tutors who understand and contribute to the development and application of theories of perception and communication through their own practice, be it writing or drawing, are best placed to devise, and encourage students to develop, drawing projects specifically designed to address the balance between *conceptual intrigue* and *perceptual intrigue*. Anyone involved in today's art schools needs to recognise an expanding paradigm of contemporary theoretical bases from which to synthesise and analyse artwork – Wolfgang Iser's³ recent book identifies no less than twelve. More than ever before, a burgeoning research culture demands of drawing tutors a much higher degree of articulacy in theoretical issues, as well as a fluency in the much more complex mix of materials, media and methods deployed in contemporary drawing practice, and visual arts practice in general. These days, in order to facilitate in students an *intelligence of seeing*,⁴ tutors need an awareness and understanding of the alternative philosophical bases from which a pedagogy of drawing may be formed.

Underlying the history of change in the organisation of art education there is a history of change in the pedagogical methods adopted by teachers of drawing. The two histories may appear dissimilar, since the former is driven by the perceived educational needs of a social formation, the latter by a series of competing philosophical positions defined by ontological and epistemological parameters. Since the two are rarely explicitly discussed in art schools, few teachers of drawing are fully conversant with both. However, it is suggested here that there is a connection between the two histories, which is important for drawing tutors, since any philosophical attitude toward the teaching of drawing is constructed in response to an educational need, and the social nature of that educational need conditions philosophical attitude. A dialectical relationship is evident between the two.

Alternative philosophical bases for the teaching of drawing

Four broad philosophical bases, from which a variety of pedagogical methods may be derived, are identified in Figure 1, and discussed in terms of their relationships to the social contexts in which they flourish(ed).

1. Rationalist: Analytical objectivity

'Objective drawing' may be discussed in terms of an ontological position common to two philosophical bases: those of rationalism and empiricism, which share the belief that reality is a given absolute to be revealed either by reasoning or by empirical observation. Objective drawing is the term most often applied to drawings based on the Renaissance development of Euclidean geometry and the codification of artificial perspective. Such an ego-centric construction of geometry may be seen as the visual expression of social attitudes of that time, when the notion of the individual and their central position in the world was significant. An emphasis upon *distance-values* may be discerned. The notion of 'accuracy' when applied to drawing which assumes the drawer's single eye at a fixed viewing point, is bound up with

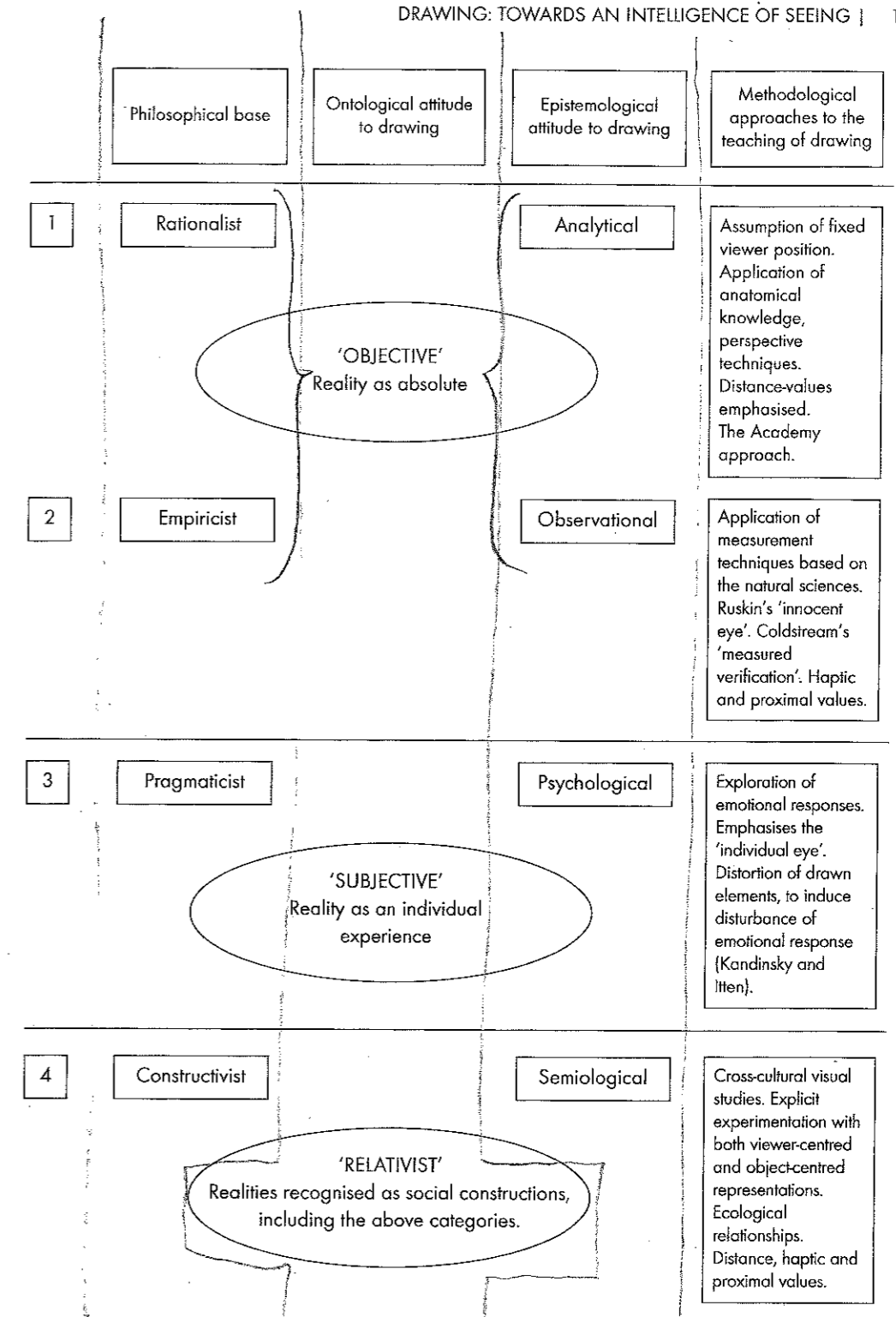


Figure 1: An illustration of the correlations between the four philosophical bases, their ontological and epistemological parameters, and key methodological approaches to the teaching of drawing.

rationalist criteria of mathematical measurability and linear geometry. William Coldstream's teaching at the Euston Road School epitomises this attitude.

Ironically, 'objective drawing' ~~has come to refer~~^{actually} to drawings which are *viewer-centred*, a term derived from the investigations of David Marr⁵ into the recognition and representation of the spatial orientation of objects. In Marr's terms, *object-centred* drawings do not take into account any specific viewing position. Although outside the scope of this discussion, it is interesting to note that John Willats⁶⁻⁷ has explained how young children make object-centred drawings, and progress to making viewer-centred drawings.

2. Empiricist: Observational objectivity

In the eighteenth century period known as the Enlightenment, a growing confidence in the abilities of individuals to achieve knowledge of the world through empirical, scientific techniques became evident. Such an attitude of confidence in the scientific method was later adopted by John Ruskin⁸ in his teaching based on the concept of 'the innocence of the eye' and vision as 'patches of different colours variously shaded' to be simply recorded on the drawing surface in a one-to-one correlation. Thus, 'accuracy' was deemed to be measured by the degree of correlation between what was thought to be the retinal image, and what was drawn, with an emphasis upon recording the *proximal* and *haptic* values displayed in the scene. Betty Edwards⁹ theorised this position on the basis of neuro-biological research into the functions of the brain's hemispheres. Her work was inspired by earlier research, e.g. that of Roger Sperry.¹⁰⁻¹¹ The materials-based visual studies undertaken on the Bauhaus preliminary course under Lazlo Moholy-Nagy and Josef Albers may be broadly classified under this empiricist, observational objectivity heading.

3. Pragmatist: Subjective expressionism

The advent of mass-democratisation and mass-industrialisation in the late eighteenth and early nineteenth centuries may be cited as factors in the development of a European Modernist aesthetic. One consequence of this, during the later nineteenth and early twentieth centuries, was a burgeoning consciousness of the dialectical relationship between the masses and the individual. Faced with such overwhelming mass-social forces, the psychological need for people to maintain and express an individual identity became crucial.

Challenges to academic analytical objectivity gave rise to more pragmatic approaches to art production, based on the notion of the subjectivity of the individual eye. Reasoning, according to pragmatist philosophers such as William James,¹² is dominated by personal and emotional factors. Reality, already challenged as a given absolute, was construed more as an individual subjective experience, to be expressed through non-objective, non-academic means. Drawing that explored individual emotional expression was undertaken outside recognised academia, often through the artists' *atelier* network, where private students would study under artists whose individuality was recognised. Distortion in drawn visual elements was deemed to express a disturbance of emotions. This belief applied to both figurative distortions, as in the examples of the German Expressionist groups *Die Brücke* and *Der Blaue Reiter*, and to non-figurative, abstract work, in which the painting itself became subject-matter in its own right.

Many approaches to the teaching of drawing in the twentieth century may be understood as amalgams of the empiricist and pragmatist philosophical bases. For example, the basic courses developed by Richard Hamilton, Victor Pasmore, Tom Hudson and Harry Thubron in the 1950s which were to influence pre-diploma and foundation courses in British art college for so long, (and acknowledged by them as being influenced by Itten, Moholy-Nagy and Paul Klee) may be understood as a combination of empiricist observational objectivity and pragmatist subjective expressionism.

The reason for the longevity of these viewpoints, and the courses founded upon them, is that they appeared to resolve a pedagogical divide between fine art and design that had perturbed visual education in Western Europe since Renaissance times. Only now, in the midst of another social revolution colloquially termed the digital revolution, do such courses seem inadequate.

4. Constructivist: Relative constructivism

There is a fourth philosophical base to consider. The constructivist believes that to understand the world one must interpret it. The development of structuralism in the first two decades of the twentieth century, and the post-structuralist responses of the 1960s and 1970s have enabled the application of constructivist insights to a wide range of human communication activities including drawing.

A relativist ontological position may be aligned with an epistemology based on a semiological negotiation of meaning so as to justify a pedagogical methodology which addresses cross-cultural drawing practices. This methodology, through recognising the previous three, allows students to be increasingly conscious of their own and others' social formations, and to be aware of how their drawing practice affects and is affected by their habits of perception and their conventions of visual representation. A constructivist basis is therefore considered the one with most potential from which to construct a pedagogy of drawing for the twenty first century.

Criteria for judging the quality of research within a constructionist paradigm have been proposed by Egon Guba and Yvonna Lincoln.¹³ These criteria provide important pointers for those seeking to develop models of drawing education including drawing research, and are described as the five *criteria of authenticity* which possess a number of distinguishing characteristics: first, *fairness*, that is, a demonstrable openness between researcher and subjects (in this case, between tutor and students); second, *ontological authenticity*, or an indication of expansion in the range of the students' personal ontological constructions; third, *educative authenticity*, or an indication of the students' improved understanding of the ontological constructions of others; fourth, *catalytic authenticity*, an indication of the degree to which the students have been stimulated to action; and last, *tactical authenticity*, an indicator of how the students have been empowered to act beyond the confines of the research parameters.

The identification and clarification of the four philosophical bases to the teaching and practice of drawing, and the clarification of a set of criteria with which to assess the quality of research into the practice and teaching of drawing, affords a further crucial step towards a new pedagogy of drawing which this chapter now goes on to discuss. That is, the social functions

of drawing and the construction of a theoretical model which maps the whole domain of drawing as a matrix relating social functions to compositional choices.

The social functions of drawing

The process of communication may be understood through three main functions, operating simultaneously. First, to convey some aspect of our experience of the world; second, to express our attitude or mood regarding our experience, and also to position the receiver in terms of mood and attitude; third, to structure these two into a coherent, perceptible form. The first two functions are here labelled the *Experiential* and the *Interpersonal*. The third may be termed the *Compositional* function.

The socio-linguist Michael Halliday¹⁴ first provided a model which identified the range of available choices – what Halliday termed a *system* – from which specific selections may be related to the functions of language in specific social contexts.

Michael O’Toole¹⁵ has demonstrated the power of Halliday’s insights when they are applied to the analysis of painting. He offered a systemic-functional semiotic model of painting in which he substituted the labels *Representational*, *Modal*, and *Compositional* for Halliday’s original terms *Ideational*, *Interpersonal*, and *Textual* describing the three functions of language. Subsequently, O’Toole¹⁶ demonstrated the versatility of Halliday’s model by adapting it to theorise how sculpture and architecture may be understood in relation to their social contexts. Gunther Kress and Theo van Leeuwen¹⁷ have also used Halliday’s insights to illuminate the study of graphic design and other forms of visual communication. They have argued that in a literate culture, the visual means of communication may be construed as rational expressions of cultural meanings, amenable to rational accounts and analysis. The problem, they claimed, has been that literate cultures have ‘...systematically suppressed means of analysis of the visual forms of representation, so that there is not, at the moment, an established theoretical framework within which visual forms of representation can be discussed’.¹⁸ To further the work of these pioneers of a systemic-functional semiotics of the visual, here is proposed just such a theoretical framework within which visual forms of representation – specifically drawing – may be discussed. It is proposed that the theoretical framework may inform the production of drawings, and that it may also function as an instrument for evaluating qualitative shifts in students’ attitudes evident in their drawings.

A Systemic-Functional Semiotic model of the domain of drawing

Such a model is represented in Figure 2, where the *Experiential* function of drawing relates to a drawing’s ability to represent some aspect of our experience of the world, be it physical, emotional or imaginative.

The *Interpersonal* function deals with how drawings may express the maker’s attitude to their experiences, and may position the viewer in terms of attitude and mood. The *Compositional* function deals with the systems of available choices of media, surfaces and marks that combine to make visible, to realise, the other two functions. The heading *Levels of Engagement* in the chart refers to the hierarchical layering within which engagement with the drawing is possible. The *Matrix of Systems of Choices* emphasises the *systemic* nature of the model: these ranges of available choices do not simply allow meanings to be negotiated at any single functional level, but affect all functions as a whole.

		FUNCTIONS OF DRAWING		
		COMPOSITIONAL	INTERPERSONAL	EXPERIENTIAL
LEVELS OF ENGAGEMENT	The drawing as displayed in context	Inter-textuality Systems of geometry; persp., orthographic, oblique, inverted persp., & topological. Size and format Framing devices Location options.	Systems of modality: mood, attitude, positioning: viewer-centred, object-centred Public / private Intimate / monumental	Systems of theme: Physical, emotional, imaginative experiences, narrative, historical genre Realistic / abstract Interplay between objects, poses, events.
	Sub-divisions of the drawing’s surface	Secondary geometry Gestalt relationships: horizontal, vertical, diagonal axes Proportional relationships Tonal passages (aerial persp.)	Systems of gaze: eye paths, focus points Dynamic / static Calm / excited Balanced / unbalanced.	Primary geometry Actions, poses, events, objects Awareness of distal and proximal perceptual values.
	Combinations of drawn marks	Relative size of marks Relative orientation of marks Relative position of marks Colour, tone and texture contrast – boundaries Pattern Rhythm False attachments.	Deep / shallow range of depth illusion Foreground / background range of positioning Stability / instability Scale Heavy / light	Distance between surfaces Edges: occlusion of one surface by another Direction Transparency / opacity of surfaces Atmospheric conditions Quality of light Time of day Awareness of haptic perceptual values Weight.
	A drawn mark	Size relative to picture surface Orientation relative to picture surface Position relative to picture surface Combination of surface texture and drawing medium Picture-primitives.	Psychological orientation Range of textural meanings: wet / dry; hard / soft; matt / gloss Denotation level of meaning.	Spatial depth Effects of gravity and other forces Effects of light and water upon material surfaces Scene primitives.
		MATRIX OF SYSTEMS OF CHOICES		

Figure 2: Chart of functions of drawing and levels of engagement.

Social meanings to do with the drawer's and viewer's experiences within the real-world, and also the tenor of the relationship between drawer and viewer are all realised simultaneously through the systems of *Theme*, *Modality* and *Geometry*. Choices from these systems are realised as particular modes of drawing which are themselves realised as appropriate combinations of drawn marks upon a surface.

In this chart, the varieties of geometries derived from the variety of ways of seeing, become some of the systems available to the Compositional function in order to realise – make visible and available for negotiation – the Interpersonal and the Experiential functions.

Combinations of selections from the available systems of compositional choices allow the drawer to give visible material form to modulations of their physical, emotional and imaginative experiences of the world. Reciprocally, those combinations are modulated through and related to the viewer's own experiences of the world. Thus the proposed model may facilitate both a means of putting sense into drawings, and making sense out of drawings. Crucially, the inclusion of the variety of levels of perception within the systems of choices available in the Experiential function acknowledges the variable foci of perception of both drawer and viewer.

The model is the organising principle, which underpins the proposed five premises set out below, upon which a new curriculum for drawing might be based. It enables the design of drawing exercises which focus students' attention upon specific problems of visual representation, as well as being a means of assessing the resultant drawings. For example, students who are able to derive the world-view of another culture from the analysis of its drawings become increasingly aware of ontological possibilities other than their own. Such awareness allows students to deconstruct their own, taken for granted, beliefs about perceptual matters, and affords the possibility of elaborating more sophisticated ontological constructs through drawings. Examples of such drawing exercises and student responses to them in the form of drawings are illustrated and evaluated at the end of this chapter.

Five premises for a curriculum for drawing

A future curriculum for the teaching of contemporary drawing practice could be premised upon five specific aspects of the two fundamental theoretical bases relevant to all visual art production: those of visual perception and visual communication:

1. Seeing and believing

If students are to develop the capacities necessary to manipulate the balance between the conceptual and the perceptual in drawings and artworks in general, it is essential from the outset that studio projects are designed to encourage students to understand that perception is a) culturally-conditioned, and b) capable of being 'tuned' to different levels of attention. How we see the world is conditioned by what we believe. This is easily illustrated for students by showing the variety of ways that different cultures, with differing belief-systems about space and time, for example, have devised to represent the relationship in pictures. Once students are aware of their own ontological constructs, they become more flexible about recognising the validity of those of others, and also more capable of inventing alternative constructs which can inform the creative production of drawings, and ultimately the production of artworks in a variety of media.

2. Levels of perception

Three levels of information about the world can be identified in the structure of the light arrays arriving at the eyes.¹⁹ These may be explored in studio or elsewhere through drawing exercises designed to focus perceptual attention on the *haptic level*, at which information about surface qualities such as texture and colour may be accessed; the *distal level*, to do with information about relative distance, size, scale and depth of field; and the *proximal level*, which provides information about the overall pattern and rhythm relationships in the visual field as a whole. The honing of such an intelligence of seeing is crucial if students are to manipulate and control the degree of perceptual intrigue in their drawing, and ultimately in any material practice generating visual artwork.

3. Functions of drawing

Alongside the exploration of perceptual values, students would be introduced to the theoretical bases of visual communication via either set projects or student-driven projects. Students understand at an early stage that a mental concept, an idea for an art work, needs to be transformed into visible, tangible form in order to be shared within an art world. The teaching challenge is to impart practical methods which can facilitate such transformation. O'Toole's²⁰ systemic-functional semiotic model of the visual arts has been adapted to provide a model of the domain of drawing illustrated in Figure 2, and this has proved to be a valuable aid both in structuring studio activities and empowering students' practice.²¹ Such clear structuring of the drawing process may be imparted both through illustrated talks and one-to-one discussion over a student's work.

4. Strategies of creative communication

Roman Jakobson theorised the two poetic devices of *metaphor* and *metonym* as characteristic realisations of the two fundamental processes of selection and combination through which the compositional, or in Jakobson's term, the *poetic function* of communication operates. Metaphor, refers to the substitution of one sign for another from the same paradigm; metonymy refers to the process whereby one sign becomes contiguously associated with another. The poetic function foregrounds the equivalences between visual elements of a composition, producing visual pattern, rhythm, symmetries and harmonies (or their opposites), which draw attention to the look of the work. In Jakobson's²² famous phrase:

The poetic function projects the principle of equivalence from the axis of selection into the axis of combination.

An understanding of the power of these devices as vehicles to make visual equivalences of conceptual ideas will surely empower students' practice. Other rhetorical tropes can also be explored to good effect in drawing practice, and so *oxymoron*, *irony* and *pun* might usefully be introduced and illustrated in visual work.

5. Drawing as a process of transformation

Ultimately, drawing practice is construed as a *process of transformation*:

■ Transformation from concept or percept to artwork via systems of geometry, lens-based and/or time-based media, or three-dimensional materials: the tradition of representationalism.

- Transformation of individual perceptions into social communication: the tradition of expressionism.
- Transformation of cultural values into material form: the tradition of art as socio-political comment, or, more contemporaneously, intervention in the social process through site-specific installations, performances, multi-media presentations, all of which might incorporate drawings, and would certainly be enhanced by a degree of visual vibrancy facilitated by an intelligence of seeing developed through the practice of drawing.

Upon these five premises it has been feasible to pilot a teaching programme for a course in contemporary drawing practice at first year BA level, examples from which are illustrated below. The challenge is to persuade colleagues – both in-house academics and visiting practitioners – that the time has come for more integration of perception theory and communication theory within the drawing curriculum.

Illustrative examples of student work

Figure 3 is presented as evidence of the catalytic and tactical authenticity of the pilot project.

This drawing is generated from a series of studies carried out during a project designed to explore *Levels of Perception*. Analysed at the level of *Sub-divisions of the Drawing's Surface*, the drawing displays a high degree of intelligence of seeing, affording the viewer ample information about textural qualities of the various plants represented, as well as strong illusions of depth.

The Golden Section proportion of the vertical and horizontal axes which sub-divide the drawing's surface, and the smoothness of the eye-line from the focal point of the intersection of those axes, the Bird of Paradise flower at left foreground, through to the complexity of forms at



Figure 3: Drawing by Amanda Maria.

right background, may be read by the viewer as metaphor for the complex harmonies to be found in the structures of natural forms.

A project on the theme *Functions of Drawing* afforded an opportunity for students to consolidate their understanding of the three functions of drawing introduced in illustrated talks. In particular, attention was drawn to the possibilities of positioning the viewer in terms of a particular mood, attitude, or sensibility which students may wish to convey about their experiences of the subject matter under observation. Such positioning may be facilitated by the drawer's selection and combination of appropriate marks and compositional devices within the drawing.

One of the considerations suggested to students in the project brief concerned the vulnerability of the unclothed life-model within the potentially harmful environment of the drawing studio.

Figure 4 illustrates one student's attempt to communicate his empathy with such vulnerability. At the level of engagement *The Drawing as Displayed in Context*, the viewer is positioned close to the foot of the drawing-donkey which supports the life-model, within reach of the slippers acting both as a focal point and an entry point into the compositional space. At the next level of engagement, *Sub-divisions of the Drawing's Surface*, the slippers act as a full stop to the diagonal axis formed by the upper leg of the drawing-donkey, and the dash-lines which pierce the model's head and connect to the top edge of the drawing. Another diagonal axis, an even stronger one,

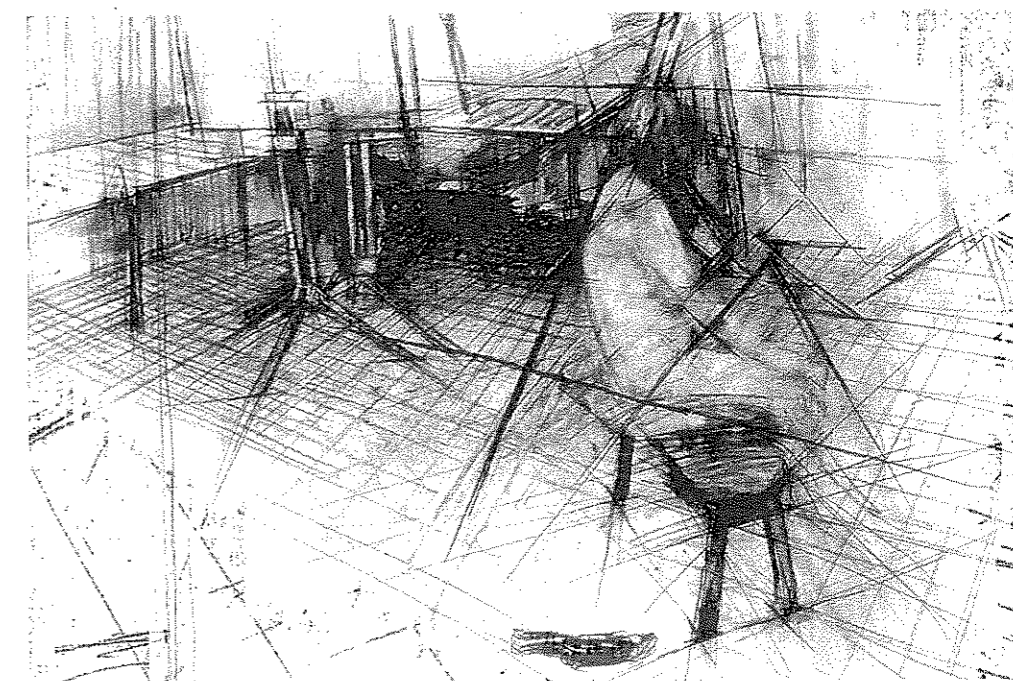


Figure 4: Drawing by Adrian John.

emanates from the same top connection point, grazes the model's back, and pierces the floor close to the slippers. The angle of this second axis is repeated across the surface of the whole drawing, at different scales of length and tonal density, representing one leg of the tripods supporting the easels. This combination of sharp, angular elements appears cutting across the thighs of the model, and cutting into the model's right elbow, shoulder, and back.

At the level of each drawn mark, the consistency of sharp-edged linearity throughout every single mark not referring to the model pointedly contrasts with those marks that do refer to human flesh; indeterminate soft smudges of tone. At each level of engagement, compositional decisions make visible the empathetic experience of the drawer, and invite the viewer to share the feeling of such experience. The drawing is presented here as evidence of the catalytic authenticity of the pilot research project, since it may be argued that the stimulus of the drawing programme enabled the student to articulate an empathetic response.

Figure 5 illustrates a response to a project exploring the theme *Seeing and Believing*, in which the robust solidity of a large-scale (six feet square) heavy gauge drawing paper is completely rendered with graphite stick.

Engaging with this work at the level of *A Drawn Mark*, each hand-made scribble of the graphite is standardised in terms of size and orientation, so that the rough surface texture of the paper is



Figure 5: Drawing by Russell Mags.

compressed by each mark to produce a polished sheen of graphite. The viewer is able to interact visually with this surface, since any movement of viewing position sets off a shimmer of surface reflection and illusions of spatial depth. Upon this shimmering surface, four totemic columns have been stamped from a wooden plank routed with patterns of linear marks. (The verb *to rout* refers to the facility for making marks upon a surface – a facility that is ignored in the hallowed-but-flawed basis of a well-rounded education, the '3 R's'. It might well replace *wRiting*, so that the 3R's become *Reading, Routing* and *'Rithmetic*, acknowledging the importance of *visualcy*, as well as literacy and numeracy). The printing ink mixed with sand produces a completely matt finish in stark contrast to the graphite's sheen, with the result that the irregular patterns of linear marks appear to dance upon the matt surface. The liveliness of the light, small-scale irregular linear marks contrasts with the large-scale, heavy, regular rhythm of the four columns spaced evenly across the whole drawing.

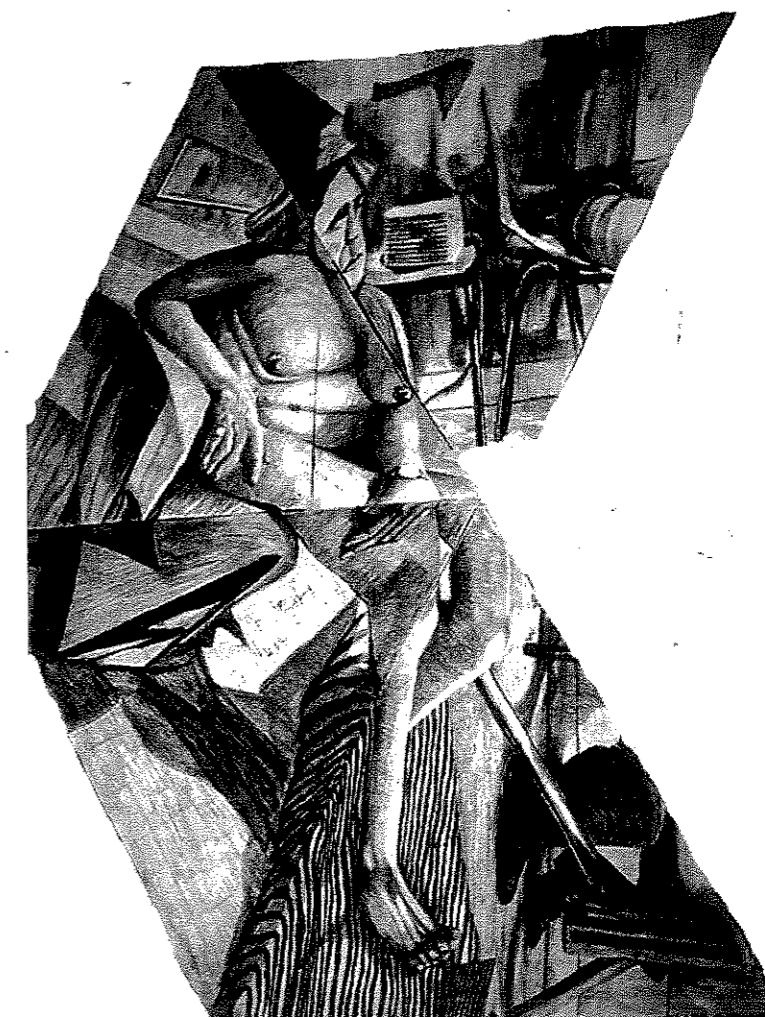


Figure 6: Drawing by Nigel Williams.

Engaging with the drawing as a whole, the viewer may discern another contrast: between the intimacy of each hand-cut mark and the (relative) monumentality of scale of the overall work. This drawing is visual evidence of the possibilities of how viewers' conventional understanding of drawing as a static medium might be challenged through its perceptually-intriguing qualities. It is a drawing which articulates visual oppositions, one which invites viewers to ponder upon the arbitrariness of their own cultural conventions, and the relationship between belief systems and how they affect perception. Such direction of visual research sustained the student well beyond the period of the *Seeing and Believing* project. It is presented here as evidence of the catalytic and tactical authenticity of the pilot teaching programme.

The drawing illustrated in Figure 6, made whilst exploring the *Drawing as a Process of Transformation* theme, evolved from the student's study of projective geometry systems which transform the three-dimensional world onto a two-dimensional surface.

An awareness that systems of geometry usually assumed a flat plane of projection stimulated inquiry into the possibility of projecting onto a non-flat surface. Discussion around the notion of a 'cone of vision' implicit in artificial perspective geometry developed into the idea of inventing a system for geometrically projecting what was noticed in the cones of vision onto a cone of projection. A paper cone was duly constructed and arranged at eye level, apex pointing to eye. With one eye closed, so as to flatten the cone perceptually, the student proceeded to mark the cone at appropriate distances from the eye, the marks representing the salient scene primitives (corners and edges). When the paper cone (or pyramid, to be precise) was laid out as a surface development, an original projection system was revealed. Here is evidence of the ontological and educative authenticity of the pilot project.

In the first decade of the twenty-first century, in the heat of the digital revolution, make no mistake about the continuing relevance of drawing. Not for its own sake, nor for any notion of accurate representation of the appearance of things, but for its unique ability to nurture an intelligence of seeing which informs the widest range of visual art practices, from painting, performance or installation to the multi-modal possibilities of digital technology yet to be explored.

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