

Briefing Paper No. 4

3D Foetal Ultrasound: Social and Clinical Meanings

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This briefing paper summarises the discussions of a workshop that took place at the University of Warwick on July 6th – 7th 2010. It was the last of four workshops funded by the Economic and Social Research Council award ‘Biomedical Visualisations and Society’ and organised by Julie Palmer and Frances Griffiths. The workshop series aims to give early-career researchers the opportunity to explore the social and political implications of a range of technologies of biomedical visualisation and to create an international network of researchers in the field.

The fourth workshop focused on foetal ultrasound with a particular focus on 3/4D ultrasound. The workshop was structured by the theme of social and clinical meanings of ultrasound and ultrasound imagery. The workshop combined presentations from Julie Palmer and Lisa M. Mitchell, with a guided visit to ‘Babybond’, a local commercial ultrasound provider, and peer discussion.

3D Foetal Ultrasound: Social and Clinical Meanings. Dr. Julie Palmer (University of Warwick)

Julie Palmer introduced the themes of the workshop. She began by presented foetal ultrasound as a ‘hybrid practice’ (Taylor 1998) and a semiotic object (Mitchell 2001). Julie provided an overview of the social and clinical roles of ultrasound before examining some of the tensions and contradictions inherent in these. She finished by introducing commercial 4D ultrasound and its use in ‘bonding scans’, as well as the main critiques of this practice.

Key Ideas:

- It is not always possible or desirable to disentangle social and clinical meanings of ultrasound
- Social and clinical meanings of ultrasound are often in tension
- Commercial scanning is beset by concerns about safety and appropriate use but critics often rely on an untenable distinction between the social and the medical
- The ‘theory of ultrasound bonding’ (Taylor 2008) plays a key role in debates about appropriate use of ultrasound.

Guided Visit to Babybond with Jan and Mike Steward (company directors). ‘

Workshop participants visited Babybond in Coventry and met with company directors Jan and Mike Steward. Mike Steward presented Babybond’s business plan and introduced participants to the company’s ethos and range of services. We heard about the origins of the company, its growth and also plans for expansion and development. Participants observed a 4D scan, undertaken by Jan Steward with volunteers recruited in advance by Babybond. We observed the process of scanning, the way the sonographer interacts with the technology and the clients, as well as receiving some instruction in how 4D ultrasound works.

Key Ideas:

- The construction and reading of ultrasound representations are mediated by the novelty of the technology, commercial factors, and social meanings.
- Participants identified an implicit ideal image ('the contented, serene, newborn') and felt that the scan process was directed to trying to achieve this.
- The business models of companies like Babybond are important for understanding the commercial provision of ultrasound and need to be better understood by scholars in the field.
- Being an ethnographic observer can be uncomfortable and raises complicated personal reactions and important ethical issues.

A Making Images, Making Meaning: Ultrasound Fetal Imaging in and out of the Clinic. Dr. Lisa M. Mitchell (University of Victoria, Canada).

Lisa Mitchell began by outlining the history of obstetric ultrasound (from Ian Donald and Marjorie Marr's early research) and describing her experience of pregnancy in the 1980s, at a time when women were not yet socialised into 'maternal-fetal etiquette'. Lisa outlined the assumptions underlying her research including, most crucially, that ultrasound images are cultural artefacts with diverse and consequential meanings and interpretations. Yet powerful narratives seek to constrain the meaning of ultrasound images, including discourses of normality, family, bonding, modernity/progress and profit.

Lisa described routine ultrasound and cases of suspected foetal impairment as observed in Montreal. She argued that, in routine cases, sonographers take pleasure in 'showing the baby': their accounts of the imagery on the screen pass through a 'cultural sieve' and therefore emphasise some aspects over others. When impairment is suspected, descriptions of ultrasound shift. Ultrasound is described as imperfect, allowing only partial vision. Medical staff describe 'deviations' from 'what we should see' or 'what we like to see'. Women are expected to look at the screen and 'see' the impairment.

Public sonograms are usually decontextualised from particular women but Lisa presented her most recent research into online memorials. In this context, we see public foetal images that retain a connection with individual women. In the case of pregnancy loss, the ultrasound scan imagery, uploaded to YouTube or similar, can represent an entire biography. But such memorials tend to emphasise the relational identity of foetus but Lisa observes little talk of foetal 'personality'. A 3D ultrasound alongside a photo of the Dad might be used to emphasise resemblance. Women sometimes display ultrasound alongside the post-mortem photo. These public foetal images are significantly different from the iconic public foetus as it has been understood to date and different from the more familiar anti-abortion campaign images that are more commonly seen in the public sphere.

Key Ideas:

- Interpretation of ultrasound is multiple, context dependent and consequential
- Ultrasound has personal and political effect because of our situational, interactive engagement with diverse representations of pregnancy, mothering and the foetus
- Virtual memorials are an important new site to investigate the public foetal image

Discussion

The discussion began with a writing exercise to aid reflection on the visit to Babybond. Participants were asked to complete the sentence: 'My observations at Babybond were shaped by...'. We discussed the commercialisation of ultrasound and the class dynamics at work in the market. The group discussed our experiences of the sometimes uncomfortable position of observer at the clinic, but also the potential pleasure of being the object of the (medical) gaze. We moved on to consider the role of the take-home scan pictures and associated 'merchandise' available from commercial scan providers, making an analogy with photography, and considering the images as extensions of a pleasurable experience into everyday life and as biographical objects. Finally we talked about complex idea of bonding through an image, making a distinction between forming a bond and 'performing' the maternal-foetal bond, or motherhood.

Suggested directions for further research:

- Further comparative research, cross-cultural comparisons, comparisons between countries and within cities.
- Compare the work of sonographers in private and public ultrasound service providers. What new forms of labour are being created?
- How are ultrasound services transforming? Can we identify shifts in the market? What are the drivers for these?
- Explore the material relations between scan providers and clients. How are interactions in the scan room situated in cultural regimes of identity, including race, gender, and class?
- Explore why women consume 4D ultrasound scans?
- Explore the experiences of pregnant women who do not undergo any ultrasound scans
- Ask how we might theorise the construction of ultrasound images and ultrasound bonding in cultural contexts where sonograms are not narrated by healthcare workers or parents? What changes in our thinking if there is no element of co-viewing or co-narration?
- Ask how we can theorise dimensionality? How are they terms '3D' and '4D' used? What do they evoke?

References

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- Taylor, J. S. (2008). The Public Life of the Fetal Sonogram: Technology, Consumption and the Politics of Reproduction. New Brunswick, NJ, Rutgers University Press.