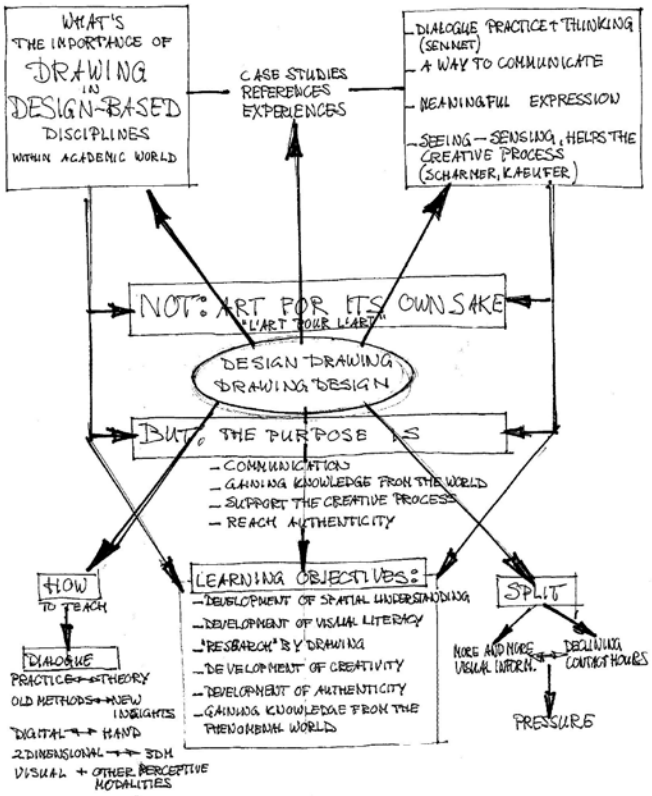

Preliminary Mapping of the Problem Area [Hélène Aarts / Robin Schaeverbeke, januari 2013]

DESIGN DRAWING / DRAWING DESIGN
WHAT IS IT WE HAVE TO TEACH AND HOW?

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[practice based research paper]

[abstract] Our paper intends to reflect upon contemporary issues, concerning design-based drawing. It is the outcome of an extended conversation between teachers within design-based drawing, operating in two different universities. We have witnessed a radical decline in contact hours to teach and as such we are confronted with a situation where we started questioning what it is we have to teach and, perhaps more pressing, how. We are inquiring ways to approach the practice of teaching design-based drawing and by comparing and discussing our practices we are searching for a conceptual framework which allows us to instigate design-based drawing. Our paper will search for a mutual grounding of the practice of design-based drawing.

Introduction

A recent inquiry on a local radio station considered the (rhetoric) question whether we should abolish writing in schools. Since everybody is typing on computers and tablets anyway, maybe we should focus upon typing rather than writing, the query went on. Questions like these make explicit not only a change in culture, but also a more pressing dilemma of how to deal with new technology, in light of the old, in a rapidly changing society. The question entails much more than typing versus handwriting. Learning how to write is learning how to organise and form thoughts and ideas on a sheet of paper, through a process of ordering and striking out. The confrontation with the physical aspects of the medium calls for a different attitude than typing on a computer. Writing by hand combines physical movement with learning and this combination makes that the knowledge will sink in, becomes embodied in a different way than through the process of typing. The physical aspect of handwriting connects thinking and making which is inherently part of mankind.(1) Within the digital realm we are able to save states and return to them at will. Words become fluid matter and mistakes are never really un-reparable. On the one hand this offers a great advantage, but on the other it may also create a false feeling of security. In dealing with dilemmas like these we have to ask ourselves whether omitting the physical aspects like drawing, painting, tinkering, music making, crafts and handwriting doesn't run the risk of alienating children from so-called 'destructive' media—'destructive' because any intervention is a lasting one.

Similar questions have been raised regarding physical drawing within design education. Once, physical drawing and sketching ruled design curricula, because there simply was no alternative. The introduction of (digital) photography, CAD, image editing and on-line search engines have irrevocably changed the way we perceive and map the world around us. As a result the status and value of physical drawing has changed and we, teachers of (design-based) media and drawing, are forced to reflect upon the functions, the teaching and evaluation of the tools we use to express design. Drawing, within design processes, serves several functions. We narrowed them down to four functions that are indissolubly interrelated: (i) recording, (ii) exploration, (iii) communication and (iv) expression. These functions do not stand on their own; more often than not one drawing is able to combine several of them.(2)

Functions of Design-based Drawing

(i) Before photography arrived, designers, architects and students within design disciplines relied on drawing to record the world around them. Drawing was introduced to students as a tool to gain knowledge about the world. The difference between drawing from observation and photography lies within the physicality, the aspect of time and the fact that drawing from observation does more than registering. Similar to the embodiment of information through writing by hand, the slow process of concentration and physical movement, allows to substantiate the observed as an image in the mind in other ways than when recorded as a series of photographs.(3) The camera, as a recorder, directs one's observation by its framing, focus, angle, lens and procedure of capturing images. Within the act of drawing from observation a relationship is established between the observed and the observer and through drawing, the object gradually unfolds itself towards the observer until it becomes known in relation to the self.(4) As such, as Anne Bordeleau and Liana Bresler state, the act of drawing as a way of recording is able to preserve something as knowledge or information.(5)

(ii) When imagining reality one is always able to rely upon something existing. Designing, on the contrary, is about creating something which isn't there yet. Within this creative process the designer communicates with the self and the drawings are used to support the creative process. Donald Schön describes this process as 'having a conversation with one's drawings in order to inform further designing'.(6) Externalising ideas through the act of drawing opens up space for new ideas while visualising ideas allows to empty one's short-term memory. In that regard, Bryan Lawson observes, drawings can act as a kind of external memory aid.(7) Drawings make something present in order to examine, possibly confirm and maybe reject, or very often refine, or adjust design ideas. Lawson defined the drawing process as one where the designer externalises some features of the design situation in order to examine them in a more focused way.(8) This kind of activity is probably at the very heart of what designers do, exploring design through drawing.

(iii) Whether to themselves or to other parties involved, designers draw in order to communicate design-based thinking. Since designers seldom construct their own designs the drawing acts as an intermediary tool between the different actors within the production process. Designers, as Donald

Schön rightly observes, make ‘things’ and often these ‘things’ start from a representation, a plan, a program, or an image to be produced by other people. Where autonomous artists are able to reign over their own artefacts, within design there is no direct path between the designer’s intention and the outcome.(9) Since a contractor searches for a different kind of information than a civil servant, a user or a neighbourhood committee, designers make use of different systems of graphical representation and communication.

(iv) Communicating through graphical representations invariably conjures up functional as well as metaphorical connotations. Here we touch upon the rhetoric possibilities of image making as a property of the language of visual communication. Communicating through drawings and and even 3D-models will always remain a representation of the intended object, revealing the object in the only way available to it. Within “La Trahison des Images” (1928-1929) René Magritte confronts us with this duality between the image and the object. By adding the caption, ‘Ceci n’est pas une pipe’, Magritte assures us that his painting is but an image of pipe, not the pipe in itself. In communicating with others designers have to be aware of this duality. To get an idea across rhetoric may help to make it more explicit. ‘De Stijl Movement’, for instance, discarded vantage point perspective because of its referral to historical styles. They wanted to express a ‘New Style’ (‘Nieuwe Beelding’) by representing their architecture and design in planimetric views. Images will always be subject to interpretation which can seriously distort the image’s intended message.(10) As such an image’s expression is able to direct the decision to get a proposal realised, or not. Next to the image’s expressive qualities there is also the designer’s personal ability to express design authentically. The personality of a designer combined with his/her distinctive ways of imagining ideas defines adds another level to creative image making. This is the realm where images are able to display signature and traces of artistry.



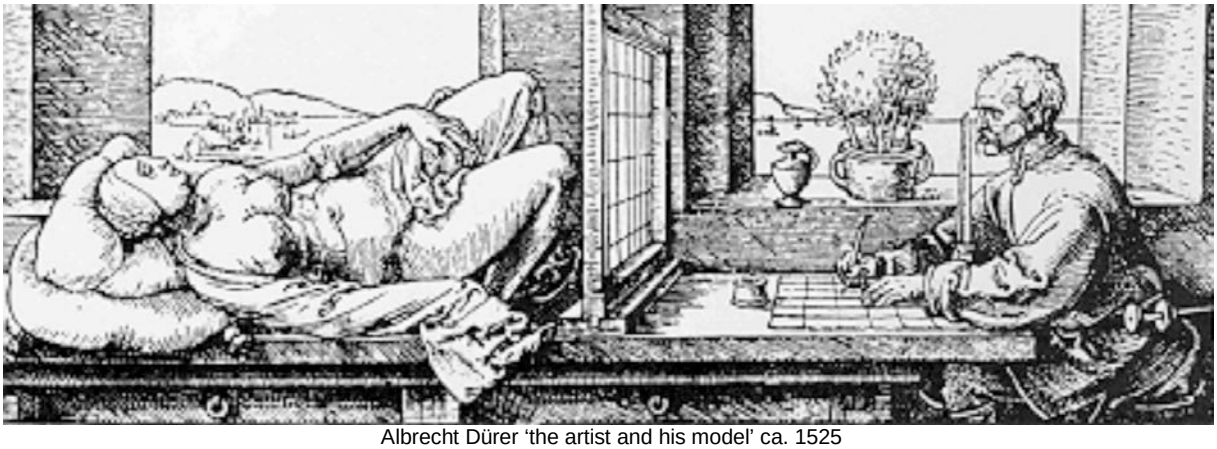
We are able to read the medieval perspective of Leonardo da Vinci (figure left), also what a child means with his depiction of a traffic junction (centre). The same goes for the imagery of the ‘De Stijl’ movement (right)

Rethinking the Drawing Classes

Within design education drawing classes used to be limited to teaching the mechanics of perspective drawing and analysing reality through drawing. While design studios focussed upon introducing design in all its aspects, the drawing classes regarded recording as the right way of amassing formal and spatial knowledge. The knowledge gained during the drawing classes could eventually be appropriated while designing. Current-day practice forces us to reconsider this way of learning: digital cameras and on-line search engines have taken over the role of drawing as recorder, digital modelling has replaced the photographic representation and the need for extensive perspective constructions, CAD eradicated the production process of handmade projective drawings. More than ever we are in need of a different conceptual framework to reflect upon the changes with regard to drawing within design. As such the drawing class is gradually transforming from a place where one learns to draw to a place where by and through drawing personal strategies for expressing design are researched. This change constitutes a shift in thinking where design-based, creative, intuitive and even philosophical, psychological and historical aspects of drawing complement the age old mechanics of drawing and observing. As such design-based drawing becomes a field of research in its

own right which can be inquired by theory, practice or a combination of both. Based upon the above mentioned functions of design-based drawing and personal experience we have delineated four themes of inquiry to rethink and redevelop the design-based drawing classes. The following list is non-exhaustive and should be interpreted as a conceptual framework able to inspire and open the discussion rather than to close it. The four themes aim to expand the theoretical and practical foundations of teaching design-based drawing: (i) inquiring other ways of seeing to re-evaluate linear perspective; (ii) inserting creativity and design as the motive force of the drawings; (iii) introducing visual literacy to instil an awareness for the expressive qualities of image making; (iv) opening up the drawing classes to other media by investigating the blending of digital and physical activities. These themes do not function in isolation but intertwine in several ways.

(i) Old methods new insights



Albrecht Dürer 'the artist and his model' ca. 1525

To communicate through images and drawings the perspective drawing still is regarded as the most accepted representation technique. The pictorial system of linear perspective, vantage point perspective – where parallel horizontal lines diverge from one point – was developed during the fifteenth century and still prevails as the dominant way of perceiving. As such we are used to represent the world with this (Western European) way of looking. Both perspective theory and photography make use of one sole 'privileged' point of view – looking through one immobilised eye only. But our view on reality and specifically our experience in looking to the visual world is totally different and can never be caught using only the application of the rules of perspective or similarly within a single snapshot. Within his most recent exhibition 'A Bigger Picture' David Hockney tries to demonstrate the impossibility to capture our three dimensional, spatial and sensory experiences. As such his series of paintings try to express the experience of spatiality rather than that they project a frozen mirror image of reality.

Spatial experience transcends the quantifiable and the visual. Working with form and space conjures up certain qualities which are difficult to convey within a (single) drawing—assuming that a drawing or a model is able to express those qualities to start with. How can we express the ephemeral, the sensual, the audible and tactile properties of form and space? Here recording, as a way to reveal new and other ways of looking at things, re-enters the classroom. To this end an object of inquiry can become a starting point for creative interpretation rather than an alienated subject subdued to the laws of geometry. To raise awareness for non-visual ways of perception we have to open up observation towards non-visual aspects of form, space and even time. By extending recording towards listening, feeling, smelling, representation could be stripped of its photographic and rational connotations.

Exercise from the course ‘Daily Speech’. Students bring three little boxes and use them as scale models for observational purposes. When the basics of observational drawing is explained the students start investigating, in drawings and composition, how to express concepts such as ‘important’, ‘huge’, ‘heavy’, ‘strong’, ‘fragile’ etc. within different drawings. These exercises play with many elements which are able to influence an image’s message.

(ii) Drawing, creativity and the design-based aspects of drawing

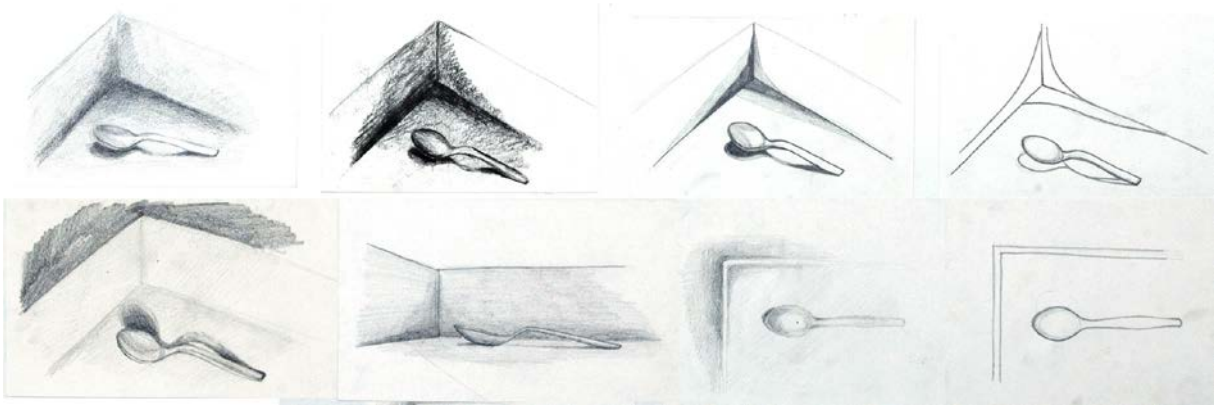
To approach drawing as a motor to generate new, non-existing forms and spaces we have to inquire design-based creative processes. Introducing design to drawing classes is the obvious route here but experience has taught us that bringing design to the drawing classes tends to divert the focus from learning how to draw to design itself.(11) So we have to look for ways of drawing which are able to facilitate creative thinking. Donald Schön’s maxim that ‘designers have a conversation with their drawings’ implies that through a process of associative thinking images are able to lead to new ideas and combinations. As such the activity of drawing is able to reveal new information.(12) According to Igor Byttebier to elicit creativity one has to break through existing thinking patterns, leaving the known behind and opening up to be able to find new pathways and solutions. To do so one can practice skills such as creative observation, delaying judgements, flexible associations, divergent thinking and developing imagination.(13) Because image making is related to the senses more directly than words, image making is able to come closer to a deeper level of cognition.(14) According to Scharmer and Kaeufer the intuitive and the creative is to be found in this deeper level of cognition.(15) To instigate design and creativity while avoiding lengthy and complex design processes we have to inquire ways of drawing which are able to astonish, reveal, uncover, trigger and ignite the invention, discovery, manifestation or generation of forms, spaces or ideas. The important thing is to search for ways to draw which are able to trigger ideas while offering the theoretical and practical tools to draw and express those ideas.

Examples from an exercise within the course ‘Spatial Imagination’. Students research by drawing and try to find out how concepts such as ‘point of view’, ‘zooming in’ and ‘zooming out’ are able to influence the spatial representation of the object. The subject

of observation is an architectural object in front of the University. Here a student tries different ways of drawing and making lines.

(iii) Visual literacy

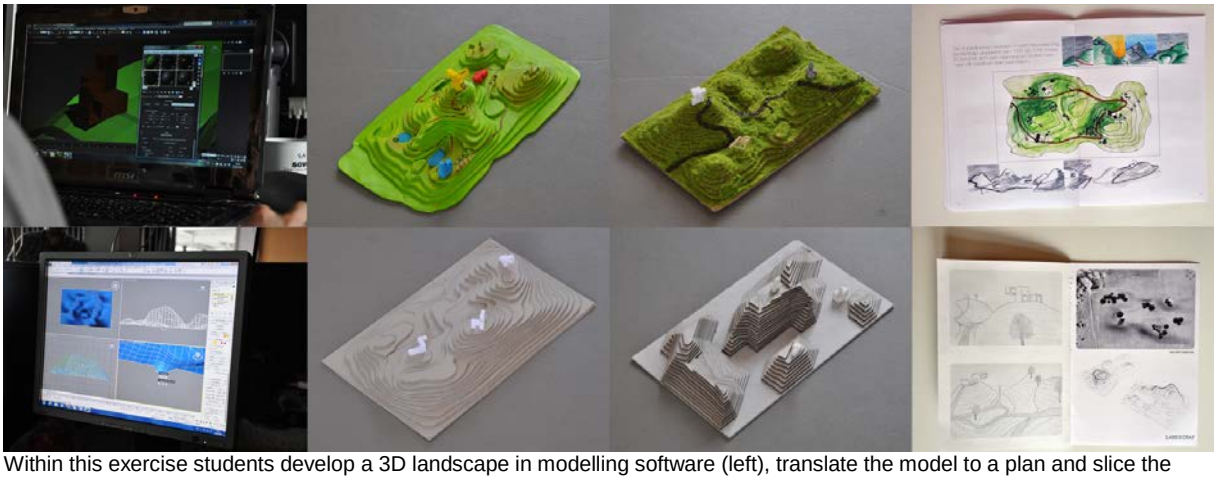
Spatial experiences need to be translated into some sort of representational system. Next to inquiring the goal of what is communicated and to whom, designers need to be aware of the atmosphere the concept intends to reveal. Visual literacy is based on the idea that pictures can be 'read' and that meaning can be communicated through a process of reading.(16) Here we touch upon the difference between looking and seeing. What we look at may be the same but what do we really see? Visual literacy is the ability to interpret, negotiate, and make meaning from information presented in the form of an image. Design-based drawings intend to communicate design-based content. Being aware of the transferability of images and the fact that every image tends to be translated to meaning is paramount here.(17) By comparing and studying the expressive qualities of light, colour, space, arrangement, vantage point, movement, material and technique. Differences in appearance and interpretation can be studied in order to reveal consistencies and strategies. In order to do so we should study images from several points of view and detach images from the idea that they have to resemble or conform to an established representational system. Changing point of view implies opening up to critical considerations based upon theoretical, practical, individual and collective assessments. Inquiring an image's subjective message raises an awareness for what images are able to convey. Discovering the expressive possibilities of images as well as the personal expressive signature is a necessary component of design curricula. By inquiring these aspects through analyses and drawing they can also be implemented within the drawing curriculum. Here the important thing is to look for ways to introduce how to capture an essence of things through inquiring different drawing and representation techniques.



Assignment from 'Spatial Imagination' where students inquire the spatial effects of 'light', 'tone' and 'point of view' in regard to the object and its surroundings.

(iv) digital-hybrid

Digitalisation, as mentioned above, changed the way we interact and deal with images and image making. For long digital and physical activities were regarded as two distinct modes of thinking. While day-to-day design practice seems to have adopted a complementary, hybrid approach towards design-based media, curricular organisation still tends to separate them.(18) Agreed drawing by hand, or on a computer are different skills altogether but we assert that by dividing the digital and the physical the designedly possibilities which lie between them are reduced, hampering mixed and creative uses of both tools. Within design the digital and the physical make use of the same vocabulary but processed differently. Contemporary practitioners appear to work and discover within, what we like to call 'the in-between' of tools.(19) Many concepts used in one mode of representation can be translated to the other. Exchanging information and drawing approaches from one medium to another opens up possibilities to reveal new meanings and knowledge within the medium and the image. Through blurring the boundaries between digital and physical activities designers and students are able to discover, augment and perhaps even reinforce possibilities to externalise design. By inquiring a personal layering of physical and digital expressions strategies are explored to embody both realms in personal ways as opposed to following pre-prescribed, separated paths towards image production.



Within this exercise students develop a 3D landscape in modelling software (left), translate the model to a plan and slice the model in order to make a physical model (centre) which is again studied by several (freehand) drawing approaches (right). The information from the freehand drawings is then used to re-process the 3D model. By going back and forth between digital and physical; the model and the drawing the students become aware of the 'in-between' of tools and techniques.

Discussion

Any attempt to define or capture the notion of design-based drawing is bound to fail. Due to the creative, personal and mediated character of the discipline, no drawing strategy within design is alike. That said there is a genuine need for a conceptual framework to inquire the forces that make the activity of drawing design-based (or not) and more important, how to teach such an activity. The above represents a first attempt to delineate several functions and forces which are able to inform design-based drawing courses. Over the past decades we have witnessed a changed appreciation of design-based drawing due to a series of technological innovations and in order to incorporate these innovations within our curricula, we saw a decline of contact hours to instruct freehand drawing. If we, as many of us assert, still regard drawing as a central property of design it is our task, as instructors of drawing, to reflect upon those changes in order to redefine the conceptual frameworks which shape our courses. Teaching, learning and inquiring design-based drawing only exists within the boundaries of design education and when we abolish the act of drawing from our curricula a practice-based specific craft will most likely get lost. Through crossing and combining the functions of drawing with the themes of inquiry new curricular activities can be designed which are able to explore alternative, expanded approaches towards design-based drawing.

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