

# A community-based sociocultural network approach to controlling COVID-19 contagion: Seven suggestions for improving policy

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## abstract

We showcase the usefulness of a community-based sociocultural network approach to understanding and combating COVID-19 contagion. Rather than recommending the standard approach to modeling contagion, which uses the individual person as the unit of interest (SEIR-type modeling), we encourage researchers and policymakers to focus on social units (such as households) and to conceive of the social units as being part of a community (a local configuration of a sociocultural network) that is embedded in a regional or national culture. Contagion occurs via culturally conditioned interactions between social units in these community networks. On the basis of this approach and our preliminary simulation results, we offer three policy suggestions for analysts, two for policymakers, and two for practitioners.

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Policies meant to control the spread of COVID-19 are designed to address both near- and long-term goals. As Thomas Pueyo highlighted in a recent *Medium* post (see Figure 1), they aim initially to “hammer down” the curves representing cases and deaths over time by reducing the transmission rate through hand washing, mask wearing, physical distancing, canceling large gatherings, and closing schools and businesses.<sup>1</sup> Then, to prevent resurgences, they engage in a “dance,” trying to balance the relaxation of the policies with renewed tightening as needed (assisted by monitoring and testing).

To enhance the success of such policies and the modeling that informs them,<sup>2,3</sup> we present a sociocultural network approach for understanding and combating contagion in communities. We base this approach on established social science research on social networks,<sup>4,5</sup> computational social science,<sup>6–9</sup> organizational community dynamics,<sup>10–12</sup> and the interpretation of sociocultural data.<sup>13–16</sup> The approach views a community as containing networks of interacting social units—such as households or workplaces—and being embedded in a wider regional or national culture, and it can be used to examine how changes within and across communities affect

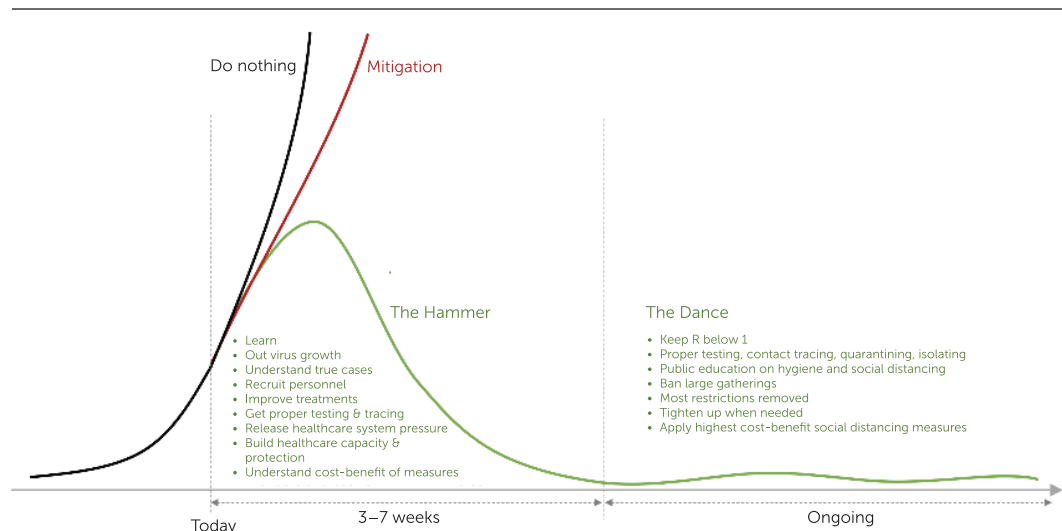
contagion rates at the social-unit level. It suggests several ways to improve strategies for predicting patterns of COVID-19 contagion, to craft community-level policies for controlling its spread, and to customize communication of those policies so that they achieve their intended outcomes. We offer three suggestions for policy analysts interested in why contagion patterns flow as they do, two for the policy-makers who decide what policies are needed, and two for the policy practitioners who decide how best to carry out the recommendations.

## Suggestions for Policy Analysts

### 1. Better Understand Contagion by Conceptualizing Dynamics at the Community Level Using Sociocultural Networks

The standard epidemiological approach to predicting the speed and extent of an infectious disease’s spread in a given place (say, a city, state, or country) uses the individual person as the unit of analysis.<sup>17,18</sup> Models assess individuals’ susceptibility to infection, their exposure and infection status, the frequency of their interactions with others, and whether they recover or die (i.e., they use an SEIR-type model). The approach usually works well when

Figure 1. Flattening the curve



Note. From “Coronavirus: The Hammer and the Dance,” by T. Pueyo, March 19, 2020 (<https://medium.com/@tomaspueyo/coronavirus-the-hammer-and-the-dance-be9337092b56>). Copyright 2020 by T. Pueyo. Reprinted with permission.

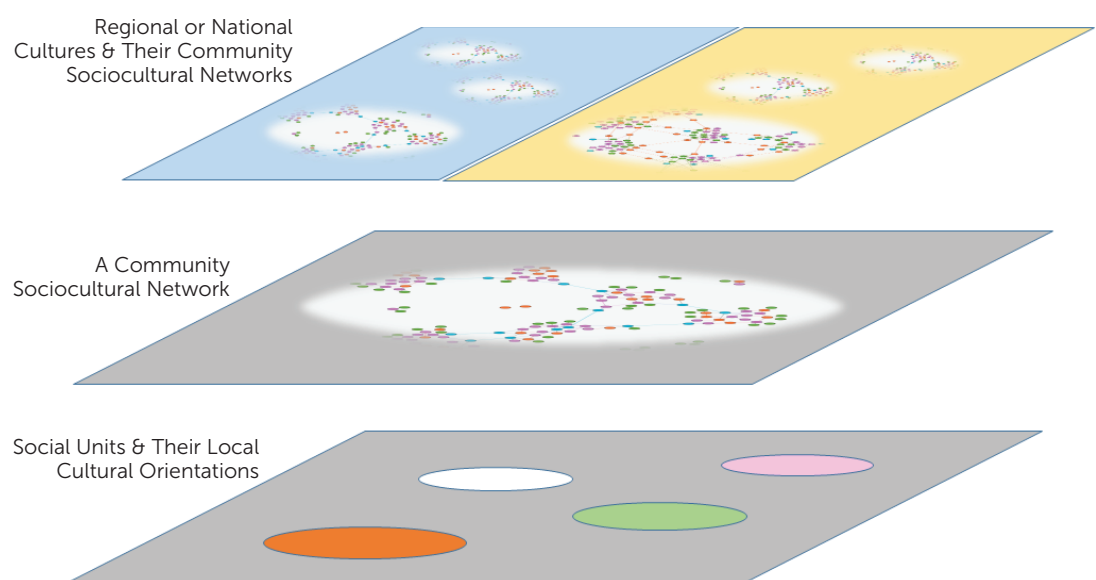
the place of concern is culturally homogeneous and individuals act independently. But it can miss differences in contagion patterns in subsets of a diverse population or when the reactions of individuals are intertwined with those of larger groups or networks; consequently, its results can lead to policy decisions that work better for some communities and nations than others.

To address that drawback, we model contagion in a way designed to reveal community-level features that can affect the success of public health policies. Instead of our analytic unit being the individual person, we use social units (such as households, farms, or workplaces), in which people interact and with which they identify (see Figure 2).<sup>19</sup> As we have already noted, we view communities as being composed of multiple social units that are linked to one another—that is, as sociocultural networks—and that are embedded in a wider regional or national culture.<sup>20,21</sup> When analyzing contagion patterns, we take into account that each social unit's behavior is conditioned by particular culturally influenced attitudes toward activities of interest (such as to physical distancing) as well as by the structure of the unit's social network (such

as whether relatively few units do most of the interacting or whether many units interact with one another). We also attend to the ways that the linkages create distinctive patterns of contagion within a community. For instance, a dense residential area encompassing many households that are related to one another would be characterized by many interactions between households and thus by greater contagion than would a more rural area in which households tend to keep to themselves.

This conception of sociocultural networks makes it clear that a unit's behavioral responses to policies for limiting the spread of COVID-19 (such as physical distancing, quarantining of communities, or convalescing at home) will be influenced by the specific unit's cultural orientation and by the norms and the interactivity of both the local, community-level sociocultural network and the broader region or nation. The message for policy analysts is equally clear: Sociocultural networks can enhance or inhibit the effects of COVID-19 policies, with the effects varying from one community to another and within subsets of communities. These differences become particularly pronounced in culturally diverse communities.

**Figure 2. Levels of analysis in the community sociocultural network approach**



Note. The four colors seen in the circles on the social unit cultural orientation level represent the four different types of cultural orientation: engagers, connectors, dividers, and loners.

## 2. Build Models That Exemplify Different Kinds of Communities, Representing These Archetypes as Sociocultural Networks

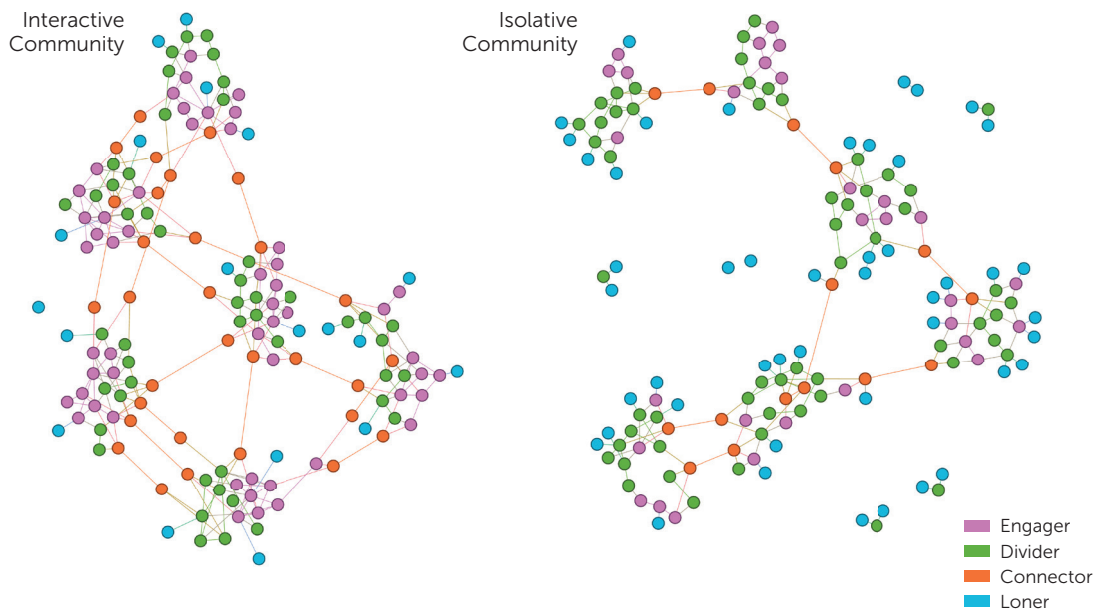
To gain insight into the factors that most affect contagion patterns in communities, we modify standard agent-based modeling (ABM), which predicts population-level patterns of activity by having different individuals in the population (the agents) follow particular sets of rules for making decisions.<sup>22</sup> Our agents are the social units we have previously mentioned, which represent the different types of units likely to occur in a community. In the case of COVID-19, as shown at the bottom layer in Figure 2, we start with social units such as households. We define *households* more broadly than economists do—as being the standard living arrangement of an individual or group of individuals (home, apartment, or sets of linked living unit in a neighborhood). These units frequently differ from one another and are distinguished in contagion models according to the degree and types of social interactions they engage in and their physical proximity, that is, in what can be called their “cultural orientation” to distancing. This rubric yields four types of social units: *engagers* (units that are socially close and physically interact regularly), *connectors* (units that are socially close but physically distanced), *dividers* (who are socially distant but physically near to other units), and *loners* (units who are socially and physically distant from most other units). The four colors in the bottom of Figure 2 represent these four types of cultural orientation.

Next, the interactions among these social units are modeled as forms of what are called “small world networks,” such as the community sociocultural network depicted in the middle layer of Figure 2. In these community sociocultural networks, clusters of units (or *neighborhoods*, in small world terms) can differ from one another in the units’ physical proximity and social connectedness, and some of the units connect across clusters. Certain clusters will be denser and more connected than others.<sup>23</sup> As shown in the top layer of Figure 2, the community social networks are embedded

in a regional or country culture; hence, these cultures can confer some sociocultural features on the community that influence contagion apart from the influence exerted by the structure of the sociocultural network itself. The sociocultural network structure and these other cultural factors will strongly shape the patterns of interaction among units and, hence, the likelihood of spreading the coronavirus. A social unit’s location and types of interaction in its community sociocultural network gives the unit a particular rate of susceptibility, exposure, infection, and recovery (or fatality); among modelers, these rates are known as SEIR factors.

Combining the variety of social units and their orientation toward interaction, their network ties, and the cultural milieu of the locale in which they are embedded allows us to generate archetypes of sociocultural networks. Figure 3 shows two archetype communities. To produce the archetypes, we first adjusted the specific likelihoods of physical and social interaction (based on their cultural orientations) for each social unit, using as a guide observed current patterns in neighborhoods of midsize North American cities. Next, we seeded the composition of each community. We populated one of them with 60% engagers and connectors and 40% dividers and loners, and we then set a rule for modifying (at random) a number of ties to the units based on the unit type (up to three for engagers, two for connectors, one for dividers, and one for loners). We populated the second community with 40% engagers and connectors and 60% dividers and loners, and we based the ties among the units on our random tie formation rule. Then we used an algorithm that generates small world networks to apply our rules to 150 *nodes* (social units)—an optimal number (that is, their *Dunbar number*) for this kind of small world modeling. The resulting archetypal *interactive* sociocultural network is depicted on the left side of Figure 3, and the archetypal *isolative* network is on the right. In the figure, we color each node according to its cultural orientation, which affected the placement of the node within the network. In each network, the connector units are the ones that

**Figure 3. Interactive versus isolative community sociocultural networks**

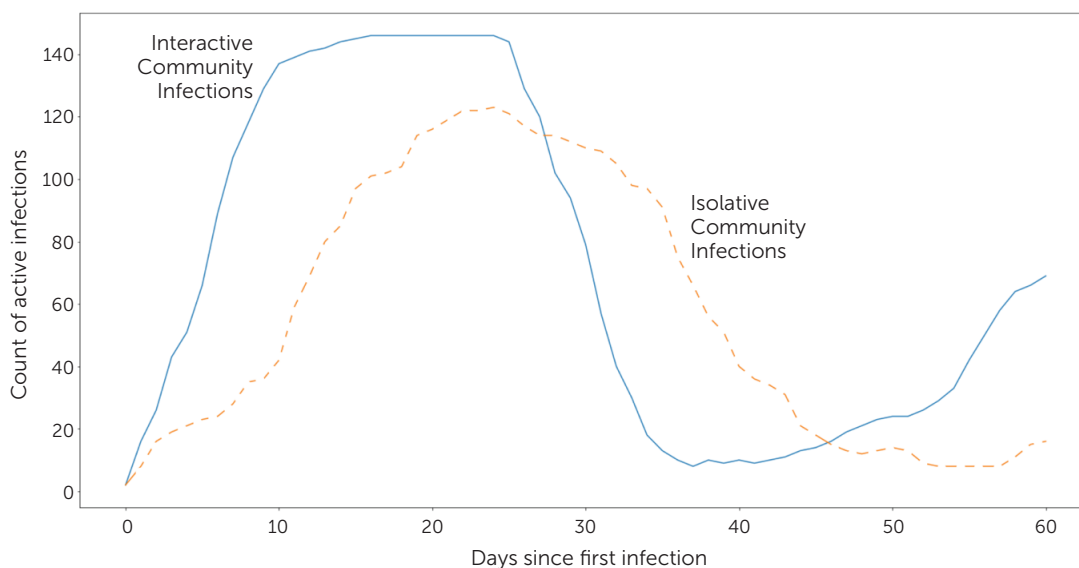


form links between clusters, and loners have only single ties to other nodes.

With the archetypes in hand, we modeled their levels of contagion. Agent-based models of contagion typically calculate changes in terms of single days and assign each agent a specific chance of bumping into (that is, interacting directly with) a neighbor. We also used

the day as our time period but based interaction rates for social units on a unit's cultural orientation and the structure of its network. We simulated the system for periods of 30, 60, 90, and 120 days to check contagion curves (that is, active infections in each community). Figure 4 shows the results for 60 days, a period that appears sufficiently long to capture some of the dynamics of the first wave of contagion.

**Figure 4. Contagion levels for an interactive versus isolative communities**



As one would expect, these analyses demonstrate that households in interactive communities become infected more quickly and in higher numbers (that is, they have a higher contagion rate) than is true in isolative communities. This is true even if both social worlds exist within the same city and region. As a more counterintuitive finding, households whose members contract COVID-19 in the interactive community tend to recover slightly more quickly, even though their network location puts them at risk of reinfection (see note A).

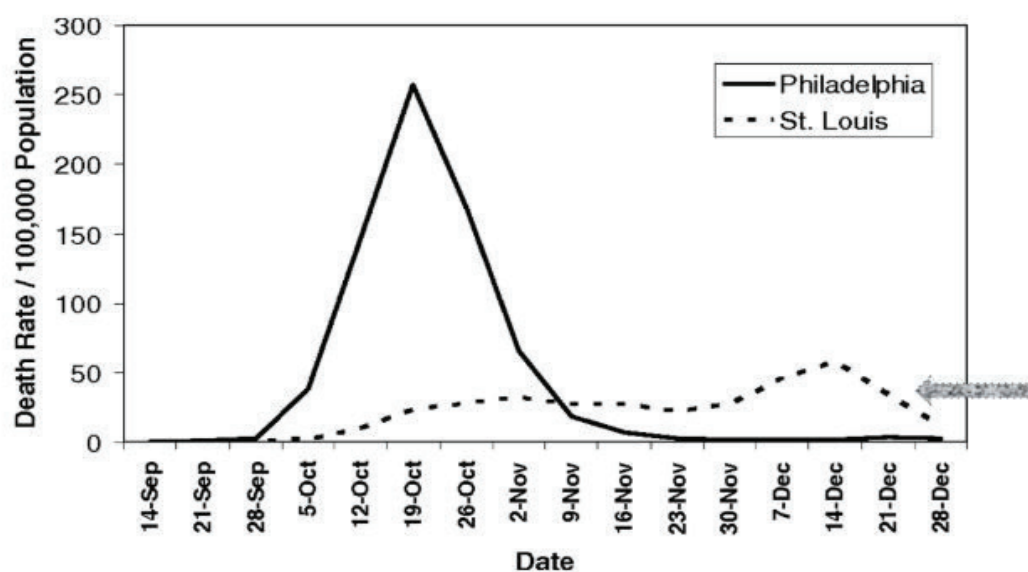
Follow-up analyses also suggest that engagers and connectors who increase barriers to entry into their units (that is, who do not allow others in their neighborhood) may, as intended, suffer lower contagion rates than less-protected units do. However, even they will need to interact somewhat with the outside world, and these linkages, by chance, will often lead to some contagion. In light of these preliminary socio-cultural simulations, policy analysts would be wise to adjust their usual epidemiological and agent-based models to include insights about sociocultural network diversity and thus

take better account of the ways that different communities behave and spread disease.

### 3. Model Future Waves by Incorporating Community-Level Learning From Previous Waves

Initially, analysts rightly spent a great deal of time modeling the first wave of the pandemic and identifying hammer-type interventions to flatten it by comparing death rates in countries that have passed the contagion peak.<sup>1,24–26</sup> But analysts now recognize the need to attend to future waves as well. Data from the Spanish flu pandemic of 1918 are very illustrative here.<sup>27,28</sup> Worldwide data show, on average, three peaks for the Spanish flu, with the second being the highest. Yet there was a great deal of community-level variation. We compare death rates in Philadelphia and St. Louis in Figure 5. Philadelphia, which was a more interactive community that instituted policy interventions more slowly, had one wave of deaths that peaked high and fast. St. Louis, being more isolative and quicker to respond, saw two more gradual and much smaller waves of death, with the second wave rising somewhat higher than the first (see note B).

Figure 5. 1918 Spanish flu: Philadelphia versus St. Louis



Note. From "Public Health Interventions and Epidemic Intensity During the 1918 Influenza Pandemic," by R. J. Hatchett, C. E. Mecher, and M. Lipsitch, 2007, *Proceedings of the National Academy of Sciences, USA*, 104, p. 7583. Copyright 2007 by The National Academy of Sciences of the USA.

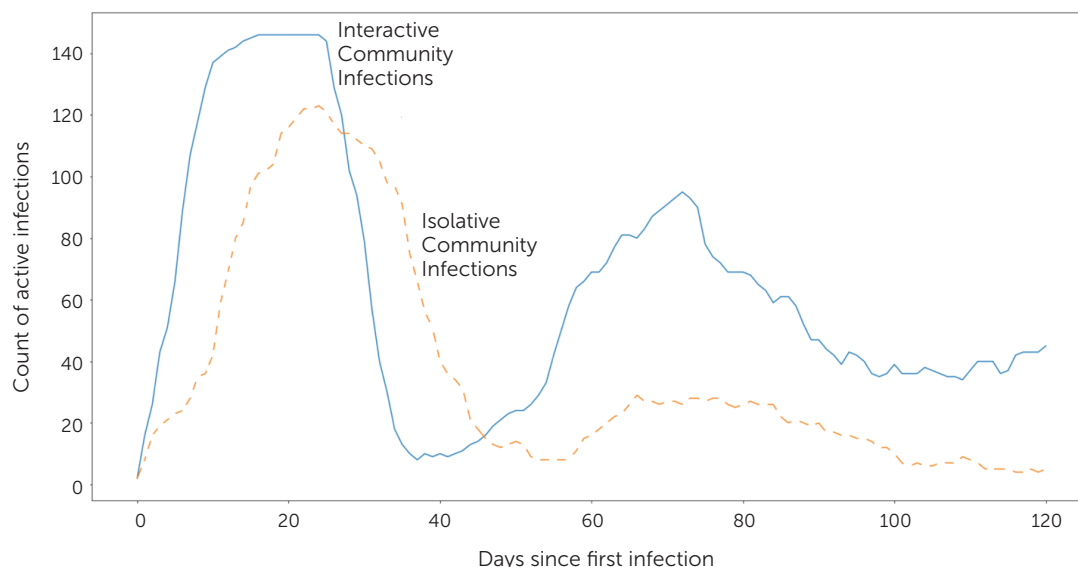
In our sociocultural models, which we refine regularly, we see strong evidence of a second wave that begins around day 45 in interactive communities and day 65 in isolative ones (see Figure 6). These model runs are based on some simple but realistic assumptions. One is that social units learn to distance themselves. They do so by changing their cultural orientation (likelihood of interacting) such that all four types distance more relative to their prior level. A second assumption is that the distancing and a lack of interaction between social units will break some network ties at random. A third assumption is that loner and divider units, who reportedly are likely to have fewer psychic and material resources than do engager and connector units,<sup>29,30</sup> will have lower recovery rates. In the modeling that produced the evidence of the second wave, we ran the experiment out to 120 days and applied these three assumptions after day 60.

Somewhat surprisingly—and alarmingly—in the second wave, the interactive community still experienced high overall contagion rates. It also appeared that a third wave started around day 115. In the isolative community, wave 2 peaked at around 80 days but at a much lower level than wave 1 and dropped toward a zero rate of infection by day 120. This drop, unfortunately, is not due to herd immunity (the whole

community having been infected and now being immune) but is simply due to the structure of the community's sociocultural network and its units' cultural orientations.<sup>31</sup> The isolative network creates enough isolation to break the contagion cycle, but not enough to prevent it from restarting later. As long as the main social units that interact with connector units are not infected or as long as the connectors are immune from reinfection, many very small neighborhoods (known in social network analysis as *cliques*) and barely linked dividers and loners will not be infected via the bridges formed by connectors (see Figure 3).

An unresolved issue is whether, over time, breaking social ties and having fewer interactions will cause already isolative communities to hit a threshold at which the social fabric of their local neighborhood—and of the social unit itself—will begin to dissolve. In the COVID-19 pandemic so far, people do not seem to be stealing goods from or committing violence against infected individuals. But some neighborhoods or communities that have particularly low levels of resources (as can be the case in very rural areas) or violent cultures might be at risk of crossing this threshold should the pandemic stretch through all of 2021.<sup>32</sup> Further sociocultural modeling that explores such issues should be particularly informative for anticipating the

**Figure 6. Second waves in the interactive & isolative communities**





effect on future waves of different approaches to lessening restrictions—such as the gradual bubble expansion being followed by New Zealand and parts of Canada (that is, the travel zone is slowly extended and increased interactions are allowed gradually), the cautiously phased opening of industries or geographic regions throughout many global regions, or the somewhat more extreme reopening plans in certain U.S. regions while infection rates are still rising.

## Suggestions for Policymakers

### 4. Tailor Policies to Types of Communities & the Broader Sociocultural Networks in Which They Are Anchored

Policymakers, quite sensibly, have been following the guidance of past public health and epidemiological research and focusing their initial interventions on hammering down the curve.<sup>33–35</sup> To be as useful and effective as possible, though, they should apply different interventions to different communities, using the archetypes described in Section 2 as a guide. Consider, for example, the policy of encouraging people to limit social interactions (social distancing) and to stay six feet apart when they are physically proximate (physical distancing). These practices appear to be essential for interactive communities even if many engager and connector social units dislike them. In contrast, calls for social distancing would be expected to make relatively little difference in communities that are already isolative. There, the encouragement would serve more as a reminder than as a powerful hammer. In fact, in such communities, it might be important to also declare when and how a modicum of interaction should be pursued by the divider and loner social units, so as to combat psychic and material depletion. In other words, policymakers should probably consider “dual-band” policies: two policies with similar goals but using different methods for adjusting the contagion paths. In some circumstances, a multiband policy might be needed.

Implicitly or explicitly, many U.S. states have begun to follow this dual- (or multi-) band strategy. As we write this article, New York City is

just emerging from lockdown and full distancing rules. In contrast, outlying areas of New York State have already been allowing more local travel, onsite work in some manufacturing facilities, and discretion when choosing to make social visits. At the provincial or canton level, Ontario in Canada, much like Hubei in China, has closed its borders.<sup>36</sup> However, Manitoba in central Canada, like Shaanxi in northwestern China, has experienced lower rates of contagion and has therefore maintained open borders and allowed its population to exercise more discretion over distancing.

Policies might be further fine-tuned by permitting communities to have some say in their modeled profiles and then adjusting policy prescriptions if the models indicate that alterations would be beneficial. Quite isolated rural indigenous communities, for instance, might identify themselves as having highly interactive local sociocultural networks, which would imply that such communities were prone to high contagion rates.<sup>37</sup> Policymakers in these kinds of rural areas need to recognize that these communities probably do not fit the usual rural mold of isolative communities and may well be highly isolated varieties of interactive communities. To reduce contagion, policymakers would need local communities to adjust their own policies on the basis of information about what has worked best for other similar sociocultural communities.<sup>38</sup>

### 5. Benchmark Against Communities That Have Similar Regional & Local Cultural Orientations, Social Network Structures, & Social Unit Diversity

In part due to media reports, policymakers have recently begun to note that national and regional cultures act as powerful filters of experiences and information and thereby can strongly affect people’s behavior. This understanding is evident, for instance, in articles that have attempted to understand the differences between contagion patterns—especially death rates—in Wuhan, China, versus Lombardy, Italy.<sup>39</sup> Consistent with observations of culture’s powerful filtering effect, sociocultural network modeling suggests that policymakers should design similar policies for communities that



have similar local and national cultural orientations, social network structures, and diversity profiles.<sup>22</sup> Comparisons, in other words, should try to take into account the three layers of the cultural approach described in Figure 2 to consider how the regional culture in which a community social network is embedded is quite similar to or very different from the policy-makers' target community.

The importance of taking these features into account becomes evident when considering people's interpretation of the term *social distancing*. Interactive communities (and their engagers and connectors) in one place do not necessarily interpret the phrase in the same way as do those in another. For instance, people in New York interpret it to mean limiting either physical or social distancing or sometimes both. Although many people were quick to reduce their visits to local workplaces and to work from home instead, they had more difficulty reducing their social distancing, engaging in impromptu visits to parks, gyms, and small restaurants until further enforcement occurred.<sup>40,41</sup> In contrast, social distancing in Seoul, Korea, was understood to include reductions in both physical and social distancing and to involve both work and nonwork activities, and restricted movement and testing became part of people's new routines.<sup>42</sup> Thus, in making community-contagion models, policymakers not only need to consider the starting differences, they also need to take extra care in choosing which comparator communities they select to justify policies for their own district. It would be unreasonable, for instance, to presume that the social units in New York City would pursue the same level of distancing reduction and the same degree of testing as social units in Seoul or to set up those expectations in others by publicizing that comparator.

Similarly, cultures and communities can differ in the value they place on various types of social gatherings and activities that interventions may target. This divergence is particularly true for events that mark key points in the life course, such as births, graduations, marriages, and deaths. Richard J. Hatchett and his colleagues have found, for example, that prohibitions

on attending funerals during the Spanish flu pandemic did not reduce the rate of contagion in either St. Louis or Philadelphia, two very different community types.<sup>27,28</sup> People in both went to funerals anyway. During the COVID-19 pandemic, Italy has also had to ban funerals, because many families were ignoring less draconian restrictions.<sup>43</sup> This step has caused much anger, sadness, and even pushback, requiring further enforcement by the police and military (see note C). Policymakers should not create blanket policies about such life course events, nor should they unthinkingly adopt the policies of noncomparable sociocultural communities. Doing so risks building resistance to policies and to those who enforce them.

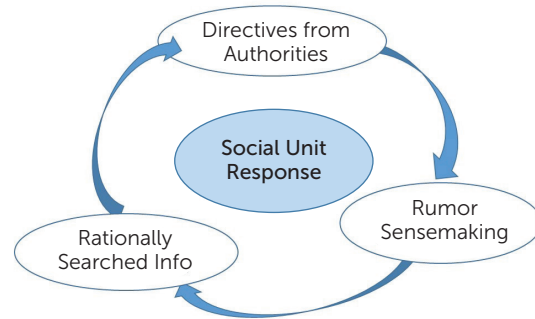
## Suggestions for Policy Practitioners

### 6. Policy Practitioners Should Craft Directives so That Their Merit Is Reinforced by Both the Informal (Grapevines) & the Formal Sources of Information That Social Units Consult

In turbulent times, policymakers often feel pressure to act immediately and may therefore resort to issuing directives without worrying about subtleties or how recipients of the prompts feel.<sup>44,45</sup> However, as discussed at the end of Section 5, where we raised the notion of resistance, our sociocultural network perspective suggests that it is critical to deliver directives in ways that will maximize the likelihood that recipients will hear about and decide to follow them. A simple model of policy communication is helpful here; see Figure 7.

This model takes the social unit's point of view, with its behavior (response) at the core. That response is also the target of policy practitioners. When crises occur, the social unit tries to make sense of the situation and determine how to respond.<sup>22</sup> The people making up the social unit gather information through the grapevine to figure out what is going on (in what is called "rumor sensemaking"), thus learning informally from friends or other trusted people in their network. They also actively seek information provided by experts (in what is called "rational

**Figure 7. The communication cycle**



search”), and they listen, to varying degrees, to policy directives (and then adhere somewhat to the authorities’ rules and instructions). As the crisis unfolds, this information begins to cycle rapidly. New information arises in rumor mills and also in scientifically grounded portals, and more directives are issued or modified in light of the crisis and this information. The social unit must revise its possible responses by collecting those forms of information and putting them together sensibly. The adjustment we made to the social unit response after 60 days in our model of contagion was based on this conception of sensemaking and these assumptions. The more rapid the cycle is and the greater the volume of information, the more difficulty the social unit has in drawing conclusions. This difficulty may reduce the likelihood of adjustment and increase the likelihood of a nonresponse or a contrary one. Consequently, policy directives need to be crafted carefully to increase the odds that the directive will float up in this swirl of information and be acted on—and this care needs to be maintained in the follow-on cycles that communicate updated information.

One way of communicating successfully is to consciously seek the uptake of messages into both the rational information and the rumor mill channels to create a positive, constructive swirl of information. Take the directive to wear masks as an example.<sup>46</sup> In many Asian communities, mask wearing has long been mandated when contagious diseases arise. Directives are simple: individuals are told to “wear your mask” in signs on the doors of public places and in communications seen on public transportation, on TV, and through other channels. Social media posts

reinforce the practice, as does official information available on public health portals.

In contrast, at the outset of the COVID-19 crisis in many European and North American communities, governments recommended but did not require masks and called for their use only by those who had symptoms of the disease or who might have been exposed to it. What is more, mask wearing was often stigmatized on social media (for instance, by being jokingly mocked or depicted as signifying that a person was likely to spread disease). At the same time, health policy portals and industry sources alluded to mask shortages in hospitals and to panicked doctors, indirectly implying that the public should not wear masks so that more would be available for health care workers. Overall, a negative loop increased uncertainty around and distrust of directives that pushed mask wearing. That negative cycle has only gradually been broken, and only in some countries.

### **7. In Health Crises, Respected Health Care Experts in a Community Should be Chosen to Communicate Directives to the Community, With Their Efforts Supported by Political & Cultural Leaders**

In turbulent times, policymakers typically rely on key respected policy leaders—such as political leaders; heads of recognized international organizations, like the United Nations; and domain experts, like central bank directors—to make statements to calm local populations.<sup>45,47</sup> Often that decision appears reasonable, given that communication generally resonates most with people if the speaker can plug the recommendations into broad, positive cultural narratives (for example, about the gradual upward progress of countries as they globalize or the need to leave none behind).<sup>48,49</sup> In a pandemic, however, as experience with COVID-19 has shown, populations are more responsive to particular types of leaders, especially to health care experts. The crisis focuses attention on the health care domain, and the search for information, rumor sensemaking, and directives absorbed are primarily about that domain.

As we discussed in Section 2, the social unit is embedded in sociocultural networks, and

information (directives, rumors, and rational search results) is filtered through the lens of these networks. Therefore, community-based experts who can reach a wide variety of social unit types via multiple linkages (such as those seen in Figure 3) are particularly useful for communicating policy directives and helping implement them. If the people with stature and authenticity are health experts, then they will probably become trusted sources of information. The more they are trusted, the more likely it is that health information will be acted on and that health communications will create a positive reinforcing loop like that discussed in Section 6.

The great influence that medical experts have had during the COVID-19 pandemic is evident around the world. In Wuhan, China, for example, Li Wenliang, the physician who first pointed to the possibility of a coronavirus outbreak and was rebuked by authorities, eventually became a cultural hero. Awareness of the efforts Li made before his death from the virus spurred other medical professionals forward in the face of their own local communities' reticence to combat the pandemic as early as possible. In the United States, Anthony Fauci, the director of the National Institute of Allergy and Infectious Diseases of the National Institutes of Health, has become a trusted figure because of his willingness to stand up for health science and against some of the current administration's policies. Bonnie Henry, the chief provincial health officer of British Columbia, Canada, not only is now listened to at the national level but also has become a cultural icon, celebrated in public art murals and fashion, with her own charity edition of Fluevog shoes.

However, political leaders in some countries and regions have felt threatened by the visibility and messaging of health care experts. Many subtle

undermining acts, such as sharing the stage for the message unequally or having the final say during a press conference, undermine the experts. Political leaders may overshadow key messages by trying to ensure that news outlets do not post the expert's picture too often, too centrally, or in flattering forms. Recently, the Brazilian health minister, in spite of his popularity and evidence of impact, was fired. Similar threats were made in the United States against Fauci.<sup>50,51</sup> We encourage policy practitioners to combat this behavior so as to keep trusted public information high in quality, frequently shared, and culturally accepted.

## Conclusion

Policy analysts can improve their modeling and understanding of the COVID-19 pandemic and future pandemics as well by adopting a sociocultural network approach to community contagion, focusing their modeling on variations in contagion rates across archetypical communities, and attending to the likely dynamics of future waves. Meanwhile, policy-makers will deliver more impactful guidelines and recommendations if they craft multiband policies tailored to different communities and seek insights from communities that are culturally aligned with the communities under their aegis. People responsible for implementing policies will increase their effectiveness if they can ensure that their directives are delivered in ways that gain the endorsement of informal community leaders as well as formal sources of information and by enlisting or supporting respected local health care experts as spokespeople. In short, both now and in the future, the sociocultural approach is key to best addressing pandemics.

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## author note

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ongoing research underlying the policy recommendations in this article can be found in our companion article posted at the SSRN website under the title "A Cultural Network Approach for Amending COVID-19 Policy."<sup>22</sup>

## endnotes

- A. Consistent with our theory, in our social-unit-based modeling (what might be called "SBM") of interactive types of communities, we slightly increased recovery rates for engager social units beyond the modeled baseline if the node was connected to other engager social units.
- B. The community-contagion patterns described for Philadelphia and St. Louis, as noted by Richard J. Hatchett and his colleagues, were surely influenced by interventions, so they are not pure contagion-only examples (in other words, policy effects are reflected in the data).<sup>27</sup>
- C. In Italy, a BBC reporter interviewed a funeral home worker named Andrea Cerato about the handling of bodies: "'We take on all responsibility for them,' says Andrea. 'We send the loved ones a photo of the coffin that will be used, we then pick up the corpse from the hospital and we bury it or cremate it. They have no choice but to trust us.'"<sup>52</sup>

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