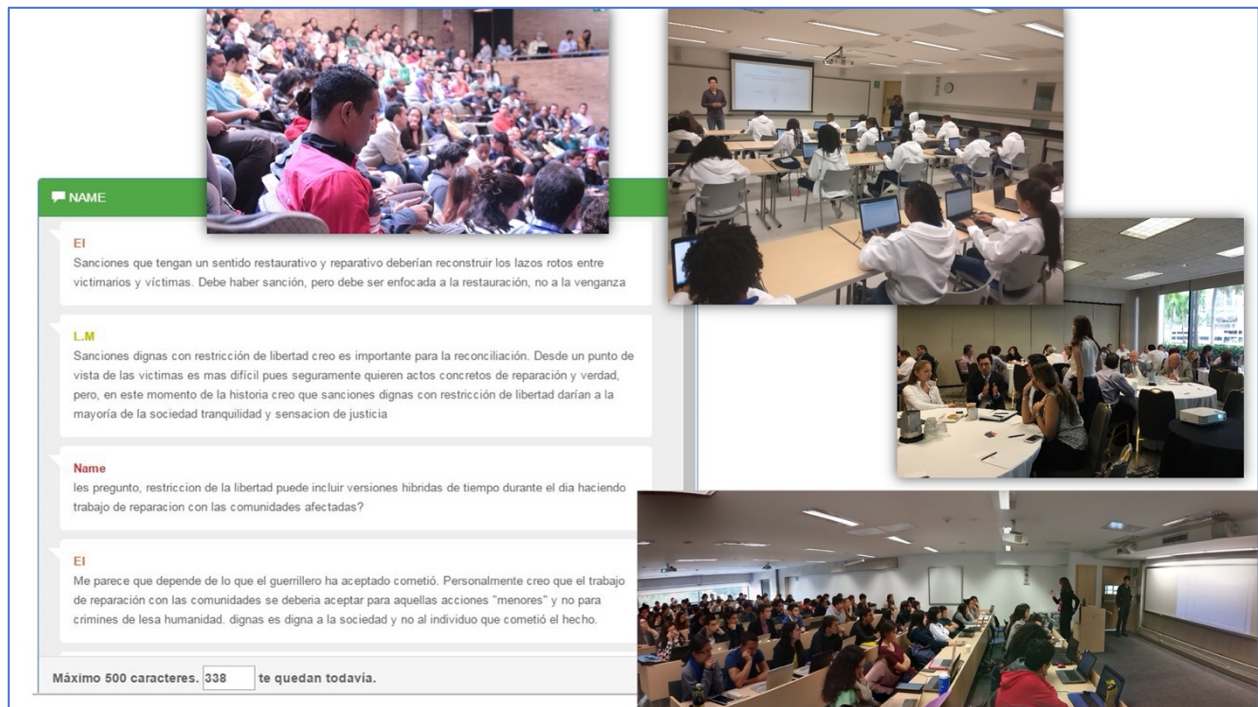
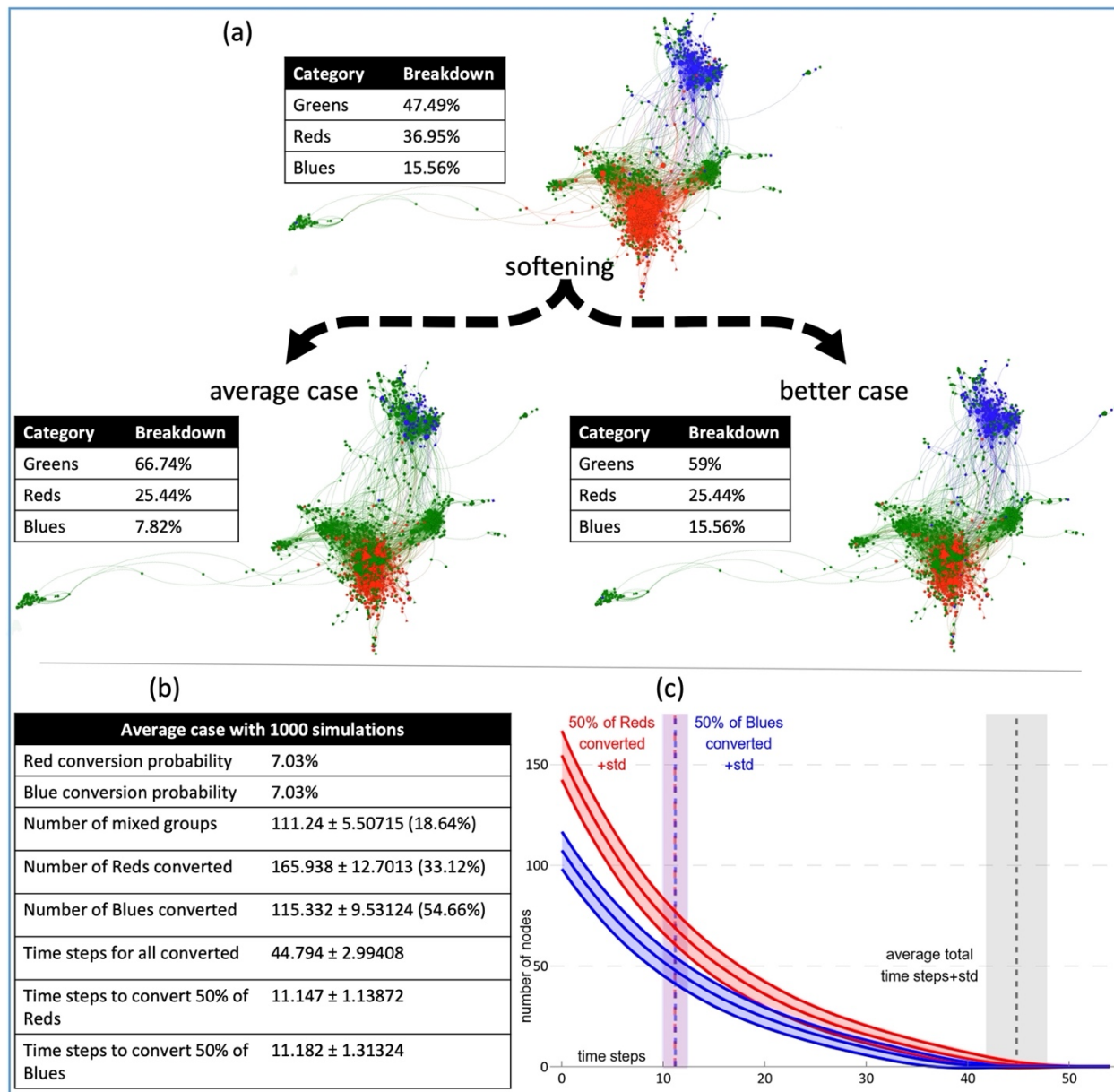
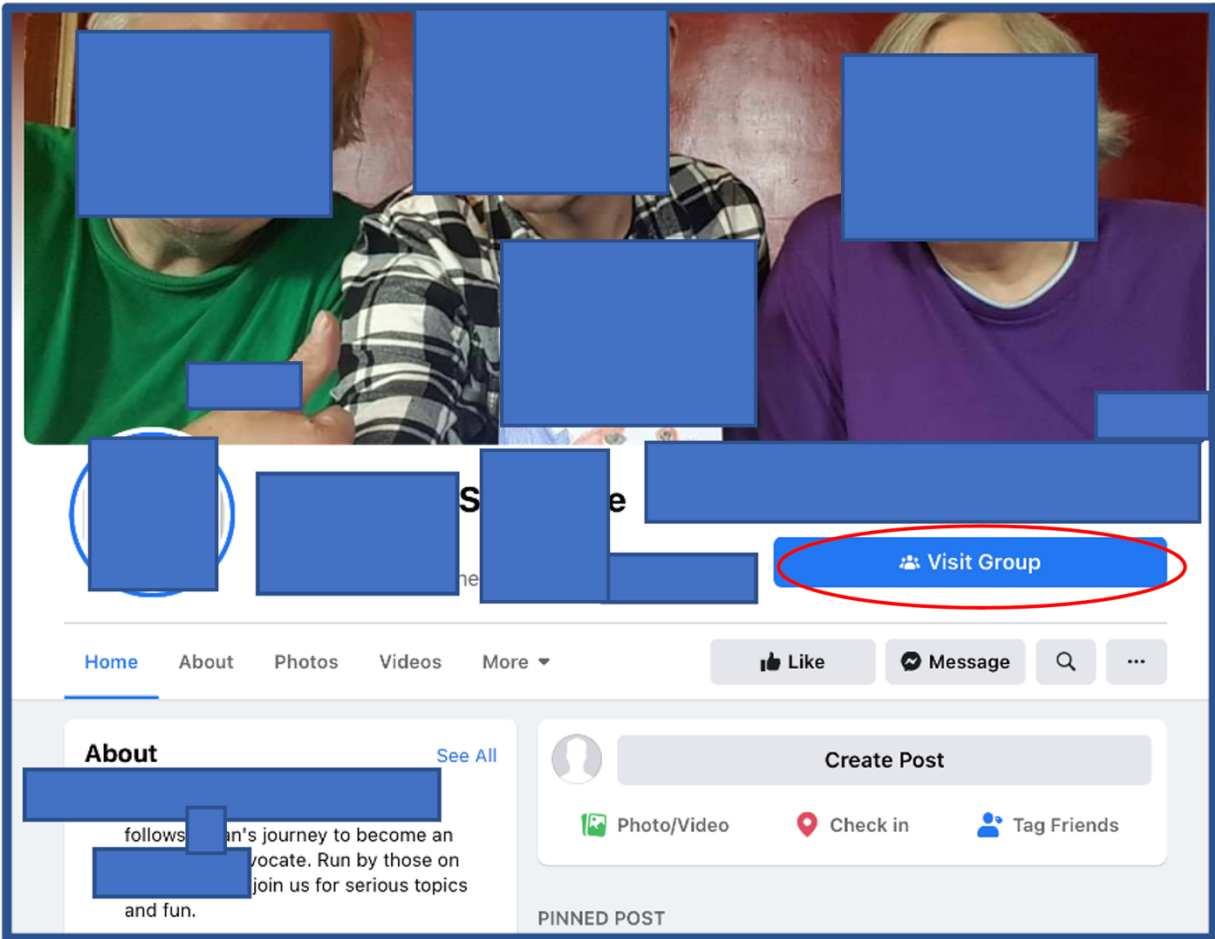




Extended Data Figure 1: Photos and a screenshot from some early experiments in which we co-located participants in case of any technical issue (they still interacted in their groups anonymously online).



Extended Data Figure 2: Our computer simulations show the predicted positive impact of applying this scheme in a repeated automatic way on the current 2022 vaccine view ecology as shown in Fig. 3(g), assuming reductions per group similar to Figs. 3(b)(d). Adopting the observed hour timescale of group engagements, and allowing many groups to operate in parallel, the prediction is for substantial softening within a few weeks. (a) allows us to visually inspect the system impact of the softening simulation and the changing distributions; the probabilities in the 'average case' are averaged from the results of Figs. 3(b)(d), whereas the 'better case' is based only on the results from Fig. 3(b). Roughly one-third of Reds are converted, and the impact to the core of the vaccine ecology appears to be quite positive. (b) outlines some statistics from 1000 softening simulations, demonstrating that on average ~33% of the Reds are converted in this process, with 50% of those being converted in about 11 time steps (where one time step is one observed hour timescale). Blues are converted on a similar time scale, as can be seen in (c), which charts out the average conversion rate of Reds and Blues over time. In (c), the solid red/blue center line represents the average number of Red/Blue nodes left to be converted, and lines above and below that represent one standard deviation. Vertical lines represent the average amount of time to convert 50% of Reds with one standard deviation, the average amount of time to convert 50% of Blues with one standard deviation, and the average amount of time to convert all possible Red/Blue nodes with one standard deviation.



Extended Data Figure 3: Private spaces such as Groups and chats tend to be accessible from within these public communities, suggesting our ecosystem network of publicly accessible Pages acts also as a crude proxy for these private networks.