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**Manual drawing in clinical communication:  
understanding the role of clinical mark-making**



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## Abstract

This provocation focuses on research into the widespread manual drawing practices used between health professionals and patients in secondary care. These are drawings routinely produced 'live' and in front of the patient or colleague, experienced sequentially (mark by mark) in the moment of their production and sometimes retained, as having documentary (medical records) or personal value.

Can these drawing practices be illuminated by Barthes' comic strip theories of 'relay', in terms of the sequential unfolding of images, and 'anchorage', in which texts (or textual annotations and speech) pinpoint meanings that would otherwise circulate more ambiguously? What other interpersonal triggers and cultural factors bear on this approach to clinical communication? Is this type of drawing, selective, schematic, in-the-moment and interwoven with text as it is, seen as able to provide a quicker, or deeper, understanding for the patient or colleague?

As a first stage in establishing groundwork for this research, a study has been conducted into health professionals' experiences of the routine drawing practices they engage in for patients and colleagues. Using a phenomenological approach, the researchers developed a method combining semi-structured interviews of participant health professionals with prompts for them to make exemplar drawings, accompanied by commentary, for the researchers. Reflecting on the intellectual, ethical and methodological rationales for this research design and participant group, this provocation will consider some of the emergent themes, illustrated by drawings. It considers the value of such health professionals' drawing practices in conveying technical information, especially in the face of patient anxiety and distress, and the potential of this type of drawing in enabling health professionals to represent contextualised and personalised information.

*Keywords:* manual drawing, clinical, communication, phenomenology.



## Introduction and context

The practice of manual drawing and sketching is embedded in health care, taking place both between health professionals and patients, and between professionals. It is used to explain care needs, to reach diagnostic understanding, to communicate treatment options and as a recording device for examination results or operative procedures. There are, however, no statistics on the prevalence of the practice and there is no consensus in the nomenclature. The manual making of marks as a form of visual communication in the clinical setting is here referred to as 'drawing', as the term in most common parlance, but the focus in clinical settings tends to be on content rather than medium. Such drawing appears to occupy a paradoxical epistemological status in health care. Whilst anecdotal evidence indicates that for some health professionals it is a routine element of communication, of achieving an understanding through visual means, investigations into the prevalence, nature or impact of the practice are difficult to find. Hospitals have many well-established clinical visual practices, from centres for scanning and imaging to departments of medical photography, yet there appears to be no organisational locus for manual drawing. A search of the academic literature has yet to reveal any research published on the manual drawing practices that occur in these clinical settings.

This research investigates the practice of manual clinical drawing in relation to Barthes' theory of anchorage (text) and relay (image). In analysing image sequence, specifically in film, advertising and cartoon strips, Barthes was concerned with the control that text bears over what he referred to as the 'projective power of the image'. (Barthes 1977, 40) According to Barthes the 'liberty' of the image is 'repressed' by the text, which has the morality and ideology of a society invested within it. The making of a drawing, however sketchy or diagrammatic, relies in part on the principles of sequencing: it unfolds in the moment. At the same time, the individual making the drawing is commenting and explaining, pausing and emphasising to a colleague or patient interlocutor. Here, the image (relay) sequence takes the form of the marks being made and 'anchorage' is provided primarily by dialogue, with the possible addition of textual annotations.

### The study design and approach

Investigating clinical drawing practices presents ethical and methodological challenges. The researchers are from arts, rather than clinical backgrounds, and the focus of this research is a practice conditioned and bounded by clinical imperatives and procedures, professional standards and issues of patient privacy, confidentiality and sensitivity. Whilst the patient's perspective is extremely important to this research, permission from the UK National Health Service's (NHS) research ethics and governance system for this has so far been declined. Whilst the researchers are redesigning a patient-centred research project in a way they

hope will satisfy ethical concerns, the project described here was carried out as a means of establishing groundwork into the phenomenon of clinical drawing. This necessarily focused specifically on the health professional perspective.

In this study the researchers took a phenomenological approach, with the aim of exploring perceptions and experiences of health professionals who routinely draw for their patients and colleagues. The interview was used as the primary method, adapted by means of an invitation to each participant to produce examples of the type of drawing they were discussing within the interview structure (see the example Figure 1). The participants were offered pieces of plain paper and a selection of pencils and pens. Drawings tended to take between 10 seconds and a minute to produce. The act of making a drawing was usually accompanied by a participant's explanatory narration, or by the continued dialogue between researchers and participant. Occasionally there were short silences whilst participants drew. This method was conceptualised as re-enactment of everyday clinical drawing practices in the context of the reflective, dialogic research exchange and reflections on the issues raised by this are made in the discussion and summary section.

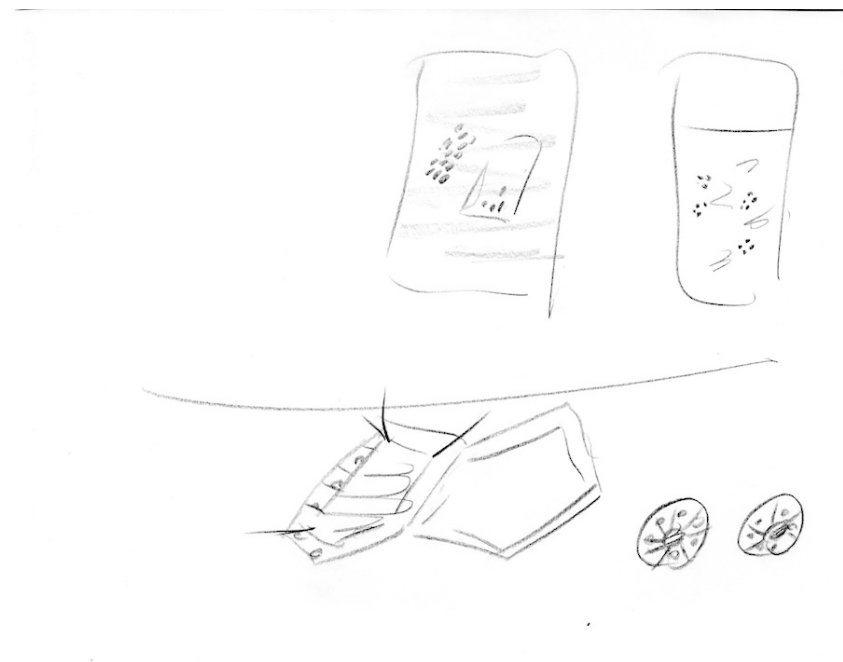


Figure 1. Exemplar drawings of slide sample and cells, of the type produced in discussion with trainees and/or medical students. Made by the Consultant Histopathologist during the research interview.

The approach taken brought with it the limitation that only one perspective upon the drawing exchanges could be investigated, that of the health professional. It had the advantage, however, of being a relatively non-intrusive and ethically acceptable starting point for the research, as it did not require observation of drawing in the clinical consultation, or direct access to patients. The researchers are currently redesigning a study that will focus on the patient perspective of such clinical drawing practices.

Seven health professional participants were recruited for the phenomenological study discussed here but the scope of this article allows space for only one participant analysis. The interview of the Consultant Histopathologist (referred to throughout as the CH) was selected because it discusses his experience of several types of drawing practice and context, together with the meanings he attaches to them. This type of specialist concentrates on microscopic anatomy and his role involves jointly examining slide samples with colleagues, training junior colleagues, educating medical students and providing information and explanations for families at inquests.

### The analysis

The CH identified three key scenarios where drawing occurred: teaching microscopic anatomy to medical students, communicating surgical outcomes to colleagues and presenting information to families at an inquest.

In the first scenario, the CH described how during teaching he and a medical student would each look through the lens of a double-headed microscope at the same specimen slide. The specimen would be unfamiliar to a student, as they would not have yet acquired the technical knowledge needed to interpret what they were viewing. In the CH's terms, the student did not:

have the language to understand what I was talking about if I was describing the structure under the microscope.

To help the student understand and reinforce or test that understanding, a diagram would be made by the CH in which he emphasised one or more elements. The CH articulated this process as one in which 'we draw to talk to each other' and suggested that in this context, the drawing act had a conversational function: 'so we'd end up drawing and drawing a lot'.

In the second scenario described by the CH, drawing took place as part of reciprocal communication exchanges with colleagues. Drawing helped facilitate the understanding of a process that had been undertaken:

we need to explain to each other where things are, what they (the surgeons) have done and why.

Here the CH described how not only the drawing process, but also the drawing as object helped to share a surgeon's experience of a particular patient's operation (see Figure 2). In relation to this, the CH also mentioned that the move towards electronic record keeping had highlighted the importance of manually-produced visual images, as such electronic systems did not necessarily provide the means for drawings to be included. The CH observed that not being able to draw in electronic patient records was frustrating and time consuming and that health professionals were finding ways to work around the system in response.

Manual drawing appeared, for the CH, to contribute significantly to the explanatory dimension of these exchanges in both the first and second scenarios, with students and with colleagues. Drawing helped him 'formulate his explanation' but also, in the absence of shared technical language, provided him with an effective non-verbal means of explaining:

I think that there are things that you can do when you're drawing that it's not easy to find the language to explain.

Part of this explanatory function seemed to be linked not to the drawing process in isolation but to the temporally and spatially linked practices of drawing, looking, pointing and talking. The mark-making appeared to form an intrinsic part of the communication, with understanding sometimes emerging from the act of drawing itself, rather than simply providing a post-hoc illustration of verbally-attained knowledge. To this extent, drawing could be seen as an embedded and dynamic visual process of explanation in action, sharing some of the characteristics identified in the pedagogical literature such as the sequencing of ideas (Loughran 2010, 9) and focussing on 'chunks' of digestible information (Cockburn and Handscomb 2006, 100).

In his experience as an educator, the CH had also noticed that in some areas of pathology, such as thyroid disease, 'people will read about it and not understand it'. When looking down the lens of a microscope as part of a discussion or training dialogue, there was no way of pointing to a particular element on a slide. It was often very difficult to establish how or at what point a description becomes clear to the colleague or student, or when the understanding of a concept is reached. Here, the CH perceived drawing as having an educationally diagnostic element:

When they take the pen out of my hand and start drawing over what I've just done ... then we're all in the same place talking about the same thing.

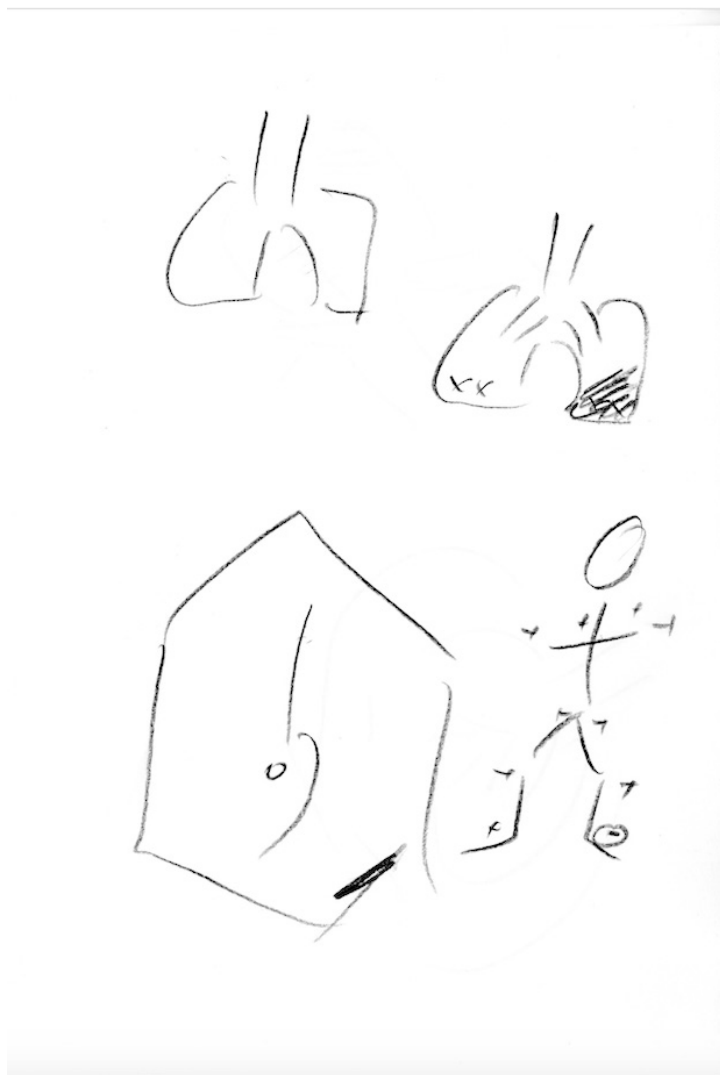


Figure 2. Exemplars of 'standard' clinical drawings made by the Consultant Histopathologist during the research interview. He drew these to demonstrate types of drawings that were made by other health professionals.

The drawings are of lung fields (top left) and lung fields where the hatching indicates some deadness to percussion (top right). Also shown is an abdomen (bottom left), indicating an area of significance that could be interpreted as, for example, a hernia or the site of an operation (the darker over-marking at the bottom right of the diagram). The stick figure (bottom right) has crosses indicating pulses, with a circled dot indicating a missing pulse.

In the third scenario, the CH highlighted the role of drawing as part of a sensitive process of communication with bereaved families at an inquest. The CH described how he would 'turn and draw' whilst giving a verbal explanation in the inquest setting and noted two key ways in which he felt this was advantageous. Drawing speeded up the explanatory process 'because it's quicker and people pick it up' and, although the CH commented that 'my drawing isn't very good', he simultaneously implied that the selective and sketchy approach of his drawings was more palatable and informative than a more realistic or expressive visualization might be. This recalls Sontag's concept of aesthetically 'flying low', raised in relation to amateur war photography, in which the less sophisticated image arguably has the power to 'innocent' some of the more harrowing content (Sontag 2004, 22-3). In relation to his drawing, the CH explained that it 'doesn't look like the patient, it doesn't look like anything or anyone they ever knew'. To this extent, he speculated that his drawings 'remove a bit of emotional content'. The CH further emphasised the uses and impact of drawing not only as process but as object. At inquests the CH, when called upon to offer an explanation to the family, would find that a 'quick diagram is usually the easiest way of getting through the process'. In this instance the live process itself could not always be viewed but the diagrammatic drawing could be physically passed to the family to support a verbal explanation.

The CH noted that for him, drawing had always been a regular part of learning and revision. The ways in which he drew for others was, he thought, strongly influenced by how he had routinely used drawing in his own learning. He explained that he was therefore particularly interested in changes due to be implemented in medical education teaching practices, where the use of the double headed microscope was to be replaced by images of scanned slides shown on a visualiser, enabling anyone present to 'see the same thing at the same time'. The CH noted that it was not yet possible to determine whether manual drawing would still take place under this new system, and what the impact would be if it did not. He also queried whether a digital representation of a tissue sample removed the student too far from the humanity of the material:

It becomes more distanced from the patient ... I like our students to understand that these are parts of people (who are) sitting at home worrying.

This comment provokes a much wider debate to be pursued about the impact of the means and mode of representation, particularly in relation to the idea of representing lived experience (Barthes 1977, 33).

## Discussion and summary

Practices and traditions of observing, looking and visually representing in order to describe, understand and revise knowledge are long established in the medical sciences (Lerner 2007) and there is a historical link between artists and the medical profession through anatomical texts and drawing manuals (Petherbridge 2010, 245). Familiarity with and confidence in these practices is echoed throughout the field, for example, in the form of medical illustration, the medical education curriculum and informal learning and revision practices.

In this interview, the CH presented an account of the ways in which manual drawing was routine and integral to his experience in all three scenarios he depicted. Whilst he offered a number of caveats to and qualifications of his views on the impact and use of drawing and was careful to point out that not all of those colleagues and students he drew with appeared to approach or view drawing in the same way, he affirmed several times that in his experience, drawing played a significant role. This was in establishing shared understanding, in supporting explanations and in providing selective diagrammatic information that could be both sensitive (in what was left out) and informative (in terms of what was included and how it was represented). He also alluded to the complexities surrounding aesthetic value judgements of 'good' and 'bad' drawing, highlighting tensions between drawing that might be seen to meet artistic criteria, versus drawing that performed a communication function efficiently and sensitively. These issues will be explored further in the analysis of other participants in this study.

From the drawings produced by the CH during the interview, issues emerged that require deeper consideration and reflection. In terms of methodology, what status and value did these acts of interview drawing and the completed drawings (as objects) have in representing the participant's experience? The drawings were made as though re-enactments or exemplars of those created during routine professional interactions, yet it is not clear what the effect was of the context and participation of the researchers. The constructedness of the approach is fully acknowledged and further consideration will be given to this in relation to the continuum of approaches to dialogic inquiry outlined by Sullivan and McCarthy (2005), from centripetal (tending towards order) and centrifugal (tending towards diffusion). This also relates to questions of whether it is more meaningful to include the researchers' voices in dialogue with the participant as part of the analysis.

In reflecting on this analysis so far, there are indications of the potential relevance of Barthes' anchorage/relay construct to future research into clinical drawing practices. It became clear to the researchers that whilst the drawings made had been comprehensible to them in the presence of the CH and his accompanying explanatory narrative and gestures, in isolation these images were far less accessible and it was difficult to identify where on the transcript of the interview

particular drawings had been made. Without technical knowledge and experience or the accompanying guiding dialogue and gestures, which can be polymorphously significant (Schneekloth 2008) the drawings remained ambiguous. The dialogue and temporally-bounded interpersonal interaction with the CH had provided the 'anchorage' for the images and their impact was strongest in the moment they were being produced, as part of a multimodal communicative exchange (Kress 2010). This is something to be explored in more detail once a full analysis of the 6 remaining interviews and drawings in this study has been made, and from these a fuller account of the structure of manual clinical drawing practices has been articulated.

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