## Appendix

### Table 1: Overview of all 43 model papers included in the analysis and their research domain

<table>
<thead>
<tr>
<th>Paper reference</th>
<th>Domain</th>
</tr>
</thead>
<tbody>
<tr>
<td>Abrica-Jacinto, N.L., Kurmyshev, E., Juárez, H.A., (2017). Effects of the interaction between ideological affinity and psychological reaction of agents on the opinion dynamics in a relative agreement model. JASSS (Journal of Artificial Societies and Social Simulation), 20, 3. DOI:10.18564/jasss.3377.</td>
<td>opinion dynamics</td>
</tr>
<tr>
<td>Dimas, J., Prada, R., (2014). Dynamic identity model for agents. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 8235 LNAI, 37-52. DOI:10.1007/978-3-642-54783-6_3.</td>
<td>virtual believable agents</td>
</tr>
</tbody>
</table>


van der Wal, C.N., Couwenberg, M., Bosse, T., (2017). Getting frustrated: Modelling emotional contagion in stranded passengers. Lecture Notes in Computer Science (including subseries Lecture Notes in Artificial Intelligence and Lecture Notes in Bioinformatics), 10350 LNCS, 611-619. DOI:10.1007/978-3-319-60042-0_67.


**Table 2:** Overview of models and the categories they incorporated, provided as extra pdf file.
<table>
<thead>
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</tr>
</thead>
<tbody>
<tr>
<td>Abrica-Jacinto, Kurmyshev and Juárez 2017</td>
<td>opinion dynamics</td>
<td>Individual</td>
<td>opinion formation and affinity</td>
<td>private opinion</td>
<td>tag</td>
<td>NA</td>
<td>implicit, affinity</td>
<td>relative agreement (not defined as comparative fit)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Akhmad, Chang, and Deguchi 2018</td>
<td>conflict research</td>
<td>individual</td>
<td>changing beliefs/stereotype s by cooperation or non-cooperation</td>
<td>NA</td>
<td>tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>stereotype belief function</td>
</tr>
<tr>
<td>Alizadeh et al. 2014</td>
<td>opinion dynamics</td>
<td>individual</td>
<td>opinion</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>opinion</td>
</tr>
<tr>
<td>Alizadeh, Cioffi-Revilla, and Crooks 2015</td>
<td>opinion dynamics</td>
<td>individual</td>
<td>opinion</td>
<td>NA</td>
<td>tag</td>
<td>yes</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>influence of in-group/out-group</td>
<td>NA</td>
<td>NA</td>
<td>opinion</td>
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<tr>
<td>Bakillah et al. 2013</td>
<td>crowds</td>
<td>individual and actors with collective responsibility</td>
<td>evacuating, sending messages (authority agents)</td>
<td>NA</td>
<td>tag</td>
<td>yes</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>focus on collective action</td>
<td>emergence of new identity groups</td>
<td>NA</td>
<td>NA</td>
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<td>Bravo and Yantseva 2020</td>
<td>conflict research</td>
<td>individual</td>
<td>giving help reproduce “harming” (reducing reproduction probability)</td>
<td>NA</td>
<td>tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>tags influence decision (no salience needed)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<td>Chae, Seo and Lee 2015</td>
<td>organizations</td>
<td>individual</td>
<td>knowledge exchange, strategy (exploitation/exploration), problem solving</td>
<td>implicit, knowledge base</td>
<td>implicit, tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>intergroup bias for outgroup</td>
<td>NA</td>
<td>NA</td>
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<td>Choi and Lee 2018</td>
<td>organizations</td>
<td>individual</td>
<td>adherence to norm</td>
<td>unclear, degree of identification, tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>adherence to safe behaviors</td>
<td>NA</td>
<td>NA</td>
<td>behaviour, unclear</td>
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<td>Cioroianu 2020</td>
<td>social dilemma</td>
<td>individual</td>
<td>playing PD (cooperate or defect)</td>
<td>NA</td>
<td>tag</td>
<td>yes</td>
<td>probabilistic</td>
<td>NA</td>
<td>NA</td>
<td>defines strategy</td>
<td>NA</td>
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<td>Study</td>
<td>Type</td>
<td>Observer</td>
<td>Interaction</td>
<td>Identification</td>
<td>Identification</td>
<td>Identification</td>
<td>Identification</td>
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<tr>
<td>Dimas and Prada 2014</td>
<td>virtual believable agents</td>
<td>individual</td>
<td>cooperation in the example</td>
<td>set of characteristics</td>
<td>set of characteristics</td>
<td>yes</td>
<td>formula: salience = fit x accessibility</td>
<td>meta contrast ratio</td>
<td>yes, unclear</td>
<td>shift towards the values, goals of the prototypical characteristics of that specific social group</td>
<td>based on context-specific salient characteristics the agent employs comparative fit and can fill in characteristics of a group with the characteristics of the most prototypical group member</td>
<td>NA</td>
<td>characteristics; explicit [e.g. skin, clothes] or implicit [social values, norms, interest, goal]</td>
</tr>
<tr>
<td>Ekmekci and Casey 2011</td>
<td>organizations</td>
<td>individual</td>
<td>randomly interact with each other (this allows the agents to compare their attributes to the other agents' attributes), construct an organizational identity</td>
<td>unclear, set of characteristics</td>
<td>unclear, identification</td>
<td>NA</td>
<td>NA</td>
<td>comparison of own attributes with organization</td>
<td>NA</td>
<td>NA</td>
<td>during the simulation identification with the organization is emerging</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Flache 2018</td>
<td>opinion dynamics</td>
<td>individual</td>
<td>influencing</td>
<td>NA</td>
<td>tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Frank and Penuel 2018</td>
<td>organizations</td>
<td>individual</td>
<td>tie formation, opinion</td>
<td>NA</td>
<td>tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>stronger adherence to norms of intraorganizational network</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Frantz et al. 2015</td>
<td>misc</td>
<td>individual</td>
<td>trade</td>
<td>set of characteristics</td>
<td>set of characteristics, tag</td>
<td>yes</td>
<td>NA</td>
<td>NA</td>
<td>generalization from individual observations, stereotype and how to behave with them</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>similarity in features</td>
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<td>Hesan, Ghorbani and Dignum 2014</td>
<td>group membership</td>
<td>individual</td>
<td>opinion</td>
<td>NA</td>
<td>tag</td>
<td>yes</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>conformity: pressure to social influence</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Higino, Mascarenhas, and Prada 2016</td>
<td>virtual believable agents (virtual agent)</td>
<td>non playable character (non playable character)</td>
<td>diverse behaviours, in the example case donating money</td>
<td>set of characteristics</td>
<td>yes</td>
<td>formula: salience = fit x accessibility</td>
<td>NA</td>
<td>average of adequacy and affordance of a character to the context</td>
<td>filtering and choice of behaviour (depending on behavioural options)</td>
<td>NA</td>
<td>goal and adequacy affordance</td>
<td>values, resources, goals</td>
<td>commitment (value)</td>
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<tr>
<td>Source</td>
<td>Study Type</td>
<td>Study Level</td>
<td>Research Area</td>
<td>Tag</td>
<td>Set of Characteristics</td>
<td>Influence of In-group/Out-group</td>
<td>Meta-Contrast</td>
<td>Weight for Each Identity</td>
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<td>Hofstede et al. 2015</td>
<td>misc</td>
<td>individual</td>
<td>finding playmates, status conferral, power exchange (fighting), leaving a group</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<td>Jani 2020</td>
<td>group membership</td>
<td>individual</td>
<td>movement (spatial relocation)</td>
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<td>Jung, Bramson and Crano 2018</td>
<td>misc</td>
<td>individual</td>
<td>attitude change due to ingroup influence</td>
<td>NA</td>
<td>tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<td>Kim and Hanneman 2011</td>
<td>conflict research</td>
<td>individual</td>
<td>choice to participate in collective action</td>
<td>NA</td>
<td>tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<td>Lim, Zo and Lee 2011</td>
<td>opinion dynamics</td>
<td>individual</td>
<td>opinion</td>
<td>NA</td>
<td>NA</td>
<td>influence of in-group/out-group</td>
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<td>Mason, van der Putten and van Duijn 2020</td>
<td>opinion dynamics</td>
<td>individual</td>
<td>opinion</td>
<td>NA</td>
<td>NA</td>
<td>influence of in-group/out-group</td>
<td>NA</td>
<td>NA</td>
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<td>Medeiros and van der Wal 2017</td>
<td>crowds</td>
<td>individual</td>
<td>misbehaviour, secondary actions (sit, go to the toilet, walk, go to a restaurant)</td>
<td>NA</td>
<td>implicit, set of characteristics</td>
<td>influence of in-group/out-group</td>
<td>NA</td>
<td>NA</td>
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<td>Metz 2011</td>
<td>opinion dynamics</td>
<td>individual</td>
<td>party identification</td>
<td>NA</td>
<td>implicit, meta-contrast</td>
<td>party identification and signaling of decision</td>
<td>NA</td>
<td>NA</td>
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<td>Miodownik and Cartrite 2010</td>
<td>conflict research</td>
<td>individual</td>
<td>change identity activation and identity subscription</td>
<td>NA</td>
<td>tag</td>
<td>behaviour (participation in movement)</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Study</td>
<td>Research Area</td>
<td>Setting</td>
<td>Type of Decision</td>
<td>Measuring</td>
<td>Tag</td>
<td>Other Characteristics</td>
<td>Tag</td>
<td>Social Influence</td>
<td>Membership Degree</td>
<td>Characteristics</td>
<td>Norm/Group Opinion</td>
<td>Opinion Change</td>
<td>Reward for Conforming</td>
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<tr>
<td>Morano, de Moraes and Jacomossi 2018</td>
<td>Social Dilemma</td>
<td>Individual</td>
<td>Obey or not rules on resource extraction</td>
<td>Equation</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Self-restraint increases under collective identity conditions</td>
<td>NA</td>
<td>NA</td>
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<td>Mosier and Brucks 2008</td>
<td>Social Dilemma</td>
<td>Individual</td>
<td>Resource use</td>
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<td>NA</td>
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<td>NA</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Moulin and Larochelle 2010</td>
<td>Crowds, Spatio-temporal group</td>
<td>Individual, Group</td>
<td>Leader: Stereotypical behaviour, agents: Join group, Control: actions, Crowd: Collective actions</td>
<td>Set of characteristics</td>
<td>Implicit</td>
<td>Yes</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>(Implicit) compare the collective actions of a group to their personal norms</td>
<td>NA</td>
<td>NA</td>
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<td>Pickett et al. 2011</td>
<td>Group Membership</td>
<td>Individual</td>
<td>Group change (join/leave group)</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<td>Pires and Crooks 2017</td>
<td>Conflict Research</td>
<td>Individual and Household</td>
<td>Collective action (rioting), households select a home</td>
<td>Set of characteristics, Implicit</td>
<td>Tag</td>
<td>Yes</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Collective actions</td>
<td>Yes, rioter, depending on energy &amp; self-esteem</td>
<td>Self-esteem</td>
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<tr>
<td>Qiao et al. 2014</td>
<td>Misc</td>
<td>Node (in the network)</td>
<td>Not really choices/behaviours, just connecting</td>
<td>NA</td>
<td>Tag</td>
<td>Yes</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<td>Salzarulo 2006</td>
<td>Opinion Dynamics</td>
<td>Individual</td>
<td>Opinion change</td>
<td>Unclear, Opinion</td>
<td>Yes</td>
<td>NA</td>
<td>NA</td>
<td>Metacontrast principle</td>
<td>Implicit difference from the prototypical opinion of the ingroup</td>
<td>In-group influence</td>
<td>NA</td>
<td>Opinion</td>
<td>NA</td>
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<td>Seeme, Green and Kopp 2019</td>
<td>Opinion Dynamics</td>
<td>Individual</td>
<td>Opinion &amp; Group Belonging/Formation</td>
<td>Private opinion</td>
<td>Tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Conform to group opinion</td>
<td>Yes, the agent switches to a new SI if this gives a higher reward, which is if it is closer to its own opinion</td>
<td>Group reward for conforming, weak</td>
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<tr>
<td>Shults et al. 2018</td>
<td>Conflict Research</td>
<td>Individual</td>
<td>Religious Violence</td>
<td>NA</td>
<td>Set of characteristics</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Predisposition to Intergroup Violence</td>
<td>NA</td>
<td>NA</td>
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<td>Situngkir 2004</td>
<td>Conflict Research</td>
<td>Individual</td>
<td>Influencing other agents' mobility (mobilisation)</td>
<td>Membership Degree</td>
<td>Tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>Social Influence of Ingroup</td>
<td>NA</td>
<td>NA</td>
<td>Behaviour</td>
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<td>Year</td>
<td>Type</td>
<td>Level</td>
<td>Variable 1</td>
<td>Tag</td>
<td>Variable 2</td>
<td>Variable 3</td>
<td>Variable 4</td>
<td>Variable 5</td>
<td>Variable 6</td>
<td>Variable 7</td>
<td>Variable 8</td>
<td>Variable 9</td>
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<tr>
<td>Skarin 2014</td>
<td>conflict research</td>
<td>individual</td>
<td>individual and collective actions</td>
<td>unclear, self-esteem, set of characteristics</td>
<td>tag</td>
<td>yes</td>
<td>implicit, self-esteem, identification</td>
<td>NA</td>
<td>NA</td>
<td>collective actions</td>
<td>NA</td>
<td>self-esteem</td>
<td>NA</td>
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<tr>
<td>Smaldino et al. 2012</td>
<td>group membership</td>
<td>individual</td>
<td>group/identity change (join/leave group)</td>
<td>NA</td>
<td>tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>the change to a new group is by definition a novel group for the agent</td>
<td>desire for inclusion and distinctiveness, implicit</td>
<td>NA</td>
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<tr>
<td>Smaldino et al. 2017</td>
<td>opinion dynamics</td>
<td>individual</td>
<td>adoption or rejection of new products</td>
<td>NA</td>
<td>tag</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>social influence</td>
<td>NA</td>
<td>NA</td>
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<tr>
<td>Stephen 2019</td>
<td>crowds</td>
<td>individual</td>
<td>movement to attraction point</td>
<td>implicit, personal preference structure</td>
<td>influencing</td>
<td>yes</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>walking direction, collective emotion</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
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<td>Upal and Gibbon 2015</td>
<td>group membership</td>
<td>individual</td>
<td>strategy (e.g., group derogation) to increase self-esteem</td>
<td>self-esteem, implicit</td>
<td>tag</td>
<td>yes</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>NA</td>
<td>self-esteem</td>
<td>NA</td>
</tr>
<tr>
<td>van der Wal, Couwenberg, and Bosse 2017</td>
<td>crowds</td>
<td>individual</td>
<td>do nothing, ask question, yelling, intimidation</td>
<td>NA</td>
<td>tag</td>
<td>yes</td>
<td>NA</td>
<td>implicit, similarity in traits</td>
<td>NA</td>
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<tr>
<td>Van Rooy 2012</td>
<td>opinion dynamics</td>
<td>individual brain</td>
<td>opinion</td>
<td>set of characteristics</td>
<td>set of characteristics</td>
<td>yes</td>
<td>priming</td>
<td>NA</td>
<td>NA</td>
<td>activation levels change (&quot;grown&quot; out of the recurrent network rules)</td>
<td>yes, learned (recurrent network)</td>
<td>NA</td>
<td>traits for ingroup stereotypes</td>
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<td>Wellman et al. 2020</td>
<td>organizations</td>
<td>individual</td>
<td>decide (option A, B, scope/links, social identity)</td>
<td>NA</td>
<td>identification</td>
<td>NA</td>
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