

Can surgery be considered craft?

An examination of the craft processes which underpin modern surgery.

Isla Millar (B.A. Creative Art & Design Practice)

Introduction



Figure 1

Despite scientific and technological advances, modern surgical practice is still dependent upon the application of knowledge and experience through the hand [1], [2]. If we consider surgery as the manipulation of materials using tools and technology to achieve a desired outcome, we could be describing a craft.

Roger Kneebone (Professor of Surgical Education, Imperial College London) has explored the parallels between craft and surgery with the aim of improving surgical education [3], [4].

An emerging interest in the overlaps between art and science has led to cross-disciplinary collaborations which have identified parallels between the fields and provoked new thinking. This creative arts practice-based research project was designed to contribute to these discussions by examining the craft processes which underpin surgical practice from an artist and maker's perspective.

Research and Development

Topics

- Surgical tools and medical materials
- Surgical processes - actions, skills and techniques
- Surgical context - the working environment, the meaning of the work
- Craft theory - analysis of craft as a process
- Repair as a creative process

Methods

- Literature Review
- Observation of surgery
- Idea development in sketchbooks
- Experimentation with materials and making processes



Figure 2: Observational sketch made in theatre. © Isla Millar 2017



Figure 3: Author experimenting with materials and process. © Isla Millar 2017

Materials and objects were developed as a vehicle for exploring surgical process:

- Manipulation of cast porcelain vessels into soft organic forms to experiment with touch and the meaning of the mark
- Combination of medical materials and organic forms to create sympathetic interventions - to open and close, to hold and join, to support and protect
- Use of surgical instruments as tools in making the work
- The impact of limited visibility or awkward access on working methods and the effect of altering hand and body positions
- Alteration of surgical instruments to reflect the surgeons' gestures and movement

Outcomes

Research & Understanding

Combining different research methodologies enabled key insights into the parallel processes which underpin craft in different contexts:

- The importance of haptic skills in the tactful engagement with fragile materials
- The tacit knowledge in the use of tools or instruments as an extension of the hand
- The importance of an in-depth understanding of individual materials and how to combine them
- Irreversible decision making and the level of end to end understanding of process this necessitates

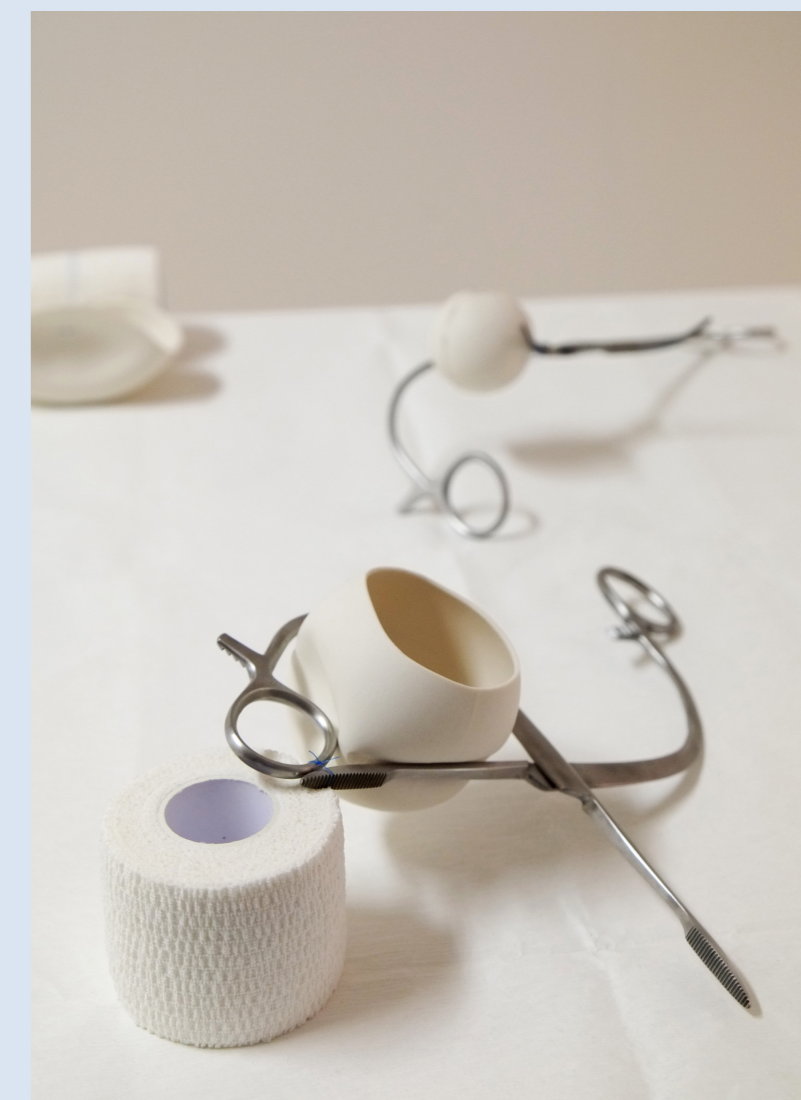


Figure 5a: Installation 'On the Mend'. © Isla Millar 2017



Figure 5b: Installation 'On the Mend'. © Isla Millar 2017

Dissemination

A collection of hand-crafted objects was made and publicly exhibited.

The installation, titled "On the Mend" evoked the operating theatre environment, inviting the viewer to consider the context and meaning of surgery in addition to more tangible aspects of surgical craft.

Objects were arranged to suggest a process from damaged to repaired. Pieces were positioned to express the interaction between the surgeon and patient and the delicate balance of technical practicality and humanity found in surgery.

Conclusion and Future Work

Through the creation of artefacts the project examined surgical craftsmanship in a different context and reframed surgical practice for a wider audience by means of a public exhibition. As an Artist Maker, I am interested in future collaborations which develop links between art and science. I am keen to explore further how these fields may benefit one another in particular, how art and making can be used to facilitate discussion and aid communication and understanding of complex issues.

Acknowledgements & References

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[2] BIRKMEYER, J.D. et al. (2013) Surgical Skill and Complication Rates after Bariatric Surgery. *The New England Journal of Medicine*, Vol. 369 (no. 15), pp. 1434-1442

[3] IMPERIAL COLLEGE LONDON (2015) *Professor Roger Kneebone*. [Online] Imperial College London. Available from: <http://www.imperial.ac.uk/people/r.kneebone>. [Accessed 06/02/15]

[4] KNEEBONE, R. (2014) *The Craft of Surgery*, [lecture] Make:Shift Craft Council Conference, 20th November 2014. London: Ravensbourne College

Figure 1: Balves, D. (2015) *Untitled*. [Online image] Available from: https://pixabay.com/p-721240/?no_redirect [Accessed 19/03/17]