Research Idea

Revisiting the Classics: COVID-19 and its Management as the New Tragedy of the Commons

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Abstract: Paradigmatic examples of the challenges that collective action entails might experience a relative unfamiliarity through time due to contextual changes. By comparing public policies combatting COVID-19 and behaviors adopted by individuals in different countries, this piece aims to revisit the classic ideas by Hardin (1968) about the tragedy of the commons, and Elinor Ostrom’s (1990) solutions for Governing the commons. Mask mandates, vaccination campaigns, and vaccination mandates are some of the most relevant public actions implemented by governments and private organizations. Their timing and implementation strategy, as well as citizens’ reaction to these measures, has varied drastically in different countries and states. The lack of coordinated strategies and collective responsibility demonstrates how unmanaged commons evolve but classic ideas in public administration and public policy remain current.

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The Classic Problem of the Pasture

When discussing the impossibility of achieving a point where population and the available goods are both maximized, Hardin (1968) introduced the tragedy of freedom in a Commons. Self-interested rational individuals that share a common will seek to maximize their gain without limits. Although it is a popular misconception to understand the term tragedy in the sense of misfortune, Hardin (1968) intended to use the term in the sense of the inevitability of overexploiting commons when individuals maximize their utility in complete freedom.

The practical representation of this tragedy is well known as the pasture dilemma: in a pasture open to the public, herdspersons will try to introduce as many cattle as possible to maximize their individual utility. Given that all individuals will use their freedom in the same direction, it is inevitable that the aggregate of herdspersons will end up killing the pasture for everyone (Hardin, 1968).

One additional dimension to the tragedy of unmanaged commons, as was corrected by Hardin (1998) thirty years later, lies in the nature of the Commons. Given the example of the pasture, it has been assumed as a concept that involves human collective action over natural resources. However, commons can be simultaneously constructed and endangered collectively by the aggregate individual action. Unlike a pasture that can be thought as an asset produced by a fortunate accident of nature, public health is a common threatened by human action like pollution.

This dimension of collectively constructed commons that has been overlooked implies that individual actions, in the aggregate, can both preserve or diminish the commons. Rational individuals that discharge wastes into a river are “fouling [their] own nest” (Hardin,
1968, p. 1245) and produce a similar tragedy than the one of the pastures. By polluting a
natural common -the river-, they are negatively affecting another socially constructed
common: public health.

A Self-Governance Remedy to the Tragedy

Social dilemmas occur when individuals face
situations in which the maximization of short-
term self-interest generates outcomes leaving
all participants in their worst of their feasible
alternatives. The conflict emerges when there
is a struggle between individual and group
rationality (Olson, 1965).

In his Logic of Collective Action, Olson (1965)
explained how the size of a group can affect
the provision of a public good. One of his
major contributions was explaining that most
groups have difficulties in providing optimal
amounts of collective goods without having
selective incentives. This affects primary the
larger groups because it is more difficult to
achieve and optimal solution through a
bargaining process than in smaller groups.
Olson (1965) pointed out that unless a social
dilemma involves a small group and there are
rules that penalize individuals who act in their
common interest, rational individuals will not
act according to their group interests (p.2).
In Governing the Commons, Elinor Ostrom
(1990) stated that a possible solution for the
collective action problem are the institutional
arrangements between individuals that commit
voluntarily to a cooperative strategy,
influenced to a certain extent by external actors
as well.
Ostrom (1998) deemed necessary to create a
behavioral approach to the rational choice
theory for the analysis of collective action
dilemmas. Behavior in social dilemmas is
affected by many structural variables, like the
information available to participants, the size
of the group, the organizational levels, and
their dependence on the benefits received,
among others.

Contrary to what other theories of rational
choice state, in one-shot or finitely repeated
dilemmas structural variables do affect levels
of cooperation. A theory of human behavior
does not consider complete rationality as the
only way to model human behavior. This
behavioral approach suggested by Ostrom
considers that citizens making partially
rational choices can affect the long term of
viability of democratic regimes (Ostrom,
1998).

One solution for finitely repeated social
dilemmas can be found in reciprocity norms.
These norms drive individuals to cooperate
and only stop said cooperative behavior when
others stop cooperating, in other words, when
reciprocity stops. The specific rules that
individuals choose to adopt depend on the
individuals' context (Ostrom, 1998).

According to Elinor Ostrom (1998), reputation
and trust are salient elements that can foster
productive social relations even in scenarios of
repeated social dilemmas. Ostrom’s (1998)
theory of public choice for common pool
resources aims to understand the way in which
individual behavior elements like trust,
reputation and reciprocity strengthen levels of
cooperation and lead to net benefits at the
collective level.

COVID-19 and Public Health as a Common

The different ways in which countries are
facing the COVID-19 pandemic can be
analyzed through the conceptual lenses of the
tragedy and governance of the commons
explained before. Public health is the common
shared by communities in a similar fashion
that clean water was the common in Hardin’s
(1968) pollution example.
Among several measures to control the pandemic, two of them have become controversial: vaccination campaigns and mask mandates. Perhaps in this case, the logic of rational individuals maximizing their utility is more salient. According to the Centers for Disease Control and Prevention (CDC, 2021), vaccines cause an immune response to the virus that causes COVID-19 and reduces its transmission. The use of masks helps to slow the spread of COVID-19 and prevents people who have the virus to spread it to others (Brooks, Butler, & Redfield, 2020). In this regard, the adoption of these measures produces utility to the individual who practice them (personal health) but perhaps more utility to the rest of the individuals, preserving public health. This example represents an exacerbated tragedy of the commons in which individuals might maximize their own utility -comfort of not wearing a mask and exercising their personal freedom, for instance- and produce an inevitable tragedy in terms of public health.

Vaccines and Peer Effects

Vaccination rates vary across countries and states as a result of a combination of factors. Availability of vaccines and the infrastructure to distribute them is one of them, but recent studies have identified other relevant elements. Safety and efficacy of the vaccine, mistrust in government, misinformation in social media, younger age, lower income, autonomy and personal freedom have been related to hesitancy toward the COVID-19 vaccine (Hill, 2021; Paul, Steptoe, & Fancourt, 2020; Paterson et al., 2016; Dror et al., 2020; Taylor et al., 2020).

Throughout the pandemic, there have been as well differences in the broadness of the vaccination mandates, if said mandates are applied. As can be seen in Figure 1, mandates to public sector workers and to attendees of public events are the most frequent ones (Reuters, 2021). The fact that large population groups are not included in these mandates leaves the decision of vaccination to free individuals who make decisions in contexts of high uncertainty and incomplete information (Simon, 1997) or abundance of misinformation (Dabla-Norris et al., 2021).

Figure 1: Frequency of Vaccination Mandates, 2021(n=46 countries)

<table>
<thead>
<tr>
<th>Category</th>
<th>Count</th>
</tr>
</thead>
<tbody>
<tr>
<td>Entry to Public Events</td>
<td>20</td>
</tr>
<tr>
<td>Elderly</td>
<td>4</td>
</tr>
<tr>
<td>Children</td>
<td>2</td>
</tr>
<tr>
<td>Other Workers</td>
<td>3</td>
</tr>
<tr>
<td>Health Workers</td>
<td>12</td>
</tr>
<tr>
<td>Public Sector Workers</td>
<td>18</td>
</tr>
<tr>
<td>All adults</td>
<td>6</td>
</tr>
</tbody>
</table>


Hesitancy toward the COVID-19 vaccine produces a social dilemma in which individuals guided by mistrust or concerns regarding their individual freedom reject the vaccine. Under this scenario, individual rationality led to an increase in the rate of virus transmission. Notwithstanding, aligned to the solutions to social dilemmas proposed by Ostrom (1990), norms of reciprocity and trust can overcome some of the barriers of vaccine hesitancy.

Empirical studies emphasize the salience of peer effects and information. Particularly in contexts of high uncertainty produced by misinformation in social media, information...
sharing by trusted peers can influence the decision to be vaccinated (Dabra-Norris et al., 2021). Moreover, faster vaccine rollouts increase the likelihood that individuals know someone who has received the vaccine. A context in which the norm is increasingly having more peers vaccinated in an individual’s network increases the likelihood to get the vaccine (Kalam et al., 2021; Dabra-Norris et al., 2021).

The Maximized Utility of Masks

Both the mask mandates and the behavior of individuals toward the use of masks have varied globally. In June 2020, survey data revealed that in countries like the United States, Australia, Canada, and the United Kingdom, between 10 and 30% of people stated that they wore a mask when going out. In countries like Japan, Mexico, South Korea, and Vietnam, between 60 to 80% of people stated that they wore a mask when going out (IHME, 2020).

The differences in the use of masks might find different explanations. The ambiguity with which governments have issued recommendations or mandates for their use is one of them. While in the Summer of 2021 vaccinated individuals in different cities of the United States were only required to wear masks in trains, airplanes or public transit, the national government of Japan recommended its citizens to wear a mask whenever in public spaces and businesses. More strictly, Germany issued a mandate that ruled out cloth masks, requiring medical masks in all businesses and offices, enforced by fines for individuals failing to adhere to these rules (Bloomberg, 2021).

The Link between Governmental Recommendations and Individual Behavior

According to Somers (2021), the inclination toward collectivism and individualism in communities and countries is correlated to the use of masks during the pandemic. In cultural psychology, a collectivistic culture can be defined as one where group needs are prioritized over individual needs. On the opposite, individualistic culture is characterized by individual needs being prioritized over collective ones.

The position where groups and countries are located in the continuum collectivistic-individualistic, contends Somers (2021) is linked to the likelihood of mask usage. Based on two between-country studies, in countries more inclined to a collectivistic culture, like South Korea, Vietnam, and the United Arab Emirates, mask usage is more prevalent than in more individualistic countries, like the United States and Australia.

It must be acknowledged that the direction of the causality can be inverse. That is, the probability of finding collectivistic or individualistic behaviors can be affected by the form of government. For instance, in more centralized regimes, the level of freedom for individualistic values might be lower than that of less centralized governments.

Although different factors explain the success in lowering transmission rates -vaccination rates, demographics, medical infrastructure, for instance- the usage of masks has contributed to reduce the spread in countries whose culture is collectivistic, as can be seen in Figure 2.
Figure 2: New COVID-19 Cases Daily Relative to Population, 2020

Source: Adapted from The Washington Post, 2020
https://www.washingtonpost.com/politics/2020/12/04/difference-how-pandemic-has-affected-us-south-korea-remains-staggering/

Putting together the different elements of Hardin’s (1968) concept, when individuals choose to maximize their utility -understood as freedom or ideological principles (CNN, 2021)- and not wear a mask, the aggregate rejection to masks ends up harming the common: public health.

The Apparent Inevitability of Tragedy

Social dilemmas and collective action problems like the control of the COVID-19 pandemic raise the question of whether self-organized groups that rely in trust and reciprocity to achieve cooperation are an unrealistic strategy to reduce the spread of the virus.

When public health agencies diffuse information related to the benefits of wearing masks and issue recommendations, their hope is to trigger collective actions scenarios where, following Ostrom’s (1990) ideas, individuals will self-regulate their own groups and personal networks and enforce the behavior that is most beneficial for the collective through trust and reciprocity.

The fact that different countries show low rates of mask usage opens a question related to Olson’s (1965) warning of scale. Issuing recommendations of mask usage might work under Ostrom’s (1990) collective action paradigm only in small groups. However, considering that individuals increasingly live in densely populated areas, the norms of reciprocity and trust (Ostrom, 1998) might be weaker than those in smaller communities. Future research could focus on the relation between usage of mask and population density.

Implications and Conclusion

Far from concluding in a pessimistic note on the inevitability of tragedy in the governance of the COVID-19 pandemic, this research idea is intended to identify and generate a discussion about the limits of collective action, and to emphasize the salience of governments to overcome said limitations in order to preserve public health.

Communities more inclined to individualistic cultures might produce better collective outcomes when governments issue formal mandates of mask usage, as in Germany and Japan. This scenario is closer to the conclusions that Hardin (1968) issued rooted in the acknowledgement that relying on individuals’ conscience is unrealistic. Notwithstanding, individualistic constituencies might as well elect governments that serve their individualistic expectations. In this regard, Ostrom’s (1990) approach to the logic of collective action might offer a more optimistic remedy. Regardless of their stand on the collectivistic-individualistic continuum, social groups of different sizes might cooperate and achieve better outcomes without the imposition of formal rules if they are provided with clear information that can guide their rational behavior. The pandemic has evolved
swiftly in the past two years, but a clearer message from public health agencies might be the difference between governing public health or lamenting its inevitable fate.

References


