HAW Hamburg
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HAW HAMBURG

Modelling Research- and Software-Development Teams

Looking for Motivation and Innovation

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Overview

- Motivation
- Placement in Research
- Current Research Issues
- My Master Topic
- Setup
  - Dependencies
  - Risks
- Outlook / Road Map

Motivation

Motivation

- Project Management
- Employer Branding
- Diversity
- Motivation
- Communication
- Innovation
- WALK – Research Team

The Idea:

Modelling a Team

Placement in Research

Conferences / Journals

- SIG MIS
  Special Interest Group of the ACM on Management Information Systems
- SIG CPR
  Computers and People Research
- ITiCSE
  Innovation and Technology in Computer Science Education
- International Journal of Human Resource Management
- Academy of Management Review
- Journal of Management

- Until now, not yet considered in detail:
  - Journal of Organizational Behavior
  - International Journal of Cross-Cultural Management
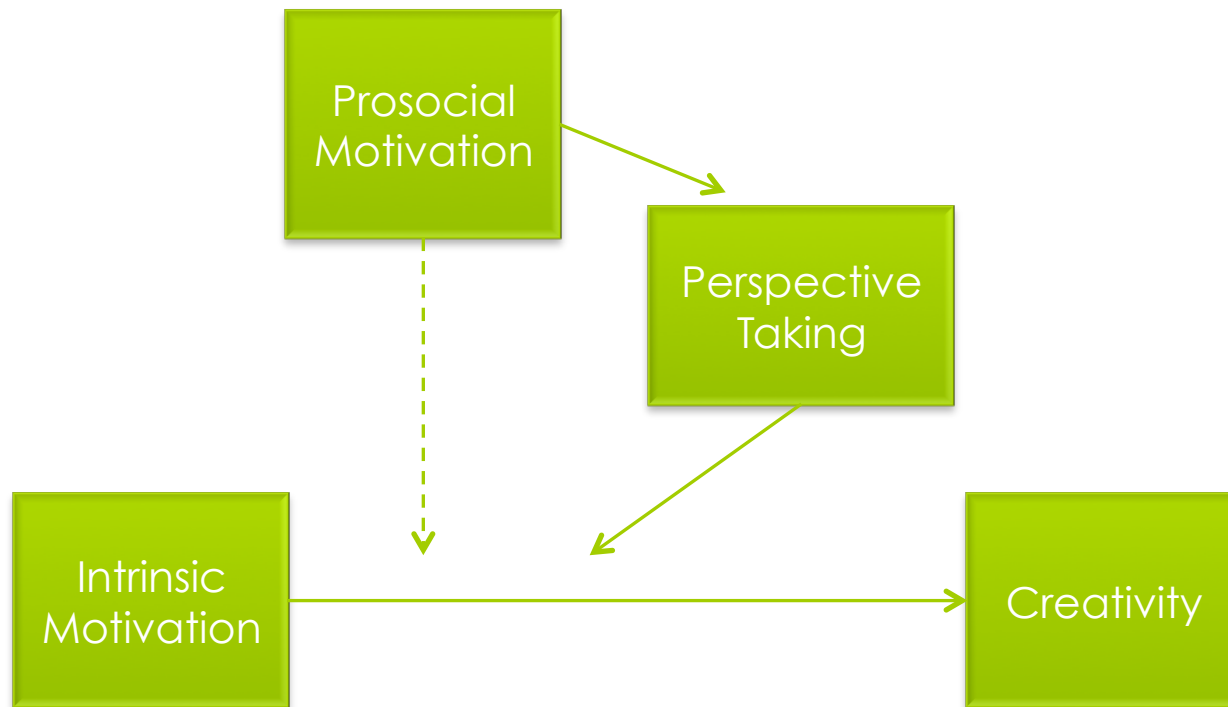
Current Research Issues

Staffing/Workforce Planning

Assigning available resources with the appropriat skills to tasks. Sticking to short- and long term strategies.

- Staffing a Software Project :
  a Constraint Satisfaction Approach
  (Barreto and Werner 2005)

- Simulation-based workforce assignment in a multi-organizational social network
  (multi objective optimization)
  (Celik et al. 2011)

- IT Workforce Planning
  (Adya and Niederman 2011)

Psychological Aspects (1/5)

THE NECESSITY OF OTHERS IS THE MOTHER OF INVENTION(Grant, Berry, and Carolina 2011)

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                    ┌──────────────┐
                    │  Prosocial   │
                    │ Motivation   │──────────┐
                    └──────┬───────┘          ▼
                           ┊           ┌──────────────┐
                           ┊           │ Perspective  │
                           ┊           │   Taking     │
                           ┊           └──────┬───────┘
                           ▼                  ▼
   ┌──────────────┐              ┌──────────────┐
   │  Intrinsic   │              │  Creativity  │
   │ Motivation   │─────────────▶│              │
   └──────────────┘              └──────────────┘
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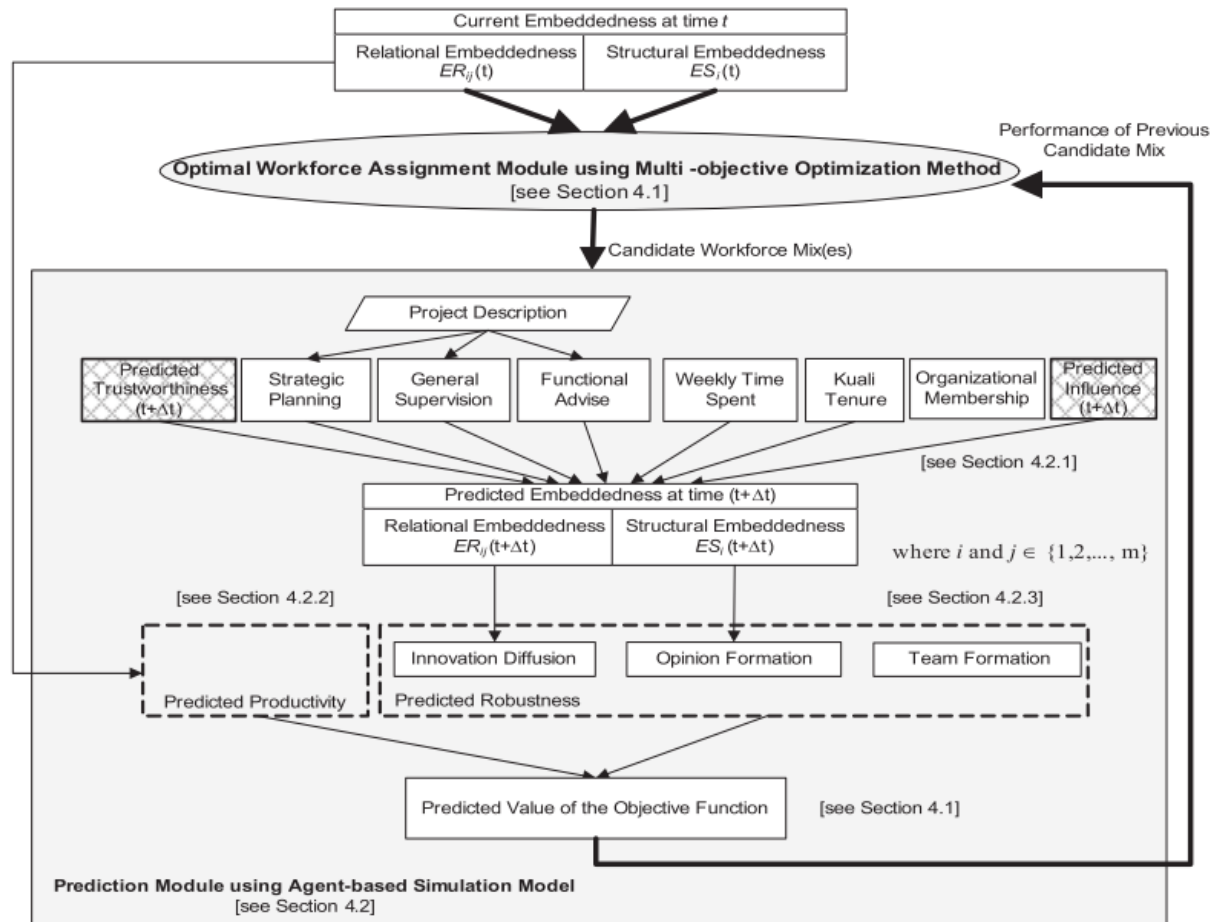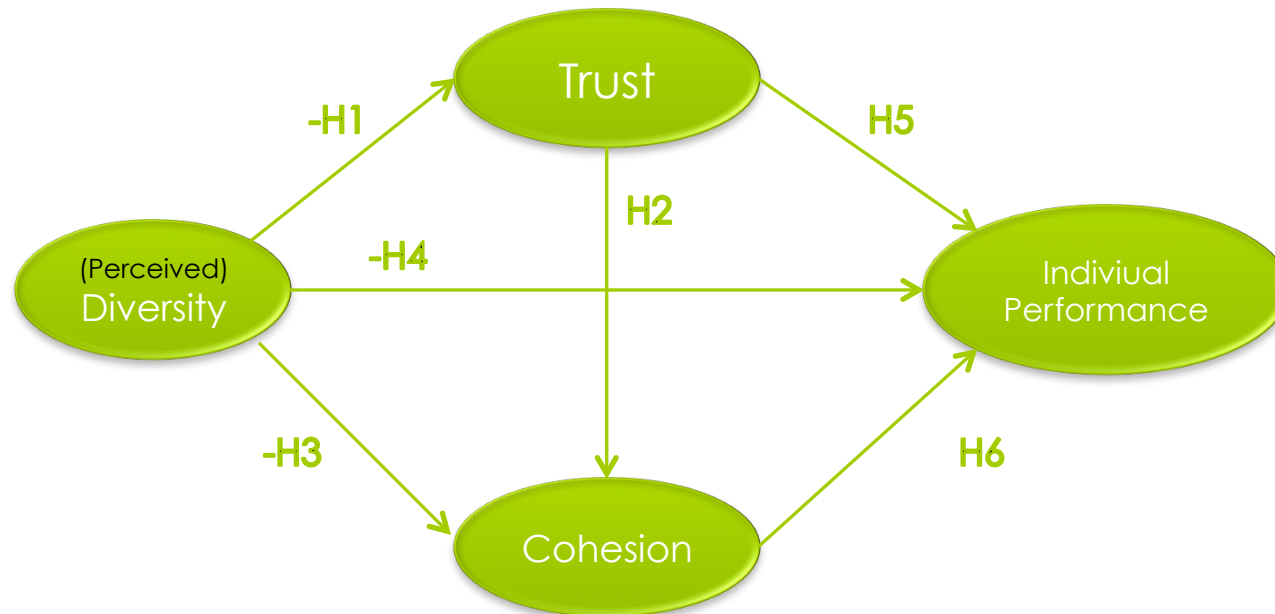# Psychological Aspects (2/5)

Fig. 3. Simulation-based optimal workforce assignment considering network embeddedness.

(Celik et al. 2011)

Psychological Aspects (3/5)

Globally Distributed Teams: The Effect of Diversity on Trust, Cohesion and Individual Performance
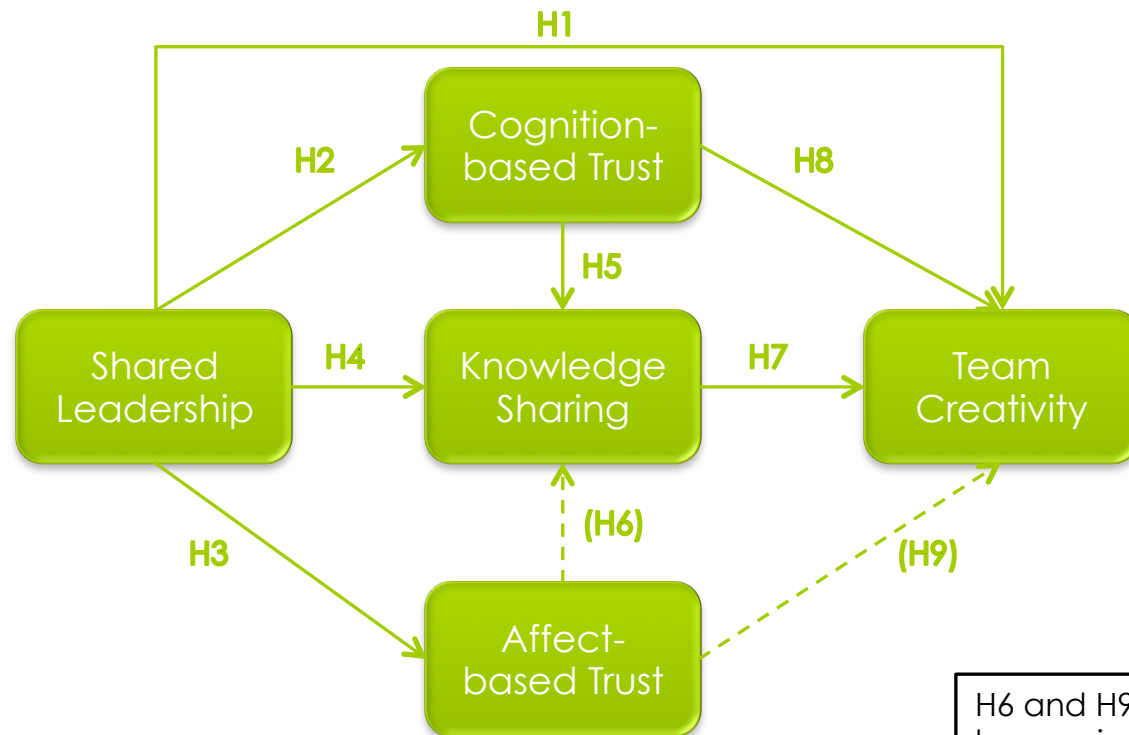(Garrison et al. 2010)

Psychological Aspects (4/5)

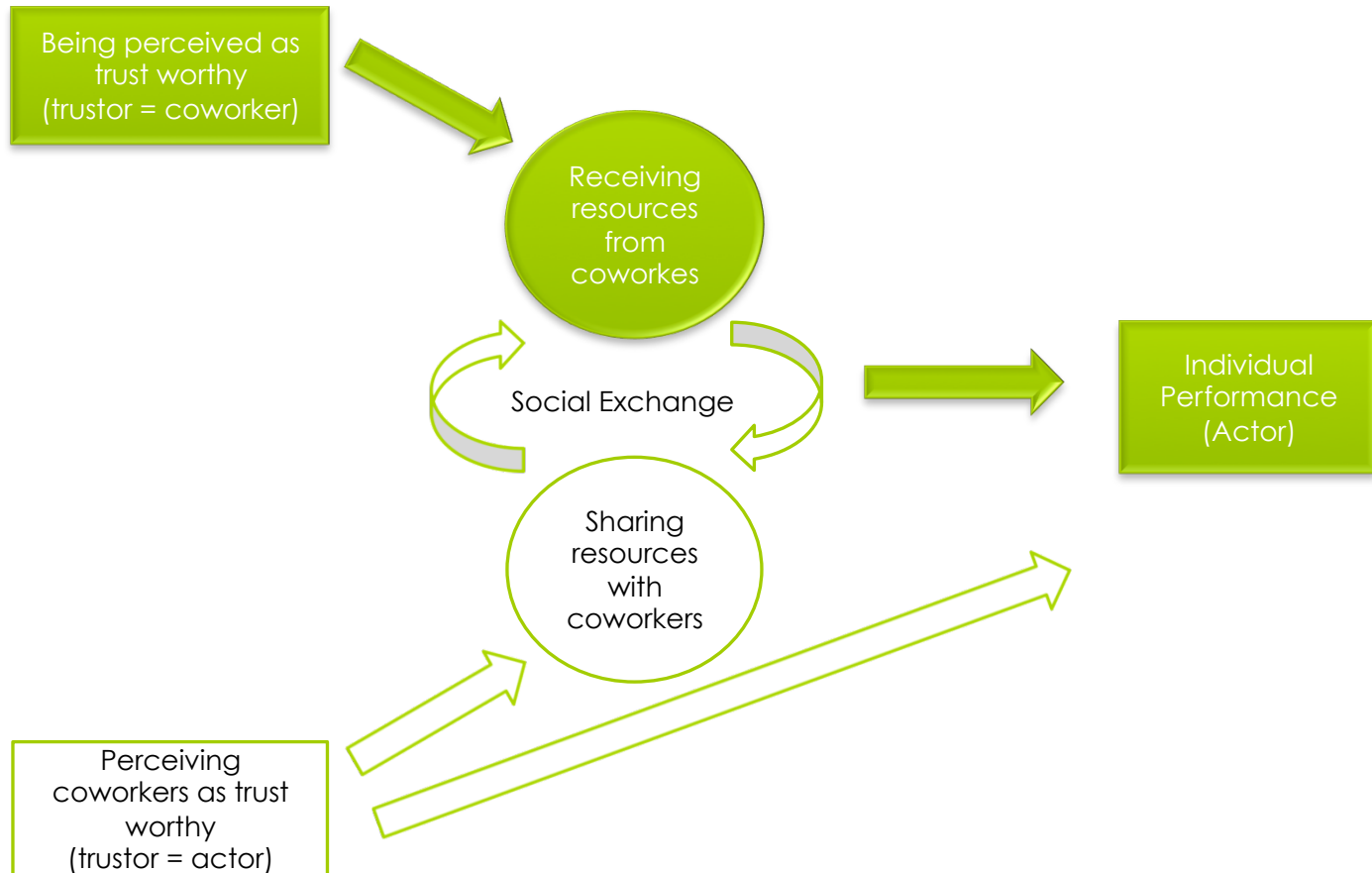Effects of shared leadership on team creativity through knowledge
(Kun Chang Lee, Dae Sung Lee, and Seo 2011)

H6 and H9 have been rejected

Psychological Aspects (5/5)

The Relationship Between Being Perceived as Trustworthy by Coworkers and Individual Performance

Being perceived as trust worthy
(trustor = coworker)

Receiving resources from coworkes

Social Exchange

Sharing resources with coworkers

Individual Performance (Actor)

Perceiving coworkers as trust worthy
(trustor = actor)

The shaded parts pf diagram represent the focus of this research; the unshaded part represent previous studies

Dirks, K. T., & Skarlicki, D. P. (2007).

Other Issues

- Making Things Happen:
  A Model of Proactive Motivation
  (Parker, Bindl, and Strauss 2010)

- Measuring Organizational Performance
  (Richard et al. 2009)

- Network Theory of Organization:
  A Multilevel Approach
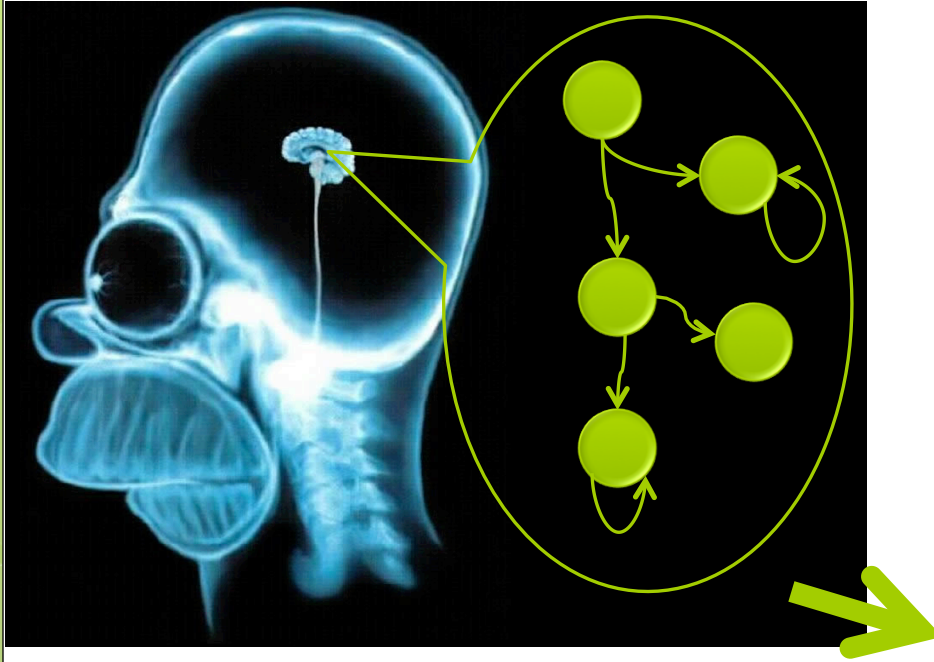 (Moliterno and Mahony 2010)

My Master Topic

Modelling Research- and Software-Development Teams

- What strives people?
- What motivates them?
- What makes them innovative?

- What can companies and managers do to make their employees innovative?

Multi Agent System

Setup

The Setup

- WALK
  - Access to the walk team to perform research
- Cielarko – South Africa
  - General support
  - Access to development teams
  - Formulating interesting questions on the model
- Microsoft Deutschland GmbH (Consulting Services)
  - Access to consulting teams
  - Formulating interesting questions on the model

Setup
Dependencies

Dependencies

- WALK
  - Emotional/Intelligent Agents
  - Agent Steering DSL
  - Event Processing
  - Visualization of Group Information

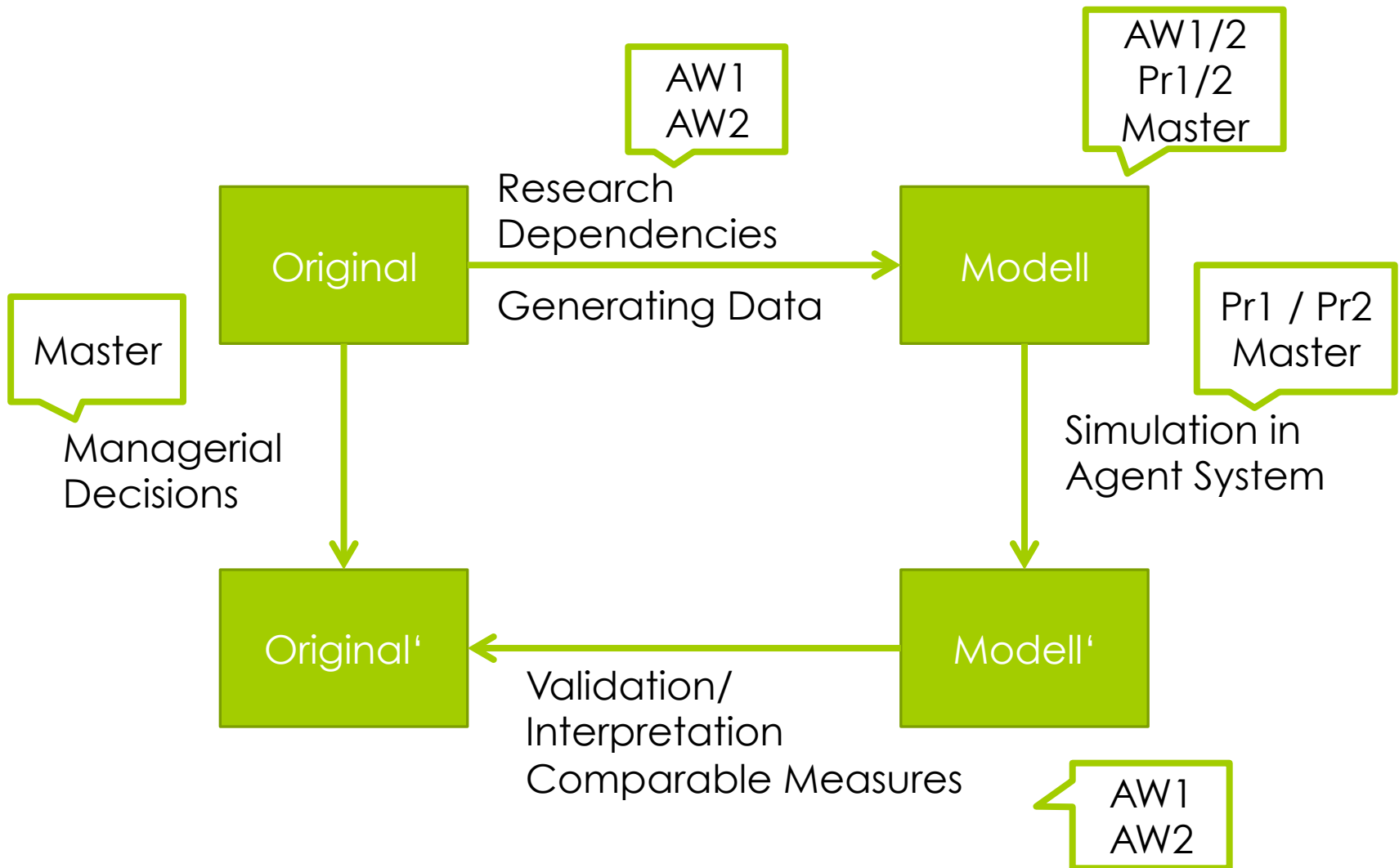- Access to teams to get enough empirical data

Setup
Risks

Risks

- Access to teams
- Focus of the model is too large or too small for the master thesis
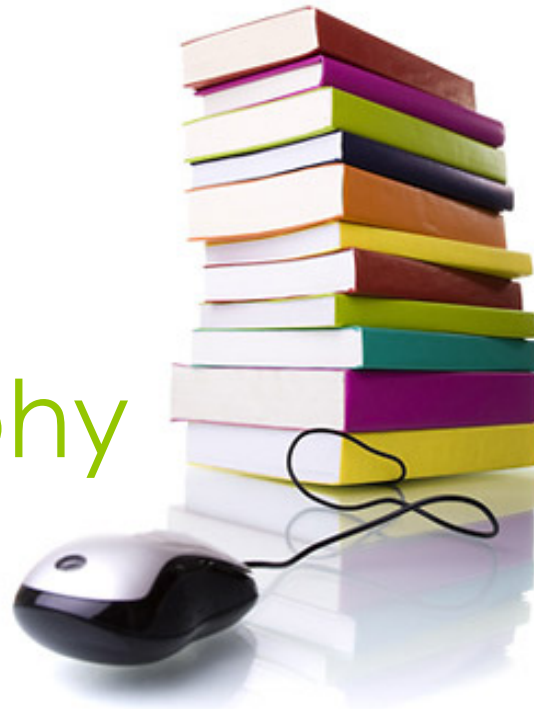- Difficulties to formulate clear managerial desicions

Road Map

Master Road Map

AW1
AW2

AW1/2
Pr1/2
Master

Pr1 / Pr2
Master

Master

Original → **Research Dependencies** / **Generating Data** → Modell

Managerial Decisions

Simulation in Agent System

Original' ← **Validation/ Interpretation Comparable Measures** ← Modell'

AW1
AW2

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