Copyright is owned by the Author of the thesis. Permission is given for a copy to be downloaded by an individual for the purpose of research and private study only. The thesis may not be reproduced elsewhere without the permission of the Author.

DairyTale

Gamification as a means to raise awareness of sustainability

BY RAHUL MUKHERJEE

Master of Design (2014)

College Of Creative Arts
Massey University
Wellington
New Zealand

A thesis submitted in partial fulfilment of the requirements for the degree of Master of Design in Game Design Massey University Wellington New Zealand 2014

Abstract

A lack of sustainability is cause for major concern in developing societies. This study explores gamification as a means to raise awareness of sustainability within the context of India. The final outcome of this study is a role-playing card game called DairyTale. DairyTale is based on the identification of industrial agriculture as one of the major unsustainable practises behind environmental degradation and organic agriculture as a sustainable alternative. The game uses organic dairy agriculture as a case study towards communicating sustainable values through gamification of sustainable practises.

Epochal analysis as understood from Raymond Williams' theory of cultural formation helps towards understanding the socio-political and economic contexts associated with dairy within Indian culture. A human-centered design research approach enabled an iterative design process. Utilizing non-linear play-based methods informed by play theory and cultural contexts, a broad range of ideas were explored to understand what play experiences could communicate sustainable values.

Through design-led research, the study arrives at the design research outcome of DairyTale. DairyTale gamifies organic dairy practise to represent sustainability in its form, and attempts to communicate sustainable values through its function of play.

This document focuses on the design and development of DairyTale

Acknowledgements

I would like to thank my family for being a source of never ending support. This project would not have been possible without you. Thank you Julieanna, Antony and Anna for being open minded and patient with me. I am fortunate to have you as my supervisors. I would also like to thank my classmates for always being there whenever I needed them. You have been a source of immense reflection, understanding and learning for me. Thank you Cami, Shari, Pip, Jorge, Matty, Tom, for always supporting me and inspiring me to do my best. Thank you to all my friends from Massey anime club and finally, thank you New Zealand!

Contents

1.	Introduction	1
	Research aim	1
	Why raise awareness of sustainability	2
	Organic agriculture	3
	Organic dairy as a case study	5
	Gamification	6
	Gamification case studies	7
	Summary	10
2.	Contextual Theory	. 11
3.	Play Theory	. 15
4.	Methodology	. 18
5.	Design Development	. 21
	Experiment One: Smartphone App	21
	Experiment Two: Online Game	31
	Experiment Three: Digital to Analogue	40
	Experiment Four: Analogue Card Game	43
	Final Design	53
6.	Conclusion	. 59
7.	Works Cited	. 61
8.	Table of Figures	. 64
9.	Bibliography	. 65
	Amandia	70