

The Tale of Two Schools:
Design Technology, Digital Mediation and Aesthetic Dispositions within Architectural Design Education

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Thesis submitted for the degree of
PhD (Architecture)
November 2016

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STATEMENT OF ORIGINALITY

The thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to the final version of my thesis being made available worldwide when deposited in the University's Digital Repository, subject to the provisions of the Copyright Act 1968.

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ACKNOWLEDGEMENTS

Firstly, thank you to all the students and staff members who volunteered to participate in this research. I was amazed by the intelligence, passion, and time that was contributed throughout this process. Not only was your involvement essential, but the quality of content shared with me was simply outstanding. Similarly, I would also like to thank the many students and tutors that I have had the pleasure of sharing studio space with. The ongoing exposure to undergraduate development in the design studio has provided me with a valuable insight—a reflexivity that has validated my own bearing throughout the research process. And, speaking of shared studios, I would like to thank my friend, Ian Owen. Your Welsh characteristics have provided me with some needed reminders. Specifically, your continued insistence upon brilliance, and refusal to accept anything mediocre, from yourself or others.

Secondly, I would like to thank my supervisors. Dr. Ning Gu, Ning—thank you for giving me so many opportunities to develop strengths, as both researcher and educator. I am very grateful for all the support and guidance you have provided, and for shaping my career as an academic. Prof. Mark Taylor, Mark—thank you for providing a fresh pair of eyes. For what has been a topic very close to me for a long time, your contribution was timely, and much needed. Our work together this year has motivated me to continue to fold, bend and break the boundaries of what is possible in a design studio.

To Dr. Hedda Askland, Hedda—I am so grateful to have you as my supervisor and friend, and hope this is the first opportunity of many that allows me to publicly thank you. The amount of time, effort, and knowledge you have contributed has been exceptional. Either through discussion or review, you consistently provided me with the direction I needed to overcome any challenge. Our conversations have been instrumental in distilling the complexities of my thesis, and for that alone I am grateful. Yet you have also greatly influenced me as a researcher, by sharing your perspective of the social world, or even tweaking my writing style. I am not the same academic that I was at the beginning of this process, and a lot of the credit needs to go to you. Thank you for: the D&M's; the venting; the gossip; and the coffee.

My family—Mum, Dad and Harry. You have each been a source of inspiration and support. Mum and Dad, your devotion to my success has had no bounds. You have put my interests above all else. Thank you for your continued encouragement, and for teaching me to never say no to an opportunity. To Harry—thank you for being my brother, best friend and partner in crime. You have been there for me no matter what. And to the Crichton family who have always been supportive, interested and welcoming.

Finally, to Sarah, without whom I might not have made it over the finish line. I am grateful for the time you have spent helping me, especially during the final stages of this journey. You have given me the drive and confidence to push through what has seemed like an eternity. Your awareness, intellect and empathy has given me a renewed outlook on understanding human experiences, and I am all the better for it. Thank you for being such a central and stable part of my life, and my love.

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ABSTRACT

The fields of design education and research are inherently dynamic, yet a sense of stasis often characterises distinct architectural institutions through definitions of particular educational ethe; that is, standardised systems, which are culturally internalised and that transcend consciousness. Focussing on two established architectural schools known for their pedagogical approaches, this thesis explores this paradox and, more specifically, investigates how it manifests through the nexus of analogue and digital design technologies. The thesis analyses the relationship between digital technology and educational ethos, exploring how unarticulated cultural preferences inform student learning and design processes.

Through analysis of rich qualitative data, the dissertation forwards the tale of two distinct Australian architectural schools as they are told through student and staff reflections on the role of technology. It outlines student educational design journeys, as well as their design tendencies, while also investigating the staff perspective, and consequently explores perception and experience of analogue and digital technologies in design and education. Using semi-structured interviews and participant observation as key methodological techniques, the thesis deconstructs the pedagogical implications of the increasingly complicated relationship between drawing, digital technology and a culture of architecture. Adopting Pierre Bourdieu's (1977) *Theory of Practice*, the study explores the educational sphere as a relational and dynamic space; a site of structuralist disruption and conflicting attitudes that constitute and reinforce the architectural learning and design environment.

The charge of emergent design technologies has encouraged a re-evaluation of an essential and defining element of culture. Through analysing the manifestation of this phenomenon within the architectural discipline, the thesis explores the paradoxical relationship between a set of classical analogue skills, functioning as symbolic reserves of cultural capital, and the expanding digital skill set. The increasingly computerised commercial digital environment is reliant on digitally mediated tools and demands the skills to use these tools. However, investment into analogue drawing by schools and students alike continues. The thesis aims to expose the struggle between the conflicting demands placed on both student and teacher to preserve the cultural hegemony of drawing, despite this inertial shift toward digital design practices. The research aims to inform contemporary understandings of the relationship between students, educational structures and cultures as part of a changing and digitising architecture and design field.

ABBREVIATIONS

2D	Two-dimensional
3D	Three-dimensional
AACA	Australian Accreditation Council of Australia
ACAD	ArchiCAD
AR	Augmented Reality
BCA	Building Code of Australia
BIM	Building Information Modelling
CACD	Computer Aided Conceptual Design
CAD	Computer Aided Design
CAM	Computer Aided Manufacturing
CCA	Centre for Contemporary Arts
CD	Collaborative Design
CNC	Computer Numeric Control
CPT	CAD-Print-Trace
DDNET	Digital Design Network
DF	Digital Fabrication
GC	GenerativeComponents
HD	High Distinction
HREC	Human Research Ethics Committee
ICT	Information Communication Technology
IE	Intelligent Environments
NSCA	National Standard of Competency for Architects
NSW	New South Wales
PDF	Portable Document Format
RIBA	Royal Institute of British Architects
RMIT	The Royal Melbourne Institute of Technology
RP	Rapid Prototyping
RSS	Rich Site Summary
SA	School A
SB	School B
SN-TSD	Single Night of Total Sleep Deprivation
UI	User Interface
UK	United Kingdom
UNISA	University of South Australia
UON	University of Newcastle
UTS	University of Technology Sydney
VR	Virtual Reality
ZPD	Zone of Proximal Development