UTS UNIVERSITY OF TECHNOLOGY SYDNEY

The Manifestation of Positive Computing in the Aged Care Workforce

by Patrick Joseph Shearman

Thesis submitted in fulfilment of the requirements for
the degree of

Doctor of Philosophy

under the supervision of: Professor Simon Darcy
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Declaration of Originality

CERTIFICATE OF ORIGINAL AUTHORSHIP

I, Patrick Shearman declare that this thesis, is submitted in fulfilment of the requirements for the award of Doctor of Philosophy in the Management Discipline Group, UTS Business School at the University of Technology Sydney.

This thesis is wholly my own work unless otherwise referenced or acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

This document has not been submitted for qualifications at any other academic institution.

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Abstract

Positive computing a recently developed paradigm aspires to design and develop technologies to support wellbeing and human potential in the workplace, as opposed to the traditional technology paradigms that focus on realising benefits such as productivity and efficiency gains. A lack of evidence-based research presents a challenge to understanding the potential of positive computing in improving wellbeing in the workplace.

An industry where wellbeing of the workforce is important to the sustainability of the industry is aged care. The aged care workforce needs to become highly and digitally trained to meet the current challenges and future needs of an ageing Australian population. There is little research on the impacts of technology on the wellbeing of aged care workers and no research on positive computing in an aged care context.

This study assessed the manifestation of positive computing in the aged care workforce, guided by five research questions: 1) How does positive computing manifest in the context of aged care work? 2) To what extent does positive computing affect the work outcomes of aged care staff? 3) To what extent does positive computing affect employee wellbeing? 4) To what extent does positive computing affect the provision of aged care? 5) How can positive computing promote diffusion of innovation in aged care organisations? a multi method design composed of a qualitative research study and explanatory mixed-methods study guided the research. The 148 participants were employees at a not-for-profit aged care organisation in Western Australia.

The study found promising evidence that considering technology through a positive computing lens can contribute to the wellbeing of employees due to a perception of better organisational support, and that positive computing can have benefits for aged care organisations and their workforce. Aged care organisations that put in place a supportive, social exchange culture, with high perceived organisational support, are more likely to put in place technological practices that are commensurate with positive computing. In such settings, positive computing has the ability to improve employee wellbeing and affective commitment and, to a lesser extent, a higher quality of proactive care. Positive computing is also a way to consider innovation at the frontline in aged care and can be part of the overall mix to improve carer wellbeing and effectiveness. The research findings in this study, although promising, are limited to one aged care organisation further research is required on the efficacy and utility of positive computing.

Acknowledgements

I have always wanted to do a PhD and to teach, however my career took me in a different direction in technology for a long time. I am happy to be able to complete this thesis and I hope I will be able to progress my career in teaching and technology research in aged care and other socially complex fields where technology has potential to help address challenges.

In terms of acknowledgements, I would like to start with my parents who are no longer with us. My mother Claire, who formed a large part of my views on the benefits of education, was semi-illiterate and could not read or help me or my sisters with school homework. This was very upsetting to her so she had the courage to go back to school at the age of 40 to learn how to read and write. This transformed her and the family, making the benefits of education apparent to me at an early age. I also have to thank my father, Tommy, who was a lorry driver delivering Guinness to the pubs of Dublin. He was an intelligent man who never had the chance to study but was never bitter about it. However, he was fortunate to work for a company which had great foresight in looking after their employees and he was grateful for the Guinness policy of providing interest free loans to employees to enable their children to go to university. For this I am grateful, and I know my father took great satisfaction from seeing the benefits to me from these loans.

I would like to thank my wife Anne and son Conor (now also a UTS student) for their patience and support over the last four years, particularly when I was sick and recovering from the stroke, as it took a toll on them mentally. I hope completing this thesis will help them see I am making a strong recovery and they need not worry as much.

I would like to thank the Golden family of Dublin who adopted me as a third son and showed me how to reach my potential in life and take opportunities that life brings your way. To Mr and Mrs Golden, I will always be grateful as you helped change the course of my life. To my best friends Jim and Dermot Golden, although we live on opposite sides of the world, our friendship will always be strong.

I would also like to remember some people who are no longer with us including my brother Ben who died at birth. Sadly, during the duration of this thesis, a number of people have died, some way too young: James Golden junior, who was taken by God at 18; my aunty Margaret in Edinburgh, who brought a lot of laughter to my life; and my son Conor's school mate Louis

who sadly decided this life was not for him. As I finalised this thesis I was saddened by the death of Dr Dean Jarrett my PhD buddy and fellow rugby tragic who was an inspiration to many indigenous students and always had a smile on his face. All of you are much loved and missed. Ar dheis De go raibh a n-anamacha.

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Táim buíoch díot go lír

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List of Key Terms

Term	Definition
Gerontechnology	"An interdisciplinary field of research and application involving ... the scientific study of aging, and technology, the development and distribution of technologically based products, environments, and services" (Fozard et al. 2000, p. 332).
Positive computing	Calvo and Peters refer to the "design and development of technology to support wellbeing and human potential as positive computing" (Calvo & Peters 2017, page 2). They have proposed that "it is the ideal moment to start measuring and designing for the impact of technologies on the psychological wellbeing of the people who use them" (Calvo & Peters 2017).
Positive psychology	"Personality characteristics that psychologists think contribute to an individual's productivity. These characteristics can include a person's perception of self, attitudes toward work, ethical orientation, and general outlook on life" (Goldsmith, Veum & Darity 1997, p. 815).
Wellbeing	"the degree of satisfaction and fulfilment experienced by individuals as a result of having their needs and wants met" (Veenhoven 2012, page 333).
Carers	In the literature, this generally applies to employees of aged care organisations who directly care for residents in the aged care facilities. This includes registered nurses (RN), trainee nurses, and Cerftificates 3 and 4-qualified staff.
Aged Care Staff	For the purpose of this thesis, [directly, and indirectly] aged care staff were employees of the aged care organisation where the study was done and were directly caring for the residents in the facilities visited, including registered nurses (RN), trainee nurses, and Cerftificates 3

and 4-qualified staff. It also includes staff who were not directly involved in the care of residents but were indirectly involved, e.g., cooks, managers, and health and safety staff.