The Art of Reconstruction. New perception, innovation and reconstruction in the field of plastic surgery. A paper by Professor Michael Healey, University of Lincoln, England. UK.

It is not often that a new, risky and revolutionary form of drawing pedagogy is delivered to a new highly critical professional audience. But that is exactly what Mike Esson created, designed and delivered when he taught new drawing and perception strategies to plastic surgeons in Australia, New Zealand, Europe and the United Kingdom. This paper focuses on the most recent and revolutionary drawing workshop delivered to plastic surgeons (Members of the UK Association of Plastic, Reconstructive and Aesthetic Surgeons (BAPRA) in Lincoln University in February 2011. The paper examines, with the support of a new illustrated film, the on-going dialogue between medicine and art. Can new taught skills in perception, drawing and sculpting make a positive difference to operative and post-operative patient success? Talking through the latest drawing film, with new post-operative input, Mike Esson invites us to examine key questions:

1. Is there added value applying ‘art based’ skills to the understanding and implementation of aesthetic considerations within the operating theatre?
2. Has each specialization, art and medicine, moved away from a common understanding of the human body?
3. On issues of symmetry and asymmetry accompany the workshop exercises can we, in the seminar, discuss and assist in cultivating an ability to identify facial and body characteristics differing from the norm?
4. Can surgeons who are introduced to a wide range of approaches further their observational and perceptual abilities to the benefit of their procedure outcomes?
5. What is “Best Practice” in terms of new ways of understanding and communicating complex visual information of service to the medical profession?

Research in this context
Research is not done as a result of the course, but is embedded within the course. The participants continually research drawing and modelling strategies that parallel surgical practice. This is not merely practical, but involves investigation into perceptual and psychological processes. The surgeons also are participating in this research directly, in that they have to evaluate how to apply aesthetic principles, and how to adapt the taught strategies to the benefit of their surgery.

The International Drawing Research Institute

The International Drawing Research Institute is a consortium of art schools from throughout Europe Asia, the Middle East and Australia, to promote contemporary drawing practice and research. Regular projects, conferences, exchanges and particularly exhibitions form a significant contribution to the research activities and inspire a range of graphic responses and philosophical concerns. Professor Mike Esson and Professor Mike Healey have worked together on previous projects.

The College of Fine Arts, The University of New South Wales invited Michael Healey to exhibit his series of very fine letterpress drawings at the Drawn – Out Gallery, during his short residency at COFA in 2010. These complex and layered works retain the essential ingredients of drawing, where line and structure conjure fascinating references to the works of Charles Rennie MacIntosh, whilst establishing their own contemporary resonance. Drawing practice engages a broad range of processes allowing for a maximum visual expression. Healey's drawings demand consideration of not only their formal qualities of structure, space and line, but the underlying philosophical framework that gives them visual authority and graphic intensity. The thematic organisational process produces dense cages of colour and light woven to imaginative effect. Essentially modernist in origin, every structure asserts its own abstract meaning through the concentrated dynamic interplay of positive and negative forms, which evoke mysterious associations. The images are sophisticated yet sensitive but do not reveal their secrets easily.

Since 2000, IDRI has held four Drawing Connections conferences in Sydney, bringing together artist and designers from throughout the world to discuss and inspire contemporary drawing. Previous conferences, Personal Practice: Cultural Context, Drawing: A Matter of Life and Death, Marking Time, and the original Drawing Connections have dealt with themes that not only reflect current drawing practice but also investigate drawing pedagogy. In 7-8 July 2006 the Mike Healey of the Universality of Lincoln organised an International Drawing Conference called “Drawing Board”. The Key note speaker was Deanne Petherbridge. Professor Mike Esson was also invited to attend and speak. This was the first formal connection between University of Lincoln and COFA Australia.
Professor Mike Esson

Professor Mike Esson is the visiting Professor of Drawing at University of Lincoln. “The Art of Reconstruction” is a term first used and owned by Professor Mike Esson, Director, International Institute of Drawing initiated by the College of Fine Arts, The University of New South Wales, Australia. Professor Mike Healey is Professor of Art and Design at the University of Lincoln.

What drawing is not what is drawing

Drawing remains the pre–eminent experimental medium, the visual and intellectual storehouse that feeds our imagination, and reflects the personal and political. The first marks of invention, no longer tethered by tradition, it charts innovation and change, daring and dangerous or subtle subversions through graphic communication.

The Arts and Humanities Research Council UK

The Arts and Humanities Research Council UK (AHRC) is the only government funded research council for the UK. To gain an award is a highly prestigious and difficult task. The 'Art of Reconstruction Research Project' gained such an award, which began in February 2011. Professor Mike Esson is a Professor at the University of Lincoln. What follows is a description of what we proposed to the AHRC.

The 'Art of Reconstruction Research Project' is initiated through The University of Lincoln where re-skilling of plastic surgeons by artists is already in an embryonic phase. In integrating the required network of associated skills, expertise and experience the research collaboration brings together artists within The Drawing Research Group of The Faculty of Art, Architecture and Design (AAD) and The International Drawing Research Institute (IDRI), The University of New South Wales, Australia, The Glasgow School of Art, Scotland, and The Central Academy of Fine Art, Beijing China. These will be working closely with members of the Royal College of Surgeons through a comprehensive workshop and seminar programme. Building from the success and feedback of an initial provisional workshop for surgeons in November 2009 this project is structured as a pilot study to develop a new research network that will extend the application of the visual arts in medicine enabling the development and treatise of the intersection of art and science in respect of the new practice based ideas and concepts currently formulating in plastic surgery. This pilot study represents the first "substantiation" stage within this overarching objective and 4 strategic activities are identified: 1. Design and delivery of a three day comprehensive workshop for surgeons in the field of reconstructive and cosmetic surgery; integrating both training and investigation of aesthetic principles, questioning canons of proportion and beauty, together with
the introduction of practical skills through the languages of drawing and sculpture. Through established drawing and modelling disciplines and techniques surgeons will be introduced to formal aesthetic principles and strategies for dealing with interpretation of structure and space. It will provide an accessible, tactile and visual experience, the focus of which deals with proportion, negative space, contour, methods of graphic representation, and in three dimensions; notions of deconstruction and reconstruction. There will also be an investigation of the dynamic geometric solids of facial features and an understanding visual tension. 2. A two weeks public exhibition following the workshop, providing additional feedback and consultation to provide the starting point of the critical review assessment. 6 month follow up and review phase enabling a qualitative analyses of the benefits and outcomes of the thematic approaches adopted within the workshop. 3. A 1 day seminar, including all workshop participants and invited specialists and academics midway through the review phase to assess and develop the thematic research questions in respect of a roadmap for further progress and uptake. 4. This will be followed by a smaller workshop involving key partners and participants at the project end to further develop the thematic areas and best practice indicators against the perceived benefits. These activities will enable many of the critical research questions to be reviewed and analysed as well as identify additional elements of importance arising that will inform and contribute to the subsequent uptake and implementation of this integrative approach throughout the UK. 1. Is there added value applying 'art based' skills to the understanding and implementation of aesthetic considerations within the operating theatre? 2. Has each specialization moved away from a common understanding of the human body? 3. On issues of symmetry and asymmetry accompany the workshop exercises can we, in the seminar, discuss and assist in cultivating an ability to identify facial and body characteristics differing from the norm? 4. Can surgeons who are introduced to a wide range of approaches further their observational and perceptual abilities to the benefit of their procedure outcomes? 5. What is "Best Practice" in terms of new ways of understanding and communicating complex visual information of service to the medical profession?

Summary

Rationale: Since Aristotle and Hippocrates in ancient Greece through Claudius Galen in the middle ages and Leonardo de Vinci in the renaissance art has been inextricably entwined with medicine. Although more often viewed in the context of illustrations, such as from Max Brodel in the early 20th century, today's advances in modern plastic surgery now call for a far more dynamic involvement directly supporting the proficiency, and thereby outcomes, of the surgeons technical skill. 21st Century plastic surgery is as much concerned with improving the perceived quality of life as it is, over and above, essential reconstruction. This requires an aesthetic sensitivity and understanding of art and form that is not part of a surgeon's normal training. Objective: Building from
the success and feedback of an initial provisional workshop for surgeons in November 2009 this project is structured as a pilot study to develop a new research network that will extend the application of the visual arts in medicine enabling the development and treatise of the intersection of art and science in respect of the new practice based ideas and concepts currently formulating in plastic surgery. Research considerations: In integrating the visual and representational skills of art to the reconstructive technical skills of a plastic surgeon there are a number of key issue to address. - Is there an added value applying 'art based' skills to the understanding and implementation of aesthetic considerations within the operating theatre? - Can we examine the intention of the value of 'art based' skills to the understanding of aesthetic considerations within the Operating theatre? - Can we improve on NHS pre and post operative patient and surgeons perceptions of "success"? - Can we discuss and assist in cultivating an ability to identify facial and body characteristics differing from the norm? Applications and Beneficiaries: - Primary and initial beneficiaries will be participating NHS surgeons who acquire new skills enabling a more informed and confident aesthetic decision-making process; investigating formal and practical aesthetic principles to integrate into their medical practice. Surgeons who participate will also pass on the benefits to NHS colleagues. - This project will test and develop strategies that explore the relationship between differing spheres of activity through a process of reciprocal interactions reinforcing the intimately connected worlds of art and science. The benefit follow up and qualitative analysis is thus central in order to validate the approaches used and identify routes to further progress and uptake. - Ultimately, the major benefit is to the patient through improved outcomes and perceived quality of life. Additional Impact: The University has a planned conference on "Drawing" in 2010 for artists, plastic surgeons and conservation/heritage science professionals and the conference and Network Project will interrelate directly with this. Additional Background: In addition a limited skills based workshop has been run in New Zealand and Australia for surgeons but there has been no follow-up academic research, debate and dissemination. 'The Art of Reconstruction' pilot project will address this and formulate development and application roadmaps relevant to the NHS medical specialist in the UK. Thus contributing to both the disciplines of medicine and the visual arts in the UK. Outputs: Workshops and seminars will develop and validate the central tenets. Academic analysis of the projects findings and best practice guidelines will be will be through peer reviewed journals as well as other Journal articles, website, film recordings, case study material, teaching material and establishment of a new and important international network for Art, Architecture, Design at University of Lincoln. This initial Network will maintain contact and extend on a sustainable basis through subsequent projects and implementation.

Ethical Information
When the project began in Australia, apart from a few enthusiastic surgeons who felt the need, there was antipathy as to what someone outside the medical profession could offer their professional expertise. It was important to establish a rigorous, ethical and practical involvement where the newly acquired knowledge could be identified, tested and applied to surgical practice. Follow-up questionnaires strongly validated the project and critical feedback was used in refining both structure and content. Since 2000 approximately 70 of Australia and New Zealand's most senior surgeons have completed a related skills course. Due to the success of the Australian project it was introduced in Melbourne in 2008 to 80 registrars. So far a course has been run in Sydney, Melbourne, Adelaide and Hobart with no ethical problem. As per the University of Lincoln regulations, this project will be submitted to the Faculty of Art, Architecture and Design ethics committee for review prior to start date.

Academic Beneficiaries

The ambition of this research project is to contribute to the disciplines of medicine and visual arts in the UK which will directly benefit the research interests of Prof. Mike Esson - Director, International Drawing Research Institute COFA Australia (IDRI); Prof Michael Healey Drawing Research Group, University of Lincoln; Prof. Belinda Colston, University of Lincoln; Mr Guy Sterne, consultant plastic surgeon Spire South Bank Hospital; Dr. Baris Cakir, a cosmetic surgeon from Turkey (http://www.bariscakir.com/english/baris_cakir_kimdir.htm). All are members of the network. The benefits to the Art and Design sector and the University of Lincoln in linking with a mature and established international network are immense. The research collaboration will bring together key international players in the visual arts: Experts that use non-figurative multi media digital drawing skills from The International Drawing Research Institute (IDRI) a research organization formed by The College of Fine Art, The University of New South Wales, Australia. Medicine: Primary beneficiaries will be the surgeons who acquire new skills enabling a more informed and confident aesthetic decision-making process. From the surgeon's point of view, it is a genuine research opportunity to investigate formal and practical aesthetic principles to integrate into their medical practice. The development of new strategies in assessing aesthetic relationships, and the exploration of various methods of graphic representation will assist in transfer of visual knowledge to colleagues and theatre assistants. Surgeons who participated in the limited previous courses were complimentary and pro-active in passing on the benefits to their colleagues. Surgeons gain confidence in communicating visual information to their patients. The results of this research experience will add to the confidence the patients feel towards the surgeons in fulfilling what is expected from a surgical procedure. Only a subjective qualitative analysis is enabled within this pilot validation study. However future research and investigations, with artist, surgeon and patient, will include clinical trials that investigate, on a quantitative basis, the comparison between the expectation and result as perceived by the patient, providing essential
statistical information. Ultimately, it is of course the benefit to the patient where the real value and satisfaction is experienced through improved outcomes and perceived quality of life. Art and Design: For the artist and art educator this is an opportunity to test and develop pedagogical strategies that explore the relationship between differing spheres of activity. Drawing functions across various disciplines, not only within the visual arts, but in other areas, particularly those dependent on visual communication and understanding. For the purposes of this research, drawing and modelling are presented as 'an art of making' rather than the act of viewing. Teaching visual awareness to those outside artistic backgrounds adds insights that help the evolution of new and challenging research through practice. An increasing number of artists are inspired by the body and the proliferation of new biomedical techniques to visualize it. The project establishes the basis for further research into the benefits of 'visual art studies' for other professions. This goes beyond the direct value it offers the aesthetic medical specialist, and provides avenues of exploration into how other areas can complement their professional activities with the assistance of training in visual communication.

Impact Summary

Network Benefits: The research project underscores the significant nexus between art and science professions in such a way that both academic collaborative practices are considerably expanded and enriched. It is appreciated that this collaboration represents an acknowledgement of shared respect for our practices, research and the associated expertise within these disciplines. Art and Design HE Education in the UK is acknowledged to be world class. Drawing functions across various disciplines and this research project establishes the basis for further research into the benefits and implications of 'visual art studies' for other professions. This goes beyond the direct value it offers the aesthetic medical specialist, and provides avenues to explore into how other areas can complement their professional activities with the assistance of training in visual communication and creative problem solving. For example, the development of drawing for conservation/heritage science will be piloted at Lincoln University, in the School of Natural and Applied Sciences. Impact on surgeons and patients in the UK: The benefits accrued through this project will have a direct impact on the field of reconstructive and aesthetic surgery. It is through their training that surgeons approach their activity from a formal surgical methodology but usually evaluate the results from an aesthetic point of view. This dichotomy can present difficulties in both the expectations of surgeon and patient. Through the research project surgeons will acquire new skills enabling a more informed and confident aesthetic decision-making process for public medical practice. It is also anticipated that surgeons will continue to seek to upgrade and develop these skills (as they have done in Australia). The University will look into this provision as part the workshop outcomes. The Interactive website and future associated events will facilitate continued dialogue and communication with key players.
Similarly the engagement of art and the use of life study classes within the undergraduate medical curriculum is being tentatively developed by several prestigious Medical Schools, such as the University of Nottingham. This project will further develop the rationale for such approaches. Impact on visual arts in the UK with relevant experience and track record: The drawing research group at University of Lincoln, embedded within Art, Design and Architecture, fosters drawing as a process of reciprocal interactions reinforcing the intimately connected worlds of art and science. Drawing functions across various disciplines, not only within the visual arts, but in other areas, particularly those dependent on visual communication and understanding. Similar projects for reconstructive, cosmetic and maxillofacial surgeons have been held in Australia and New Zealand. The classes originated from drawing classes run at The Royal College of Surgeons, Edinburgh in 1993/94 when Esson was an Artist in Residence and Healey was the Head of the Design School at Glasgow School of Art. Subsequently, in Australia, the project was extended with the most prominent surgeons in the field enrolled. They expounded the value of the project experience to their colleagues. Since 2000 approximately 70 of Australia and New Zealand's most senior surgeons have completed the evolving project. Due to the success of the course it was introduced in Melbourne in 2008 to 80 registrars with the possibility of it being adopted as a regular component. Economic Impact: The introduction and development of this project into the UK will impact on the potential for enhancement of UK medical economic competitiveness by delivering better results for patients who are undergoing pre and post operative plastic surgery. The enhancement and development of the field of NHS cosmetic and maxillofacial surgeons would be a powerful outcome. General enhancements of quality of life, health and creative output will also follow.

Additional Engagement

The University of Lincoln has specialised staff employed to undertake communication and exploitation activities which will be directed through the outreach and exploitation team in both the Marketing and Communications department and Enterprise @ Lincoln. The University has technical experts to write publications, web pages and user friendly interfaces that all have relevant experience in achieving successful knowledge exchange and impact. Additional Information For further useful NHS plastic surgery stats/report, please see links below.
http://www.wrt.nhs.uk/index.php/component/docman/doc_download/75-plasticsurgery
Information film on “The Art of Surgery” based on Mike Esson’s workshops in Sydney: http://www.youtube.com/watch?v=WuOhz3YC9Es

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