Report of Changes 2018/Oct/12

1. The way the average is calculated is changed.

First in Person state *yearly\_interactions* we reverse the called of methods, we call first the methods for *Set\_LastYear\_Average*\_ (OGS, IGS,ShNr; and *this\_year\_average* is reset to 0). Then we set the *cumulative\_average* to the *last\_year\_average*. In other words, the cumulative average is not the cumulative over all years an agent has lived but the one of the past year only.

Consequently, the method *SetCumulativeAveragesOutInSharedNorms* was changed, this cumulative average corresponds now to the one of the past year and not of overall years of the simulation.

1. We did the same for the links and interaction ratios Maj:Min.

Two agents’ variables added: last year\_average\_Maj\_Min\_interactions(links)\_ratio.

Two methods added: Set\_LastYear\_Average\_Maj\_Min\_interactions(links)\_ratio.

Methods called in the yearly\_updates state together with the methods for OGS,IGS and ShNo

SetCumulativeAveragesMajMinRatios changed so the current average is set to past year.

1. All variables in Main related to the cumulative averages were added a prefix “Cum\_”
2. The names of the two methods collecting cum averages were changed, *Cum* was added
3. A new variable was added in main: “Employment availability” calculated in the weekly\_list\_updates even in main as:

**double** Jobs\_available = 0;

**double** Jobs\_Taken = 0;

**for** (**int** i = 0; i < employment\_Places.size(); i++)

{

Jobs\_available += (**double**) employment\_Places.get(i).Number\_Of\_Jobs;

Jobs\_Taken += (**double**) employment\_Places.get(i).Current\_Employed;

}

Employment\_ availability = (Jobs\_available - Jobs\_Taken) / Jobs\_available;

Employment\_ availability then replaces the parameter Employment\_Change\_Pct\_Majority when individuals are NOT\_EMPLOYED and looking for a job in the method “Update\_Montly\_Employment” in Person.

1. Number\_of\_Employers added to the initial number of agents for Agent Employment\_Place in Main.
2. A modification was done to the algorithm determining the chances of the minority employed of losing their job. Previously it was:

else if ((…)&&(chance\_of\_employmentnotChange < (get\_Main().Employment\_Change\_Pct\_Majority \* get\_Main().Enforced\_Antidiscr)))

Because Enforced\_Antidiscrimination takes values [0,1], the chance of the minority losing their job were <= than that of the MAJORITY (chance\_of\_employmentnotChange). To avoid this and make the chances of the MINORITY losing their job higher than that of the MAJORITY the following change was introduced:

**else** **if** ((…)&&(chance\_of\_employmentnotChange < ( (get\_Main().Employment\_Change\_Pct\_Majority)\*(1+(1-get\_Main().Enforced\_Antidi))

In this way the chances of the MINORITY losing their job are higher than those of MAJORITY, and the increase is inversely proportional to the value of Enforced\_Antidiscrimination value. So, if enforced antidiscrimination is 0.9, 0.6, 0.3, 0.2, the increase is 0.1, 0.4, 0.7, and 0.8 respectively.

Report of Changes and additions 2018/Oct/19

1. In Person, function Set\_Outgroup\_Suspicion. Standard deviations of the values for the maj/min groups were wrongly set. Now they are correct.
2. A new output file was added. This file captures individuals’ attributes annually and includes all agents. This should be considered when doing analyses, since agents <= 12 do not start interactions yet and their IGS, OGS and ShNr values are averages of that of their parents values.
3. A new parameter SimulationID was added in Main. This parameter keeps track of the Iteration number and replication number. The default value is set to “NA”. If needed, it has to be set in the “Before simulation run” field in a given experiment (e.g. see Monte Carlo experiment).

Changes made to CRED 2018/Oct/30

Methods added: Set\_ThisYear\_Average\_WorldView (Frustration), Set\_Last year\_Average\_WorldView (Frustration), Update\_Kids\_WorldView (NOTE, should frustration also be set to the average of parents)