# Table of contents

## Introduction

1. Introduction
   2. Theoretical concepts and background
      2.1 Frame of reference
      2.2 Unstructured problems
      2.3 Learning processes as strategy
      2.4 Multi-stakeholder learning as part of science and technology development
      2.5 Transdisciplinary research
      2.6 Operationalizing multi-stakeholder learning in transdisciplinary research
      2.7 Resistance to learning
      2.8 Summary

3. Research design

4. Setting the scene of the Seeking Sociable Swine project: Exploring possible value projects

## Results

5. Moving from monodisciplinarity towards transdisciplinarity: Insights into the barriers and facilitators that scientists faced

6. Scientists and Dutch pig farmers in dialogue about tail biting: Unravelling the mechanism of multi-stakeholder learning

7. Same pig, different conclusions: stakeholders differ in Qualitative Behaviour Assessment

8. Exploring the potential of Dutch pig farmers and urban citizens to learn through frame reflection

9. Engaging society in pig research. Lessons learned on how to facilitate multi-stakeholder dialogues to enhance animal welfare in pig production

## Conclusion

10. Conclusion & Discussion
Account

Chapters 5 to 9 are based on five co-authored articles that have been published or submitted to peer reviewed journals. Therefore, in these chapters, the we-form is used.

Chapter 5


Chapter 6


Chapter 7


Chapter 8

Benard M, de Cock Buning T (2013) Exploring the potential of Dutch pig farmers and urban citizens to learn through frame reflection. Journal of Agricultural and Environmental Ethics

Chapter 9