Revisiting COVID-19 Policy: A Psychological Perspective on Consideration and Compassion

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> *"What if this virus . . . can teach us a little about holding contradictory ideas once again? What if it can allow us to see that we're not as stupid as our political parties want us to be, or as unidirectional as our TV channels seem to think we are? A purple America is a far more interesting one than the red or blue one that some insist on.*
> *What time demands now is a new form of contrapuntal thinking. We do not need to simplify. We need to scruff things up. We need to be brave enough to reach across the aisle. And the voices that really matter will be the ones that come from underneath, not above . . . "*
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> *--Colum McCann*

[Note: early in 2020, I published an essay concerning policies that were being or could be enacted in response to the emerging COVID-19 health care crisis. I focused in particular on policies in the United States, but consider the issues surfaced to be relevant in all countries. Now, one year later, I wish to review the ways in which policies in this arena were and were not engaged. We have much to learn from this brief history, as we continue to address the COVID-19 challenge—and more important prepare to manage pandemic crises in the future in a more effective manner.

The millions of infections and several hundred thousands of deaths related to COVID-19 speak tragically to the failure of countries throughout the world to deal effectively with the current virus. From this failure we can chose to sit back and hope either that there will be no future virus or that somehow things will be better the next time. We can instead spend time and energy identifying the people who made the mistakes. We can both blame them and punish them for their arrogance and ignorance.

There is a third option. We can choose to learn from our collective mistakes. As those who are advocating the creation of learning organizations and learning societies have noted, we are not "stupid" when we make a mistake, but we are "stupid" when we continue to make the same mistake (Argyris and Schon, 1978; Senge, 1990). There is no way to avoid making mistakes in a world filled with volatility, uncertainty, complexity and ambiguity—along with turbulence and contradiction (VUCA Plus) (Bergquist, 2000). The issues surrounding COVID-19 certainly qualify as VUCA Plus

and it would have been naïve to assume that mistakes would not be made. This essay is based on an assumption that the third option must be chosen. We must learn from our mistakes, rather than live in a world of denial, hope without action, or blame.]

The Basic Assumptions

When the virus first hit, early in 2020, we all knew that the correct thing to do was to engage in a series of actions (or inactions) that would assist in ameliorating the impact of COVID-19. We were all to observe social distancing when going out in public. We were to stay at home whenever possible, as well as wash our hands and engage in other sanitizing practices. All of these were deemed important—and in this essay I will sometimes subsume all these practices under one term: "social distancing".

We all knew that only through social distancing (and other preventative actions) could we flatten the COCID-19 curve and bring our society (and other societies around the world) back to normal. But was this assumption about social distancing really valid? Some epidemiologists from respected universities in the world (such as Harvard University in Cambridge Massachusetts) offered some "inconvenient truths", based on their careful modeling of future trends in the infection and mortality rates. In an article titled "There's only one way this ends: herd immunity", Jeff Howe (April 12, 2020) offered the following sobering observation in the *Boston Globe*:

> It's easy to forget that if a disease can't be contained – and its' too late for that in the COVID-19 pandemic—then there's only one possible ending to the story: We must collectively develop immunity to the disease. In lieu of a vaccine, that means most of us will need to be exposed to the virus, and some unknowably large number of us will die in the process. (Howe, 2020, p. K1)

The epidemiological experts introduced several different public policies to see what the impact of each policy would be on the rates of virus-related infection and death. Shockingly, it seemed that if a society consistently practices social distancing then rates of infection and mortality would drop off for only a short period of time and then rise again.

What was the reason for this potential trend? As Howe notes, it all has to do with the inevitability of infection. We will all eventually become infected, so the use of social distancing only delays the

inevitable. Worst yet, this means that many of us would never build the antibodies that are created when we are infected and then come through the infection with built-in protection against the virus. What was to be done with this set of inconvenient truths? And did they influence the policies formulated and actions actually taken? Perhaps most importantly we must ask: was the influence that did take place helpful or harmful?

Herd Immunization

The health experts who provided us with the dire predictions offered a radical alternative solution that most of us did not want to hear. They suggested that we alternate our social distancing policy with an "open up" policy that would allow us to go out in public without protection. We get infected. Most of us survive the infection and build the necessary anti-bodies. This is what is called *herd immunization*. When we all are self-immunized, then the virus will cease to be a major threat. It will go away (with the assistance of immunizing injections for young people). Many people will die—but many people will live and rebuild our societies. It is a horrible option that only uncaring people who live by numbers (statistical projections) would ever propose.

The reaction of most Americans to this option was one of horror. We must throw out this option –and perhaps fire the scientists who are making this inhumane proposal. The problem was that they might in some way be right. Careful consideration should be given to the truths that might be embedded in this policy. Such a consideration never took place in the United States. Herd immunity became politized (as did many other complex societal issues of the 2020s in the United States). Americans were either for or against herd immunity and those advocating the other side of the issue were assigned labels that led to frozen, polarized positions.

In many ways, this outcome could have been predicted. We know that VUCA Plus issues are usually not handled in a thoughtful manner by Americans (or virtually anyone else in the world). These issues tend to be heavily ladened with anxiety—and this anxiety had to be metabolized (transformed) in a way that contains and reduces the anxiety. Typically, the metabolism only takes place by looking to a leader who offers simple ways to reduce the anxiety (Bergquist, 2020b). These ways often include not only trying to simplify the issue but also finding the enemy who "caused" the underlying problem and/or are blocking its solution. Such was the case with "deliberations" regarding herd immunity. As Daniel Kahneman (2013) and other behavioral

economists have noted, we are likely to engage in "fast thinking" when confronting immediate, anxiety-filled challenges. The "slow thinking" that is required to sort through the VUCA-Plus labyrinth of COVID-19 infections and immunity was not widely engaged in the United States during 2020.

The Outcomes

No serious attention was devoted at any level to the matter of herd immunity. A serious proposal should have been offered. It would include realistic appraisals regarding the virus's staying power which is the core of the herd immunity policy. Embedded in this appraisal was an assumption that the virus will continue to linger, and outbreaks will occur at least sporadically—even with an effective vaccine and continuation of social distancing. While this assumption might be too pessimistic, it is important to keep the "worst case" scenario in mind—what the behavioral economics call "premortum" planning (Kahneman, xxxxx).

The proposal would also include policies and funds that intensify research efforts in the discovery of one or more vaccines to combat the virus. The proposal would incorporate a third, critical element: procedures for distribution of the vaccines so that they would be universally available in all countries. A continuing commitment to social distancing and other effective preventative measures would accompany this proposal.

While this proposal was never offered (or at least never given serious consideration) in the halls of the US congress, or in the White House, we can tabulate the extent to which element of the proposal were effectively engaged in 2020. First, the vaccines did arrive before the end of the year, and this is an exceptional accomplishment—exemplifying the way in which private and public enterprises can work together to solve problems.

As noted, a realistic appraisal of the perspective offered by advocates for herd immunity never took place. Politics and polarization overwhelmed slow thinking. Ironically, many of the actions suggested by the Herd Immune advocates were engaged – but through thoughtlessness (a blending of arrogance and ignorance). Many US citizens did not comply with social distancing norms—flaunting the request for civic responsibility in favor of individual liberties. As a result, a significant percentage of the population in the United States were infected, leading to what the

Herd immunization advocates hoped would be a baseline of immunity. This baseline would, in turn, leave the virus with nowhere to turn and, like many other viruses, COVID-19 would simply fade away (with the occasional appearance I already noted). Tragically, this fading away has not occurred. This is perhaps because the horror attending the herd immunity policy prevents citizens of the United States from collectively allowing it to happen.

Why were there mostly negative outcomes? First, we know that any considered decision about adopting a viable proposal and monitoring its enactment on an ongoing basis requires valid information regarding who has been and has not been infected. There must be broad-based (if not universal) testing—and this testing was not widely available in the United States or in many countries.

The real challenge was even greater. There must also be contact tracing after testing has revealed a positive COVID-19 result: with whom has this person been in contact and have they yet been tested. This tracing was absent in most communities in the Unites States. Without this tracing, the hit and miss of herd immunity would be completely untenable. Issues concerning confidentiality, disrupted work forces and a general fear of other people begin to emerge when tracing is implemented. Perhaps this accounts for its absence—as does the politicization and polarization that accompanied virtually every aspect of the COVID-19 response in the United States (and many other countries).

In addition, we were faced with the unknown about whether self-immunization is permanent—and if any vaccine can promise life-long (or even long-term) immunity. Can the virus transform itself and successfully assault one's body once again? And what about the false positives—the occasional false assessment of one's immunization? We faced many complex problems regarding testing of COID19. VUCA Plus was fully present in the world of COVID-19. Decisions regarding how best to monitor this virus and the ways that the virus was best defeated were not easily made. Blame was easy to assign and a sense of helplessness was readily evoked.

What did we learn? In the future, how do we address complex, multi-tier pandemic issues? At the very least we know two things. First, we know that critical data must be generated and pondered regarding the ongoing status of the virus. Second, forums must be convened in which important

debate regarding options can take place. As I have already noted, the data is not easy to acquire. The forum will be even harder to enact—especially if it is to be international in scope. The difficulty resides not only in the procurement of valid and useful information, but also in the thoughtful consideration of implications embedded in this data.

As human beings, we prefer not to consider negative options—for they create collective stress. We would prefer to isolate (censor) the inconvenient truth and demonize those who are conveying this truth. Clearly, the challenge is great of convening an international forum in which constructive dialogue takes place. In order to successfully convene this dialogue regarding future pandemic policies, we must take several factors into consideration regarding the human psyche. As psychologists, we might have something important to say about the process of collective (inter-societal) policy formulation.

Thinking in Systems: The Outcomes May Surprise Us

While we, *homo sapiens*, are among the brightest members of the animal kingdom, there are some major limits in our capacity to think clearly and systematically about the challenging conditions we face. First, we are inclined to view our complex world in single dimensions: it is hard for us to take multiple, interacting variables into account at the same time. Our colleagues at M.I.T. (just down the road from the Harvard epidemiologists) have created a powerful modeling tool called system dynamics that enables us to take multiple variables into consideration at the same time (Meadows, 2008).

The modeling tools being used by their colleagues at Harvard and other universities and research centers are similarly able to do multi-variable analyses. And what are the outcomes of these analyses? The results are often counter-intuitive—that is to say, the models often come up with outcomes that are quite different from what was anticipated. We end up doing what is intuitively and humanely "the right thing". However, the outcomes end up being destructive—even catastrophic.

Jay Forrester, the original architect of System Dynamics, often declared: "don't just do something—stand there!" One of Forrester's esteemed students and colleagues, Donella Meadows (2008, p. 171) has put it this way. There is a broad-based and compelling tendency "to define a

problem not by the systems' actual behavior, but by the lack of our favorite solution." Meadows (2008, pp.171-172) goes on to describe a typical decision-making process:

> Listen to any discussion in your family or a committee meeting at work or among the pundits in the media, and watch people leap to solutions, usually solutions in "predict, control or impose your will", without having paid attention to what the system is doing and why it's doing it.

Forrester, Meadows, and their colleagues strongly suggest that we need to reflect on our assumptions before taking any action. This might be what we should have done regarding the COVID-19 virus—and what we must do when facing other pandemics in the near future.

Slow Thinking

We need not travel far (just to a nearby building at M.I.T.) to find a complementary perspective on human decision making. I have already cited the work of MIT's Daniel Kahneman. He is the Nobel prize winning author of *Thinking Fast and Slow* (Kahneman, 2013) who focuses on processes of human decision making. Kahneman suggests that we are inclined to think fast about a pressing (and complex) problem—especially one (as I noted above) that is filled with anxiety.

We should instead slow down our thinking so that we might better understand the problem and identify often untested underlying assumptions embedded in the problem. Like Forrester and Meadows, Kahneman urges us to stop for a few minutes (or a few days) before deciding and acting—especially when we are anxious or when there seems to be social pressure to quickly make a decision.

As a sidebar, I can point to a story issuing from reporting regarding the death of Steve Dalkowski, a baseball player, who legend has it, threw the fasting pitch ever recorded in modern baseball history. Supposedly, he was able to fire in a baseball at close to 110 miles per hour (though he was playing before the device recording the official speed was invented). While Dalkowski could pitch hard and fast, he was not very accurate. His errant pitches over the backstop were noteworthy, as was his strike-to-walk ratio (more of the latter than the former). Dalkowski was portrayed (as "Nuke" LaLoosh) by Tim Robbins in the movie, *Bull Durham,* with his fastball flying everywhere.

Tragically, Dalkowski was defeated by not only his lack of control as a pitcher, but also his lack of control as an alcoholic. Nevertheless, for a short period of time, he was a good pitcher and almost made it to the major leagues. What was the secret? He slowed down his pitch and found more accuracy in throwing the ball over the plate. As they say in baseball, he gained some "command" of his pitches—he learned how to "pitch" rather than just "throw".

I would suggest that the same principle applies to 21st Century problem-solving. Our Dalkowski Theorem is that we must slow down our thinking if we want to be accurate—otherwise we will never make it to the major leagues! We need to thoughtfully pitch rather than simply throw hard (or solve fast)—otherwise we will remain a "bush leaguer".

Now back to Cambridge, we join Kahneman and his behavioral economics colleagues. They write about the frequent use of heuristics (simple, readily applied rules) that enable fast thinking to occur. Many heuristics serve us well in addressing daily-problems and making decisions about mundane and often reoccurring matters. However, they often get us in trouble when we face unique and multi-tiered problems—such as formulating policies regarding the COVID-19 pandemic. We might be inclined to "throw hard" and engage a simple values-based heuristic about saving the life of a single person: "Your failure to social distance is endangering the life of my mother!" The herd immunization option is immediately rejected, even in its more benign form: "This is nothing more than a Nazified decision to 'let them bleed!'"

In applying this heuristic to the Corona virus epidemic, we move immediately to the social distancing (and other preventative actions) solution and decide immediately to "stop the bleeding!" "People [including my mother] will live if all of us stay at an appropriate distance from one another." Widespread support for this social distancing policy grew during the middle months of 2020. The social distancing heuristic was working somewhat effectively for a while in some countries – such as China, Singapore and New Zealand.

Yet, the rate of infection was creeping back up in these countries—especially among members of their communities who are marginalized. Requirements regarding lock down were eased at times. Citizens were spending more time out in public. They were social distancing, but this was not enough. The restrictions were often re-instituted as infections and deaths once again rose.

COVID-19 infections would come and go—much as was predicted by many advocates of herd immunization. Restrictions also came and went—with citizens uncertain about what to do.

There probably was not a silver bullet. No social policy could bring the death rate down to an "acceptable level." Even though several vaccines were produced by the end of 2020, there remained the major challenge of distribution given the widely differential levels of economic vitality and presence of health-related infrastructures from country to country. Dire predictions made by the epidemiologist may be coming true. We might need to slow down our thinking and challenge our humane, short-term perspective on confronting the virus with a broad-based application of social distancing public policies, complemented by vaccine-based immunization. Good intentions might not be enough. We need to do a better job of thinking in a systemic manner, as Forrester and Meadows propose.

For a moment we need to stand there rather than do something—especially as we get ready for future pandemics. The herd is starring at us from not too far away. Our slow thinking might be leading us to the difficult and anxiety-provoking conclusion that our policy must change. This recognition, in turn, creates more anxiety and pushes us back to fast thinking. Our rational system of thought and problem-solving will easily collapsed. The baseball once again might fly over the backstop. Death counts mount everywhere in the world. Like Dalkowski, we (collectively) seek out something that will numb the pain of failure.

Polarity Management

We must leave the confines of Cambridge Massachusetts in order to introduce a third, related perspective on the best way to learn from the COVID-19 crisis of 2020. Specifically, we turn to the work of Barry Johnson (1996), the "dean" of *polarity management*. Johnson's perspective and his related tools might guide a forum convened to slowly and thoughtfully formulate a viable pandemic policy for the future.

Johnson suggests that polarity management can be used in handling everyday dilemmas. It can also be of great value in addressing major societal contradictions—settings in which there are two or more legitimate but opposite forces at work. Can polarity management help us gain a purchase on a pandemic policy? I believe that the answer is "yes". Along with systemic perspectives and

slow thinking, polarity management might provide important guidance in the convening of a forum for constructive dialogue.

Both/And Rather Than Either/Or

Many of those involved already in the deliberation regarding a pandemic policy have framed the policy as an either/or option. To quote Howe again, those offering the herd option are taking the follow stand: ". . . the fact remains that herd immunity isn't merely a possible strategy. In the long run it is the only strategy. The question, then, is how to get there responsibly." The proponents of social distancing offer an even more absolutist stance: "the withdrawal of a social distance policy is unethical and immoral. It is counter to everything we hold precious as human beings."

I will frame our analysis around these two polar-opposite stances and begin by identifying some of the benefits and disadvantages associated with each policy. The benefits in both cases yield both short-term (tactile) and long-term (strategic) outcomes. The disadvantages I offer relate to what we don't know and what might be an unexpected and devastating outcome.

BENEFITS:
SOCIAL DISTANCE POLICY

- Preserve commitment to focus on welfare of each individual person
- Reduce pressure on health care workers and facilities
- Establish new social norms and interpersonal behavior patterns that can endure for a long time.

BENEFITS:
HERD IMMUNITY POLICY

- Build a sustainable world community with most if not all people being immune
- Set realistic expectations regarding short-term impact of virus on human health.
- Set hard but realistic policies regarding health priorities with specific populations

DISADVANTAGES:
SOCIAL DISTANCING POLICY

- May lead to recurrent outbreaks of the virus and ultimately more deaths
- Will sustain global uncertainty about long-term status of human health
- We don't know if social distancing can be sustained by most societies
- May set precedence for short-term solutions to pandemic outbreaks in the future

DISADVANTAGES:
HERD IMMUNITY POLICY

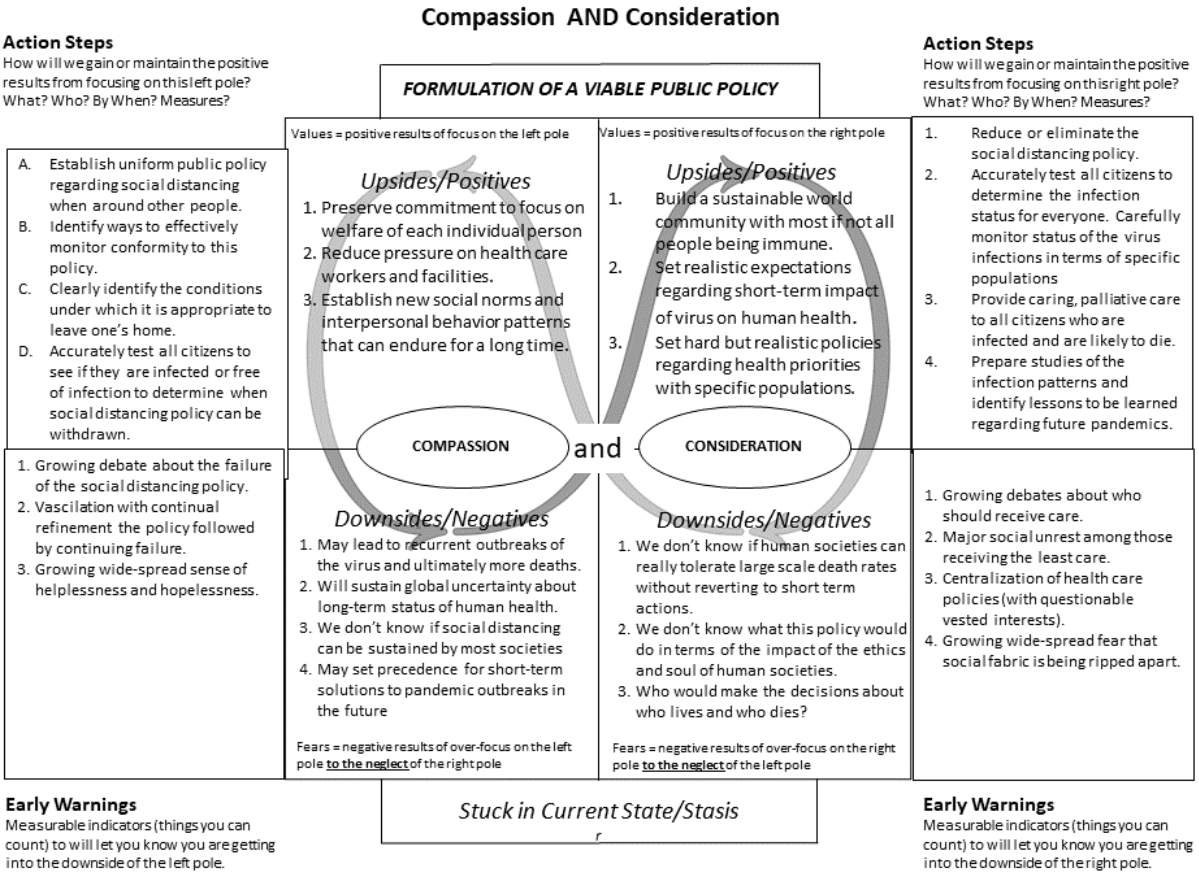
- We don't know if human societies can really tolerate large scale death rates without reverting to short term actions.
- We don't know what this policy would do in terms of its impact on the ethics and soul of human societies.
- Who would make the decision about who lives and who dies?

These initial summary statements regarding the pull between two public policies can be framed as a polarity. What tends to occur is that we linger briefly on the advantages inherent in one of the options (in this case the social distancing policy). Then we begin to recognize some of the disadvantages associated with this option. We are pulled to the second option. If social distancing and other preventative actions are not the answer, then we must embrace a herd immunization policy. Yet, as we linger on this second option, we discover that this policy also has its flaws and disadvantages. We are led back to the first policy—and must again face the disadvantages inherent in this first option.

The swing has begun from left top to left bottom to right top, to right bottom, back again to left top. We are whipped back and forth. As anxiety increases regarding the COVERT-19 virus and future pandemic viruses, the vacillation also increases in both intensity and rapidity. This is what the dynamics of polarization is all about. There is inadequate time and attention given to each option.

The Polarity Graph

Here is what the polarity-based dynamics of our policy deliberations might look like if mapped on a polarity graph:



A Polarity Analysis

With this preliminary framing and charting completed, we turn to what happens when we try to *maximize* the benefits of either side at the expense of the other side. In the case of sustaining the social distancing policy (along with other preventative actions), the maximization of social distancing would (as the epidemiological models indicate) tend to delay but ultimately accelerate the rate of infections and ultimately virus-related deaths. Furthermore, we now know that the masks don't necessarily prevent the virus from spreading. The virus comes in through the sides of the masks which most people wore during the COVID-19 crisis (much as water comes in through the edges of our googles, not through the glass).We would soon be in despair regarding the failure of this social distancing policy. At some point, we might adopt the herd policy, but would probably find that it is too late.

Conversely, if we completely overrode the social distancing policy and fully adopted the herd infection policy, then we would witness massive death rates and would be deeply concerned within a short period of time (throughout the world) regarding the "heartlessness" of this policy. We would inevitably find that projections about the potential number of people who would die before herd immunization was established are staggering.

We would feel deeply wounded about the decisions being made. If we are religious and view ourselves as culpable, then we might ask our deity for forgiveness. Other members of our society would be inclined to launch a vitriolic attack against those who enacted this grotesque policy. As a result, we are likely to return to a social distancing policy—though only after many deaths. And the social distancing policy would still be flawed.

Barry Johnson warns that we must not try to maximize the appeal of any one side; rather we must carefully *optimize* the degree to which we are inclined toward one side or the other and how long we will stay with consideration and enactment of this side. Optimizing means that we must find a reasonable and perhaps flexible set-point as we act in favor of one side or another. Finding these acceptable optimum responses and repeatedly redefining them is the key to polarity management. This strategy is aligned with the suggestion made by many health policy experts that with future pandemic virus we should periodically adopt a social distancing policy, rather than abandoning it all together.

The fundamental recommendation to be made in managing this particular polarity is to remain in the positive domain of each policy option long enough to identify all (or most) of the key benefits and potential actions to be taken that maximize the benefits. Time should also be devoted to and attention directed (in a slow and systemic manner) toward identification of potential ways in which the two policies can be brought together on behalf of an integrated response to the pandemic challenge. Consideration and compassion potentially join hands.

This polarity management recommendation is not easily enacted—especially when the stakes are high (as they certainly were regarding COVID-19 and will be with any future pandemic crises). As Johnson and others engaged in polarity management have noted, effective management of polarities requires a constant process of vigilance, negotiation, and adjustments. The second

option regarding future pandemic invasions that is offered by public health policy experts seems to be aligned with this recommendation of dynamic vigilance. They suggest that we must continuously seek and refine a dynamic, flexible balance between consideration and compassion—so that each side's beneficial contributions can be enjoyed, without engendering serious negative consequences. We must accompany this balance with some immediate, tangible correctives, such as wide-spread distribution of better-designed masks, increased testing and improved tracing.

Policy Alarm Systems

Johnson has one more important point to make regarding the management of polarities. He identifies the value inherent in setting up an alarm system as a safeguard against overshooting toward either side of the polarity. It would be prudent to build in an alarm system that warns us when we may be trying to maximize one side and are on the verge of triggering the negative reactions.

The alarm signal for the social distancing policy might a growing debate regarding failure of this policy and the continual refinement of this policy by leaders in politics and business. We would observe a struggling system: abundant vacillation, frequent reversal of existing policy, and very short-term implementation, criticism, and abandonment of revised social distancing policies. The signal might also be apparent at a deeper, psychological level. There would be a growing sense of helplessness and hopelessness.

The alarm system for safeguards against the herd immunization policy might be increasing occurrence of debates about who should receive the most care and who should "tragically" be allowed to die (for the sake of the "herd"). Major social unrest might arise among those populations receiving the least care and witnessing what seems to be cavalier societal disregard for their welfare. Control of health care policies might become more centralized and embedded in vested social and economic interests. At this point, the herd policies might be saving lives in the long term—but destroying (forever) the social fabric of the communities in which these policies are being implemented.

Hopefully, with the safeguards in place and the alarm signals clearly articulated, we can address the negative consequences of each option in a constructive manner. As a result, we might even be in a place to formulate an even better integrative policy regarding the international handling of recurrent global pandemics (which will occur inevitably in our boundaryless world). Optimally, this formulation could be thought through in a slow manner with broader, often counter-intuitive and systemic dynamics taken into consideration. Johnson's polarity management is joined with the wisdom of Forrester's systems thinking and Kahneman's slow thinking.

Consideration and Compassion: An Integrative Strategy

What then are we to do individually and collectively about social distancing and other preventative actions when confronted with the new pandemic? A cursory analysis would suggest that we have three choices. Meadow's systems thinking and Kahneman's slow and fast thinking are relevant to each of these choices. Each choice also involves the polarity of consideration and compassion.

The First Choice: Denial or Disillusionment

The first choice is to do nothing and avoid making a tough decision. We won't even engage a polarity analysis when considering this option. This choice, like that made in many countries during the first months of the COVID-19 virus, is filled with denial and underestimation of virus impact. It is a form of freezing, which was the behavior our ancient ancestors learned to engage as one of the slowest and weakest animals on the African Savannah (Sapolsky, 1998). If we remain still and don't move, then maybe the threatening entity (lion or virus) will somehow go away.

Living in the world of 21st Century realities, freeze can take on several different forms. We might simply remain at home, escaping into reality TV, watching the televised replay of some sporting event, or getting absorbed in a warm and soothing "escapist" novel. Alternatively, as one of my colleagues in China reports, we can become disillusioned with what is happening (or not happening) in the world: "In the past [2020] we tried one of the other options and found it useless or found that no one else was dancing to the same tune. Why should I do anything, when no one else seems to be doing the right thing? Why trust my government, when they botched it with

COVID-19." With disillusionment comes a sense of hopelessness and helplessness—key ingredients in the formula for increasing stress and even depression.

This first choice yields not only dysfunctional public policy and dangerous collective action, but also horrible health outcomes for all of us (freezing produces a highly stressed physical system). This choice is what Dr. Michael Osterholm (2020) of the University of Minnesota calls the fool's position. It requires massive denial of the reality we now face. Or it requires a pervasive sense of helplessness. Like our ancestors on the African Savannah, we are very slow and very weak when it comes to somehow escaping or fighting the virus. Furthermore, unlike the lion on the Savannah that might overlook us or lose interest in us if we remain frozen, the COVID-19 virus knew where we were and had no intention of leaving us alone. The same will be the case with any future viruses.

The Second Choice: Doing the "Right" Thing

The second choice is to engage in fast thinking. We are compassionate. It makes us feel better and requires none of the systemic and often counter-intuitive thinking espoused by Forrester and his system dynamic colleagues. We do what we immediately know is proper. We win approval from our family, friends, and fellow citizens (and win elections). Perhaps of greatest importance is our own self-approval. We do the "right" and "decent" thing—based on what the media and our chosen political leaders encourage us to do. In 2020, we made sure our masks were in place and we remained at an appropriate distance from other people when going to the supermarket. Other people at the market nodded their appreciation for the sensitive way in which we were looking after their welfare. A wonderful short-term benefit—but not necessarily something that leads to long term systemic benefit for our society.

We are wonderful people—but we might die during the coming year along with those who admire us. Our actions may lead to unanticipated outcomes. Perhaps we should stay frozen. This might be what my Chinese colleague described as the wide-spread disillusionment in her own country. The system is not responding like it should to our generous actions. We are kind, but the virus is persistent. As a very experienced clinical psychologist, my Chinese colleague warns that this might be an inevitable stage in the psychological reaction to pandemics. Is her reflections on reactions in Chinese applicable elsewhere in the world (including the United States)?

If we wish to avoid disillusionment, then we might try hope. We can fast think by hoping that a cure or source of prevention will come soon when the next pandemic arrives. Hope is certainly a good thing—we know that hope can be healing. Furthermore, hope might be warranted. Scientists achieved miraculous results in 2020 concerning the production of vaccines. Cures were on the way within one year. Perhaps we will only have to hunker down and engage in proper social behavior when the next pandemic arrives.

Is this a viable choice? Can we rely on hope and optimistic anticipation as a public policy? Our COVID-19 enemy was agile and widely present. It did not easily succumb to human intervention and was too widely distributed to prevent re-occurring outbreaks in remote regions of the world (where the preventative or curative measures were not present). This could happen in the case of any future virus. There are likely to be repeated struggles with containment all over the world. The epidemiologists of 2020 might be right: there could be a very long-term, drawn out war against future viruses that humankind could lose. We must be engaged in painfully realistic assessments of future viruses.

The Third Choice: Humane or Defiant Herding

The third choice leads us directly to this painful assessment. We become considerate realists. Like the second choice, fast thinking takes place when we make the third choice. This leads to the absolute abandonment of any individual behavior related to recommended social behavior. "Why bother with social distancing and other preventative actions when they don't really make much difference in the long term." We abandon all compassion and sense of collective responsibility and turn away from any recognition that recommended norms regarding social behavior can be managed in a humane manner. We could blend consideration with a pinch of compassion by support a public policy that allocates caring resources to those many citizens who must become infected in order to gain immunity. Instead of focusing on testing and contact tracing or sitting around hoping for a cure, we wait out the eventual global immunization (as happened with many other illnesses and pandemics in the past, such as the Spanish Flu in 1918).

At its extreme, we redirect primary attention and resources away from the discovery of new curative drugs and preventative inoculations to the reinforcement of health care services. In that

way, those who are infected receive the best possible care. We would be hunkering down in a different way from that involved with the second choice. Put simply, the focus turns with this third choice to the caring and thoughtful treatment of those who are afflicted. In the long run, it is a choice that is just as compassionate as the second choice. In the short run, however, it seems to be quite brutal and can lead to a polarity response--a swinging back to the second choice or to a freezing in place (choice one).

This third choice requires that we make hard decisions regarding who does and who does not receive the caring attention. Important questions arise. What about racial minorities? What about those who are poor or incarcerated? Do we ignore those involved in occupations requiring close contact with other people—such as those in the meat-packing industry or restaurants? And what about the health care workers themselves? Who do we save and who do we lose? Who makes the decisions, or does no one take responsibility for the horrible choices that must be made? We could end up with a Darwinian survival of the fittest scenario.

Even with equitable policies in place, we would have to prepare ourselves (with this second choice) for the death of many people—including those we love. A major role might have to be played by religious institutions and other faith-based communities—as we seek to find some purpose or meaning in the afflictions that will become rampant with the next pandemic. We would have to allow our public policies and our careful consideration of the long-term outcomes of a social distancing policy to temper (and sadly often replace) our compassion. Our grieving and sense of guilt could overwhelm us. As I already noted, we might be propelled back to the second choice when faced with these prospects and the associated deeply felt emotions. Polarity vacillation could replace consistent consideration and compassion. We would certainly be tempted to refreeze (and turn to the first choice). We would become disillusioned like my very caring colleague in China observed.

Before leaving this third choice, we must acknowledge that it gets much more complex. There is another way in which the third choice can play out. It might not just be a matter of thoughtful and compassionate treatment of those who are afflicted. It might also be a matter of actively challenging widely held beliefs regarding the virus and social distancing policies. There is an important variant on the third choice. Like the engagement in humane treatment, this variant

eliminates the freeze and moves us to action. As occurred in many countries during the COVID-19 pandemic, we become defiant protestors. We demonstrate outside the offices of our elected leaders. We prepare signs that say: "giving me liberty or give me death!" We produce You Tube videos that question the validity of a social distancing policy. "What are the real intentions driving this policy?" "Who started it out? Was this pandemic embedded in a plot hatched by government officials in some enemy country that was intended to destroy us? Were some major corporate leaders producing the virus in order to make money by creating the vaccine to defeat this virus?" In declaring that the next pandemic is something of a conspiracy that benefits political leaders or the medical establishment, we shift attention from health and medicine to politics and business practices. At the very least, we declare that social distancing policies (or other changes in recommended social behavior) violates our individual freedom.

This variant on the third choice is clearly represented in the work down during 2020 by two Southern California physicians. They posted two You Tube videos that created major controversy. These two physicians noted that many deaths reportedly caused by COVID-19 were attributable in fact to other causes (such as heart disease). They suggested that the reasons people infected with the virus die can often be traced back to poor lifelong health habits (such as smoking and obesity). They proposed that virus only accelerated a decline in health that was already taking place. Hospitals, according to these two physicians, were being encouraged (perhaps even forced) to ascribe the death to COVID-19. As is the case with the herd immunization advocates, these physicians declared that social distancing was only delaying the inevitable. Will similar credentialed health care "experts" show up on social media when the next pandemic strikes?

The story gets even more interesting and complex. The challenging perspectives these physicians offer led to their You Tube presentations being shut down by the You Tube staff. Was this decision by You Tube appropriate and justifiable? Most of us (who are not radical social libertarians) would agree that there should be screening of inaccurate or inappropriate content (such as pornography) or blatantly inaccurate information. However, should the observations made by these two physicians be considered inappropriate? Do we know that what they declared is inaccurate? What should be the policy regarding future challenging presentations regarding a pandemic?

As one might imagine, uproar about this "censorship" was widespread and passionate. As one of those commenting on the censorship declared: "If you stomp on our freedom, that has one ending and its violence. Spoken like a true American!" At the very least, the actions taken by You Tube speak to the major challenge of establishing an open forum for the discussion of various options. What should we make of this variant on the third choice? Don't we want a forum that welcomes the sharing of diverse perspectives regarding something as complex as a global pandemic?

On the one hand, in declaring "give me freedom or give me death", those choosing this variant may be opening the door for deadly misinformation. They may actually be choosing their own death (from the infection). At the very least, they may be endangering the lives of other people and adding greater stress to the health care system by sharing or accepting misinformation. They are declaring their own freedom—but are constraining the freedom of other people in our society. On the other hand, we are remaking a fragile democratic society if we block out all discourse about the validity of specific pandemic policies.

The polarity has been fully and passionately engaged with the presence of this variant on the third choice. In the future, how do we make the management of this polarity into a constructive act that yields a viable social policy regarding a pandemic virus? We need an open forum for system-based, slow thinking dialogue—a forum leading potentially to identification of a fourth choice.

The Fourth Choice: Integrating Consideration and Compassion

There is a fourth choice—we become realistic about the spread of future viruses and the interplay between induced immunity (via vaccines) and natural immunization (a variant on herd immunity) coupled with the enforcement of strong social behavioral practices and the development and equitable as well as efficient distribution of effective vaccines. This choice requires that we are quite thoughtful in our policy making. Can we formulate a set of contingency plans that account for (but don't rely on) the potential of curative or preventative breakthroughs in response to the variants in pandemic viruses we are likely to encounter? Slow and systemic thinking must be in place for this fourth option to be engaged successfully. It is not an easy path to take. It requires that we become rational and caring citizens despite the fact that we will be quite anxious and prone to disillusionment and the uncritical acceptance of misinformation.

From the perspective of this fourth choice, the best pathway will bring about the integration of compassion and consideration—rather than these values and accompanying perspectives being framed as a non-reconcilable polarity. This fourth choice requires that social distancing (and other preventative actions) are engaged. We need to learn from what did and did not work in various society regarding social behavior policies. This (at least temporary) acceptance of the social distancing policy (the upper left side of the polarity map) will only be effective if it can be applied in a flexible and adaptive manner without a polarizing vacillation between this policy and the herd policy (the upper right side of the polarity map). The fourth choice also requires effective and widely accessible testing and a labor-intensive contact tracing system.

At the present time, the engagement of social distancing (and other preventative actions) in the future probably makes sense. A strict herd immunization policy does not make sense, for several reasons. First, we have not acquired sufficiently valid and useful information to make the critical decisions in the future regarding vulnerability. Who is most likely to live and who is most likely to die. The epidemiologists now know more than they did prior to 2020—but the information still isn't complete. Second, many of us lack confidence that any government (or nongovernment) institution can fairly handle such a difficult decision-making process (operating without prejudice or vested interests). Third, in 2020, we painfully discovered in most countries that there are not an adequate number of health workers, nor adequate facilities to handle a significant increase in hospital admissions. It is unlikely that most governments in the future will be able to fund these operations at a sufficient level.

It is only when there is information, trust in government, and adequate health resources that a social distancing policy can be abandoned –even temporarily. At the point where conditions are satisfactory then we will probably be positioned to adjust this policy. Howe (2020, p. K4) relied on the expertise of the epistemologists when he suggests that "once more wide-spread testing is in place and hospitals have the resources they need to treat COVID-19 patients, then we could switch gears and allow for more exposure than we are allowing now." This perspective is probably appropriate when we face future pandemic challenges.

The aforementioned Dr. Michael Osterholm (2020) is one of the experts who was engaged in slow, systemic thinking when considering the best way to address the COVID-19 virus. He suggested

that the fundamental question be framed as follows: *How do we maintain (preserve) our society*? Along with many other epidemiologists, he came to the sobering conclusion that ultimately between 60 and 70% of the people in the world will have to be inoculated or infected. They will either become immunity to the virus or pass away. Furthermore, we will be facing the challenge of COVID-19 (and other viruses in the future) for many months (or even years). If Osterholm is correct, then viruses will become a lingering factor in all societies, erupting in one community after another and bringing about social and economic disruption wherever it erupts.

Osterholm is not alone. Many other medical and epidemiological experts have joined him in declaring that this will be a war not a battle. Just as American (and other nation's) armed forces have been in Afghanistan for many years, so we must acknowledge that the COVID-19 virus –and many future pandemic viruses—are strong and persistent enemies that will not easily be defeated. For us to somehow bear the weight of these long-term healthcare war, Osterholm insists that we engage universal (or near universal) testing procedures that yield high quality (valid) results. The medical leaders in all societies need to know how to use high-quality testing procedure and must steer clear of either inequitable distribution of these tests or use inferior tests that yield invalid results. A systems-based contact tracing process must be engaged.

Appropriate social distancing behavior will also be required. We now know that the COVD-19 virus can (and will) mutate. This virus (and future ones) learns how to adapt to the human organism. Our enemy is fleet of foot and capable of change. We do have a defense against the virus to which it can not adapt. This defense is our modification of social behavior. The virus can't move from person to person if the second person isn't nearby or if the second person is protected with an effective, "leak-proof" mask. The virus can't knock on our front door if we are staying home and can't swirl around an unmasked crowd if this crowd is never convened.

With good and fair testing and tracing procedures engaged throughout the world and with appropriate social behavior in place, leaders of our global communities can make the difficult but informed decisions about where to allocate resources and which sub-populations in particular need to be protected and sheltered. It is only when these testing protocols, tracing procedures and social distancing policies are fully in place that we can selectively answer the short-term question: How and when do we "open up"? And it is only at the point when we have valid and

useful information that we can answer the related question: To whom and how should we be directing often scarce medical resources when a new pandemic virus begins to spread worldwide?

As a slow, thoughtful analyst, Osterholm envisions a systems-based approach to addressing the COVID-19 crisis. He declares that this approach will only be effective if several other foundational elements are in place. These elements are required for societies around the world to survive. First, the health care workers must be fully protected with fully available and functioning protective equipment. This means that greater attention needs to be given to and higher priority assigned to the task of producing (and stockpiling) this equipment. Second, the health care systems they serve must not be overwhelmed—which means that communities will have to periodically issue stay-at-home orders. The question of opening up will be answered differently from one community to the next, with the answer changing from month to month, depending on the up-to-date testing data and results of ongoing contact tracing in place for this community. Long-term, health care resources must be greatly increased (and held in reserve) so that health care systems are not readily overwhelmed.

Osterholm offers a third foundational element which is much more psychological in nature. He believes that a carefully crafted and implemented realistic pandemic-response policy will only work if those in a leadership position communicate in a way that is not only knowledgeable but also comforting. He points back to the "fireside chats" that Franklyn Roosevelt brought to the American people during the high-stress periods of World War II. What would a digitally mediated fireside chat look like in the mid-21st Century? Who would deliver this chat? Would it be delivered by a different respected leader in each nation or is there some global leader who has credibility in virtually all countries? Is the world sufficiently "flat" (Friedman, 2005) that a truthful yet reassuring message can be delivered in a universally compelling manner?

Most importantly, we need the wisdom of leadership that identifies and yields benefits from both sides of the polarity. There must be both caring compassion and thoughtful consideration. Ultimately, I would suggest that it is about *trust* in leadership. Furthermore, it is about not only trust in a leader's competence (consideration) but also trust in the leader's intentions (compassion) (Bergquist, Betwee and Meuel, 1995). Effective leadership is a tall order—but it is essential if our global society is to successfully combat future pandemic invasions.

Collaborative Creation of the Future

While I agree with Osterholm regarding the need for competent and well-intended leaders who offer fireside chats (or the 21st Century equivalent), I think another foundational element must be in place if we are to successfully negotiate long-running pandemic wars while preserving our global societies. I would go so far as to suggest that something even more fundamental must be in place—and this additional condition is truly psychological in nature. We must do something more than slow down our thinking and be both considerate and compassionate. We must also collectively engage in constructive, extended conversations about policies and policies related to future pandemic challenges. These conversations must include members of our communities with diverse perspectives and expertise. Ultimately, we must engage an even broader, global set of communities.

Social Constructive Dialogue

We must engage in what Ken and Mary Gergen (2004) describe as social constructive dialogue. This dialogue is required if we are to create a shared narrative (social construction) filled with both reality and hope—with both consideration and compassion. We should not rely on our leaders to solve the virus problems. This would be nothing more than regression to an old (and highly authoritarian) reliance on other people to solve our collective problems. We must avoid other people constructing our collective narrative about the cause and cure of COVID-19 (and other future pandemics).

The social construction of a dominant collective narrative that is valid (consideration) and hopeful (compassion) requires that we not leave either the policy formulation or the narrative construction to the designated leaders. We must participate in (and encourage our leaders to join us) in the engagement of a polarity-based analysis of not just the various options available to us in coping with the continuing crisis of COVID-19, but also the options available to us in addressing future pandemic challenges.

Compelling Image of the Future

As Osterholm has noted, the core question is: How do we preserve our societies around the world while addressing the virus challenges? A second version of the core question might be posed: *What is a compelling image of the future for each of our societies that should emerge from the COVID-19 crisis*? This version of the key question arises from the work of Fred Polak (1973) who proposed many years ago that a viable society must always hold in mind (and heart) a compelling image of its own future –a future to which members of society are willing in a sustained manner to commit their energy and talent.

We must invite people with multiple perspective to the narrative-constructing and decision-making table if we are to build a compelling but also realistic image of the future after COVID-19. We should listen to our learned colleagues, like Dr. Osterholm, who are engaged in epidemiological modeling of the virus's behavior and the identification of necessary elements. It is critical that we hear and appreciate their "inconvenient truths." We must respect the way in which multi-tiered data can be processed and interpreted as a dynamic system. The contemporary system dynamics inheritors of Jay Forrester's and Donella Meadow's wisdom might lend a hand.

We should also recognize, however, that the epidemiologists and system modelers do not have all the answers. We should bring many other people to the table—including ethicists, historians, economists, and sociologists. Communication experts are needed who know how to help leaders chat fireside in a considerate and compassion manner. Perhaps, an invitation would be extended to psychologists and behavioral economists. They do know something about human decision-making (at its best and at its worst). As experts on the dynamics of groups and teams under conditions of intense anxiety, they might help design and facilitate dialogues occurring at the table.

Together, we might be able to create an image of the future that is both realistic and compelling. This would be an image that is saturated with both consideration and compassion. We hold the opportunity in our hands to create such an image of the future for all societies in our world. We can create this image in anticipation of future pandemics while addressing the more immediate lingering COVID-19 challenges. With this compelling image in place, we might be able to not only preserve our global societies, but also enrich them.

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