A pair of agents; they exchange their findings (this synchronisation, in turn, may be global to the population or local to peers). Roughly, three modalities can be compared:

- Agents develop independent alignments, but from time to time, proceed to synchronisation when with their peers the correspondences that they found. These problems may be approached either theoretically or experimentally, through the framework of cultural evolution. Experimental cultural evolution provides a population of agents with interaction games that are played randomly. In reaction to the outcome of such games, agents adapt their knowledge. It is possible to test hypotheses by precisely crafting the rules used by agents in games and observing the consequences.

We want first to understand when this occurs as well as what can be done for the agents to share their knowledge. We aim at studying the effectiveness and robustness of such a process.

Our ambition is to adapt the successful cultural language evolution approach [Steels, 2012] to the evolution of the way agents represent knowledge [Euzenat, 2014; Anslow & Rovatsos, 2015; Chocron & Schorlemmer, 2016]. We have applied this approach to ontology alignment repair, i.e., the improvement of incorrect alignments [Euzenat, 2014; 2017]. For that purpose, we performed a series of experiments in which agents react to mistakes in ontology alignments — expressing relations across ontology concepts [Euzenat & Shvaiko, 2013]. Agents only know about their ontologies and may however attempt at communicating and progressively align their knowledge. It is possible to test hypotheses by precisely crafting the rules used by agents in games and observing the consequences.

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We want first to understand when this occurs as well as what can be done for the agents to share their peers the correspondences that they found. Roughly, three modalities can be compared:

- Agents develop independent alignments which can be compared;
- Agents develop independent alignments, but from time to time, proceed to synchronisation when they exchange their findings (this synchronisation, in turn, may be global to the population or local to a pair of agents);
Agents develop from the beginning shared alignments. In the two latter modalities, different operations may be used to aggregate the results brought by other agents. Finally, it is possible to consider more than two populations and/or ontologies, eventually by splitting and merging populations and to study its impact on the alignment process.

Compétences
- Curiosity and openness.
- Interaction with other researchers.
- Autonomous researcher.
- Taste for experimentation.
- Knowledge of multi-agent simulation and/or logic not required but a plus.
- Innovative.

Bibliography

Avantages sociaux
- Subsidised catering service
- Partially-reimbursed public transport
- Social security
- Paid leave
- Flexible working hours
- Sports facilities

Rémunération
Monthly salary after taxes : around 1596,05€ for 1st and 2nd year. 1678,99€ for 3rd year. (medical insurance included).