SIA & SIAM

Social Identity Approaches & Social Identity in ABMs

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Geeske Scholz & Nanda Wijermans

Social Simulation Week 2020

Workshop: Othering Polarisation and Social Identity

Social Identity approaches

Describes how:

- One behaves while being part of a group
- How groups interact
- How behaviours in groups change over time

Social identity approaches*

salience | ingroup vs outgroup

We have a personal and multiple social identities

Social identity approaches:

- Social identity theory
- Self-categorisation theory

Image credit: Petra Braun www.petra-braun.com

* Overview: Reicher, S. D., Spears, R., & Haslam, S. A. (2010). The social identity approach in social psychology. In M. S. Wetherell & C. T. Mohanty (Eds.), Sage identities handbook (pp. 45–62). London, UK: Sage. http://dx.doi.org/10.4135/9781446200889.n4

Social identity approaches

Social identity approaches:

- Social identity theory
- Self-categorisation theory

Social identity theory

salience · ingroup vs outgroup

We have a personal and multiple social identities

Context

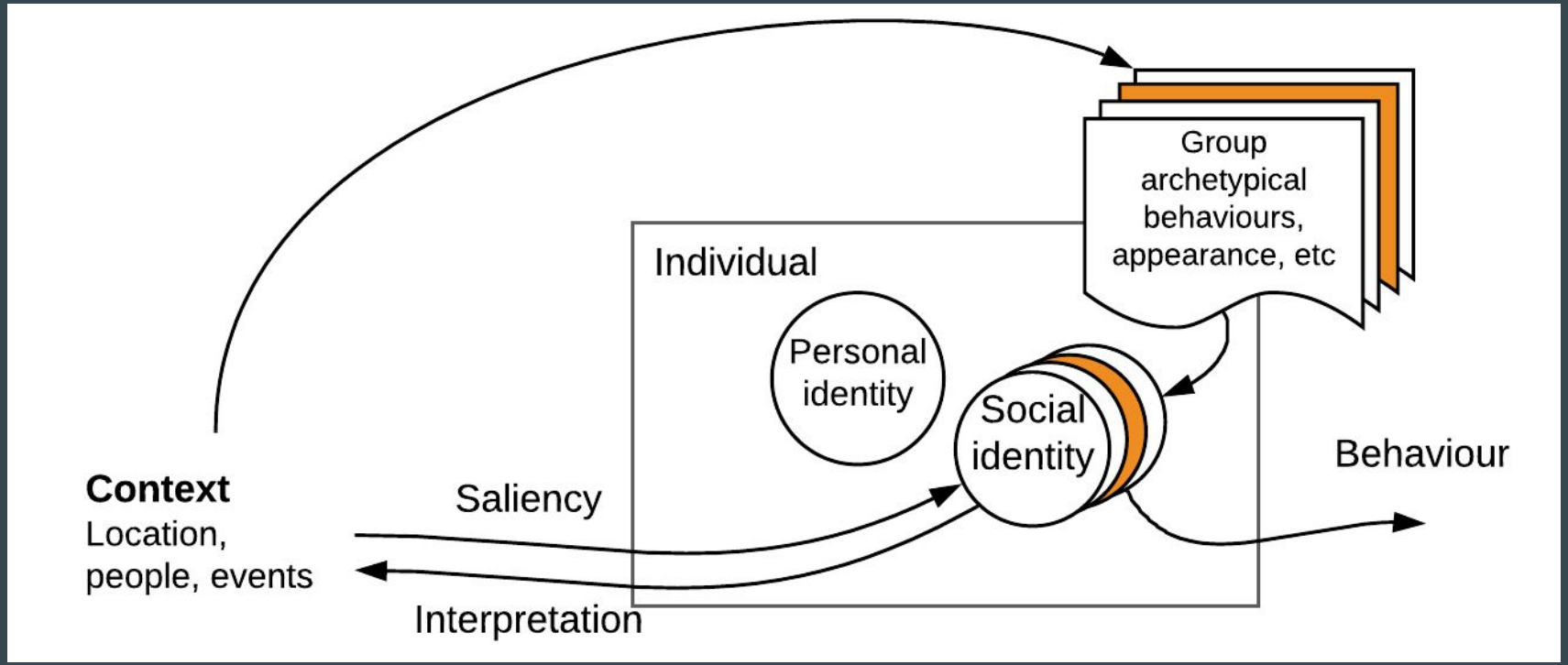
fit

How we categorise ourselves and others as a group member

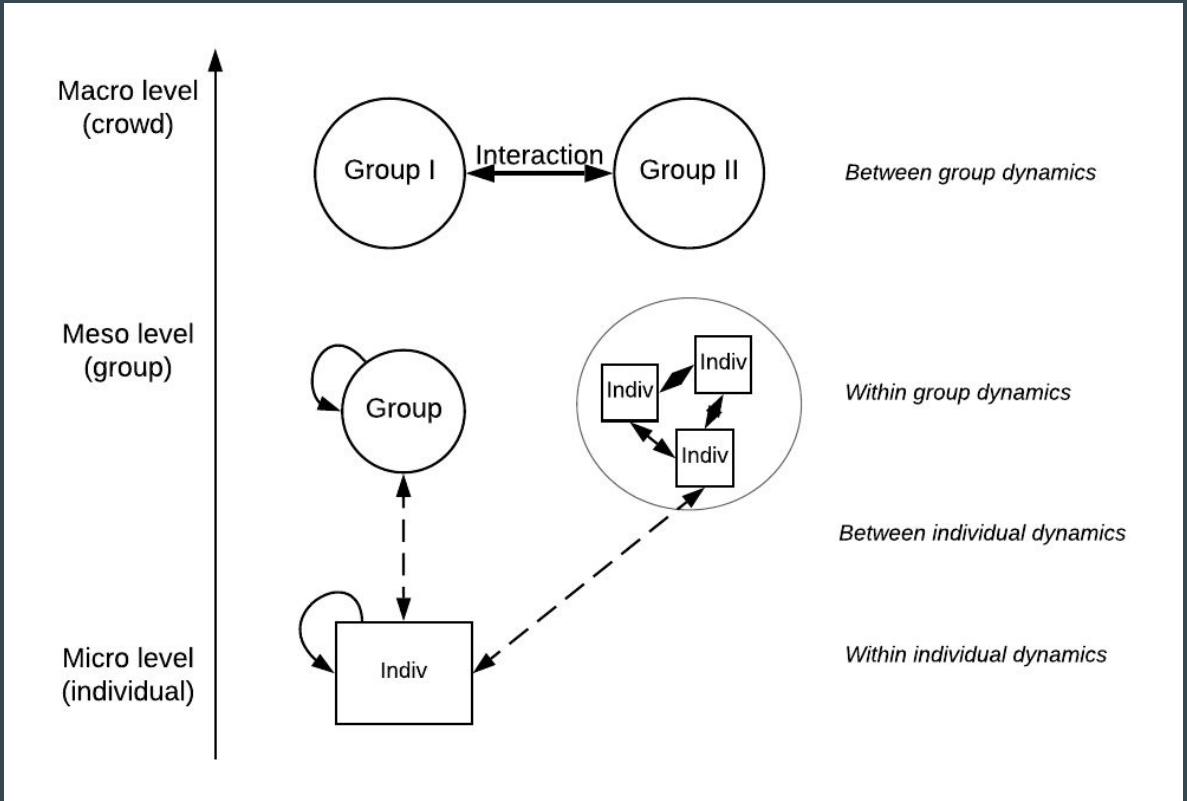
Context

A salient social identity → behaviour considered appropriate in ingroup more likely to be shown

Individual level processes



Social identity approaches



SIA in ABMs?

Paul Smaldino[a], Cynthia Pickett[b], Jeffrey Sherman[b] and Jeffrey Schank[b] (2012)

[a]Johns Hopkins University, United States; [b]University of California, Davis, United States

An Agent-Based Model of Social Identity Dynamics

Journal of Artificial Societies and Social Simulation 15 (4) 7
<http://jasss.soc.surrey.ac.uk/15/4/7.html>
DOI: 10.18564/jasss.2030

Armano Srbljinovic, Drazen Penzar, Petra Rodik and Kruno Kardov (2003)

An Agent-Based Model of Ethnic Mobilisation

Journ

The Emergence of a Shared Identity: An Agent-Based Computer Simulation of Idea Diffusion
David Rousseau and A. Maurits van der Veen
Journal of Conflict Resolution 2005; 49; 686
DOI: 10.1177/0022002705279336

A COMPUTATIONAL FRAMEWORK TO SIMULATE HUMAN AND SOCIAL BEHAVIORS FOR EGRESS ANALYSIS

Xiaoshan Pan[1], Chuck Han[2], Kincho H. Law[3], and Jean-Claude Lato

Conflict Management and Peace Science
2017, Vol. 34(6) 660–679
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sagepub.co.uk/journalsPermissions.nav
DOI: 10.1177/0738894215613035
journals.sagepub.com/home/cmp
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How ethnic structure affects civil conflict: A model of endogenous grievance

Alexander Kustov
Princeton University, USA and LCSR, National Research University Higher School of Economics, Russia

Ian Lustick (2002)

PS-I: A User-Friendly Agent-Based Modeling Platform for Testing Theories of Political Identity and Political Stability

Journal of Artificial Societies and Social Simulation vol. 5, no. 3
<http://jasss.soc.surrey.ac.uk/5/3/7.html>

Insights from a pre-review

Scholz, Eberhard, Ostrowski & Wijermans (In press) "Social identity in agent-based models – exploring the state of the art". Proceedings of the Social Simulation Conference 2019

Diversity of research areas

- social science / social psychology / crowd simulation / peace and conflict research / business management / environmental system science

Many models that relate to SIA only superficial

Insights from a pre-review

Most commonly implemented

- group norms and dynamics between groups
- in-group favouritism or out-group devaluation
- multiple social identities of one agent

Rare

- agent's motivation for acting on SIT
- strategies to contain or enhance positive self-esteem
- models that implement all aspects of SIA

Identity and Self-concept

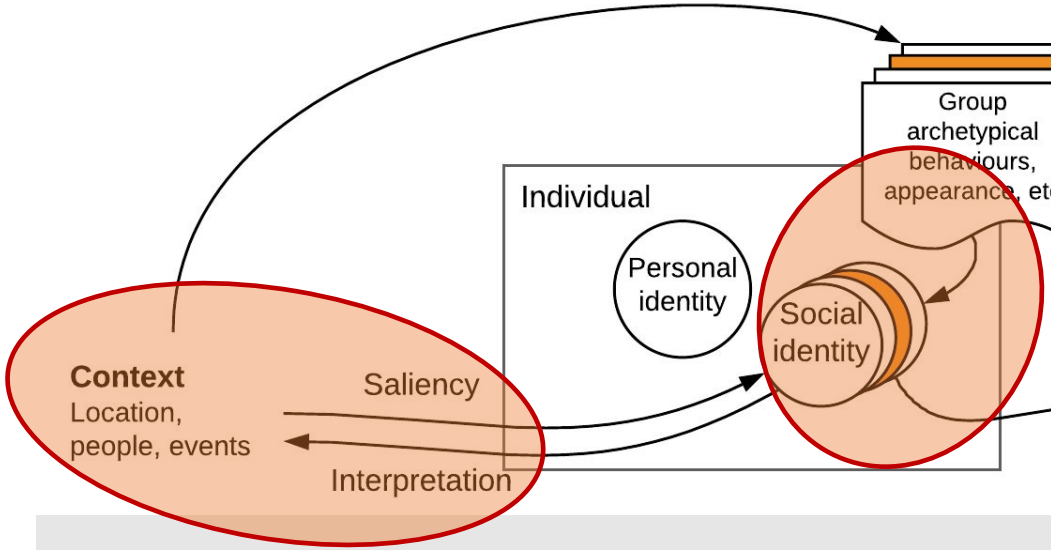
Salience = *Accessibility x Fit*

Accessibility is determined by experience and situational motivations

- cognitive or emotional

Situational Fit refers to a normative as well as a comparative component

- Normative: extent to which an observed behavior matches the perceiver's stereotypical expectations
- Comparative: meta-contrast ratio



Preliminary conclusions & discussion

- Use of SIA in models on the rise
- Congruence of formalization differ
- While differing model foci and application cases might create the need for different formalizations, transparency and a comparison of different options and their consequences would facilitate an informed choice for a specific option

SIAM network

Contribute towards formalizing the social identity approach for the use in agent-based models

Targets

- review paper of ABMs using the social identity theory
- a conceptual model (set) formalization of SIA (paper, ODD+D, and MOHUB-CC)

https://www.siam-network.online/

erdinanda Wijermans
Anne
Geeske Scholz
Bruce Edmonds
Martin Neumann
Immo Fritsche
ejlchappin
Tony Craig
Geo Kocheril
Rocco Paolillo
Torsten Masson

social
group
identity
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norms
differences
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Thank you for your attention 😊

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