Researchers refute theory of collective (non-)action

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In the largest laboratory experiment ever carried out in experimental economic research, financed by the German Research Foundation (DFG), a group of German experimental economists, led by Joachim Weimann from Magdeburg, has now tested Olson's theory under laboratory conditions. Credit: Harald Krieg

Democracy, environmental protection, peace—the great issues of our

time are collective goods that can only happen if many people make a voluntary contribution. However, the theory of collective action, which has been held for over 50 years, states that there is no incentive for individuals in large groups to participate in the provision of work for public benefit. Frankly speaking, individuals lack motivation because their contributions stand in no relation to the very small influence they can exert. With the largest laboratory experiment in economic research to date, a group of German experimental economists have now shaken this theory to the core and made an astonishing discovery. With considerable implications for the way participation is handled politically, our commitment is by no means only dependent on the influence we have. What is far more important is whether we really know what we are striving for.

World issues such as climate protection and the right to personal freedoms benefit all, regardless of whether everyone contributes to them or not. It is therefore a perfectly rational strategy for the individual solely to be a beneficiary. Conversely, this means that the state of affairs regarding issues impacting everyone is not in a good shape. This does indeed seem to correspond to our everyday experience: Why should I give up my car if millions of others don't?

Flight passenger numbers are rising at the same rate as environmental awareness—a contradiction?

Since Mancur Olson's book "The Logic of Collective Action," published in 1965, science has invoked the theory that large groups are unable to make decisions benefitting the greater good. According to this, these groups fail on the grounds of a fundamental contradiction. Although all members of the group would be better off if the outcomes were made available, the incentive for individuals to actually contribute to them is infinitely small—their very minimal influence is offset by costs that are

perceived to be too high. For example, it is inconvenient for the individual homeowner to turn down the heating and dress warmer to reduce CO_2 emissions. Yet the impact of this measure on climate change is practically undetectable. The realization that less air traffic would contribute to more climate protection does not prevent people from using airplanes—passenger numbers are rising at the same rate as environmental awareness.

The visibility of the benefits of cooperation is what counts

In the largest laboratory experiment ever carried out in experimental economic research, financed by the German Research Foundation (DFG), a group of German experimental economists, led by Joachim Weimann from Magdeburg, has now tested Olson's theory under laboratory conditions. By linking four laboratories via the Internet, Weimann and his colleagues, Jeannette Brosig-Koch from the University of Duisburg-Essen, Heike Henning-Schmidt from the University of Bonn, Claudia Keser from Göttingen, and Timo Heinrich from Durham University, were able to bring large groups together in a virtual environment under laboratory conditions. With more than 5,000 subjects, they came to a surprising conclusion: in both large groups and small, controlled ones, members were willing to engage. The researchers did not observe the effect described by Olson which said that individuals in large groups were not able to cooperate on a mutually-beneficial task if their impact on issues is negligible.

Instead, it turns out that cooperative decision making in large groups depends on something that had previously not been considered in research. The absolute value of the contribution (which can be very small) is in fact less important than the relationship between this contribution and the significance of the individual in a group. The

researchers interpret this as an indicator of the visibility (salience) of the mutual advantage generated by cooperative behavior: "My own cooperation helps others, and the cooperation of others benefits me."

The danger and opportunity involved in solving large tasks

This, however, opens up a completely new approach in terms of research on issues related to the public good. If it can be confirmed that it is indeed the visibility of the benefits of cooperation that is crucial for large groups to take collective action, new questions of considerable practical and political importance will arise. This would mean, for example, that democratic systems would be put at risk if citizens were no longer sufficiently aware of the mutual benefits for everyone arising from participation in political life. Furthermore, it would mean that the solution to environmental problems depends crucially on whether the benefits of environmentally-friendly behavior are sufficiently well known and the public is aware of them. Moreover, it would suggest that issues surrounding the public good therefore arise first and foremost when the benefits of their solution are not sufficiently visible.

One third of people are cooperative, but voluntary action alone is not enough

This large-scale experimental project has also shown, however, that even under the ideal conditions of a laboratory, relying solely on the voluntary cooperation of individuals only leads to a partial solution for issues that benefit the greater good. Nevertheless, a third of the participants were willing to cooperate if there was sufficient salience. And this is where the opportunity lies: "Thirty percent support—in democratic systems, this is an indispensable basis for rational, collective (i.e. political) decisions," says Joachim Weimann.

More information: Joachim Weimann et al, Public good provision by large groups – the logic of collective action revisited, *European Economic Review* (2019). DOI: 10.1016/j.euroecorev.2019.05.019