



COMMENT



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# United by the global COVID-19 pandemic: divided by our values and viral identities

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The rapidly evolving landscape of the global COVID-19 pandemic necessitates urgent scientific advances and adaptive behavioural and policy responses to contain viral transmission, reduce impacts on public health, and minimise societal disruption. Epidemiological models of SARS-CoV-2 transmission are heavily influencing policy responses, forecasting viral infection, transmission, and death rates under simplified representations of human behaviour. They either assume that all members of a population or demographic group behave identically or design individual behavioural rules based on demographic and mobility data. In pluralistic societies, however, individual behavioural responses vary with personal values, situational contexts, and social group identities, affecting policy compliance and viral transmission. Here, I identify and explore the impacts of salient viral identities or “COVID-19 personality types” that are emerging and fluidly coalescing with each other and existing social and political identities. The resultant heightened inter-group differentiation explains the politicisation of the pandemic and rampant racism, discrimination, and conflict observed now and with epidemics historically. Recognising salient COVID-19 behavioural identities can improve scientific forecasting of SARS-CoV-2 transmission and the impact of containment measures, as well as tailor nuanced policy interventions and communications to enhance individual coping and compliance. As governments contemplate easing social-distancing restrictions, the science-society-policy nexus needs fortification through public participation, structured deliberation, and evidence-informed decision-making of policy options to negotiate the complex value trade-offs among public health, the market economy, and civil liberty. By thus valuing human diversity to foster societal resilience, an ethical agenda can be set with a united response to the COVID-19 pandemic and global commons challenges whose impacts are less immediate, but no less dire for humanity.

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## Introduction

“No man is an island, entire of itself; every man is a piece of the continent, a part of the main. If a clod be washed away by the sea, Europe is the less, as well as if a promontory were, as well as if a manor of thy friend’s or of thine own were: any man’s death diminishes me, because I am involved in mankind, and therefore never send to know for whom the bell tolls; it tolls for thee.”

(John Donne, Devotions Upon Emergent Occasions, Meditation XVII, 1624)



**Fig. 1** Bell toller rings church bell in unison with others in a novena prayer against the COVID-19 outbreak across Bologna, Italy during a nationwide quarantine in March 2020. This figure is not covered by the Creative Commons Attribution 4.0 International License. Reproduced as a screen shot from the video, *Italy: Bologna church bells ring in unison for 9 days amid coronavirus outbreak* (<https://ruptly.tv/videos/20200314-016>), with permission of Ruptly GmbH; copyright © Ruptly GmbH, all rights reserved.

The global coronavirus disease 2019 (COVID-19) pandemic is gripping humanity with a united focus not seen since the last world war. Moreover, not heard since then, in March, church bells rang across Bologna in a novena prayer (Fig. 1) against the outbreak of the severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) as it ravaged Italy and spread to the rest of Europe. In April, the pandemic stormed North America with a vengeance, as the death toll in the United States catapulted it past all other nations in a macabre Olympics. In his *Meditation XVII*, John Donne urges “never send to know for whom the bell tolls; it tolls for thee.” Each person’s death diminishes us, as we are bound in a common humanity. However, how do we cope when the bell tolls four times every minute, *once every 15 s*, to mark the estimated 6000 individuals that were being lost daily from humanity to COVID-19, as on 4 April 2020 (JHU, 2020)?

Also on April 4th, traditionally celebrated as *Qingming* or “Tomb-sweeping day” by the Chinese as they pay reverence to their ancestors and departed relatives, horns and air-raid sirens punctuated three minutes of silence to commemorate the COVID-19 victims in China (The Guardian, 2020), where the outbreak originated in Wuhan in December 2019. On this same day, over 20,000 visitors flooded Huangshan National Park (Jiang, 2020), sparking fears of a second wave, after the Chinese government relaxed its harsh quarantine and lockdown measures (Cyranski, 2020) as its daily new COVID-19 cases and deaths approached zero (JHU, 2020). Meanwhile, with the virus spreading in Europe and North America, democratic leaders, like German Chancellor Angela Merkel (Davidson, 2020) and Canadian Prime Minister Justin Trudeau (McLean’s, 2020), rally their

citizens to join in solidarity and adhere to social-distancing measures. As nations prioritise public health and saving lives, their citizens are isolated and economies are crippled by COVID-19 policy interventions, which include: travel bans; self-isolation, quarantines, and stay-at-home orders; public-gathering and event restrictions; school, restaurant, and non-essential business closures; and complete lockdowns. In contrast, national populist leaders resist these measures, such as Brazil’s President Jair Bolsonaro, who denies COVID-19 as media “hysteria” and urges Brazilians to return to work and to schools against state-imposed restrictions (Phillips and Briso, 2020), while United States President Donald Trump prioritises the nation’s economy and his political and electoral interests (Parker and Mounk, 2020), risking public health and the World Health Organisation (WHO)’s work (Nature Editorial, 2020a).

The policy challenge in the global COVID-19 pandemic is that unlike the two world wars, the “enemy” is not visible. No visible marker identifies who is infected with the highly contagious SARS-CoV-2. The usual identity markers, such as nationality, ethnicity, race, religion, socio-economic class, and gender, which characterise current “identity politics” (Fukuyama, 2018), do not apply in this “war.” The novel SARS-CoV-2 virus respects no political borders, infects all demographic groups (though with differential impacts), and lurks even within loved ones. This lack of viral discrimination is reinforced by tragic stories, such as of Chinese doctor Li Wenliang who first warned of the infectious disease only to succumb to it (Buckley, 2020), and the New Jersey Fusco family that lost four members in 1 week (Tully, 2020).

## A pandemic world: emergent viral identities

This invisible common enemy inflicts a palpable sense of unease among people as they struggle, amidst high uncertainty and risk of contagion, to assign others according, not to the familiar, more visible social identities above, but to new viral identities. Viral categorisations of the desired in-group (not infected) and out-group (infected) extend to viral susceptibilities, exposures, recoveries, resources, and treatments, as well as behavioural and policy responses. The pandemic highlights how we intuitively structure and make sense of our social worlds based on “human kinds” that differentiate “Us” from “Them” (Berreby, 2005). By such inter-group differentiation, we judge and treat people as members of either in-groups or out-groups, rather than as individuals (Van de Vliert, 2020). Social identification is linked to personal values and often induces group centrism, that is, preference for one’s own group at the expense of others. This stems from the simplifications that come with social categorisations, which emphasise similarities and differences, and often evaluate negatively the unique attributes of out-groups, leading to stereotypes, prejudices, and discrimination (Alves et al., 2018). Negative bias and inaccurate beliefs of out-group perceptions and motives exacerbate inter-group conflict in competitive contexts (Lee and Cikara, 2020). High inter-group differentiation is associated with high pathogenic stress, with human-to-human transmitted diseases hypothesised to promote xenophobia and ethnocentrism (Van de Vliert, 2020). And there’s the rub: the global COVID-19 pandemic unites us with a common virus, but divides us with emergent viral identities.

These emergent viral identities are influencing individual behavioural and government policy responses to the heightened uncertainty posed by COVID-19. Individuals often respond to policies by protecting their values and identities (Kahan, 2010), so for some, COVID-19 has reinforced social and political identities. Social identities foster a sense of belonging via

attachment to social groups and their behaviours (Tajfel, 1981). Salient identities contribute to common views on policies and shape behaviours to benefit in-groups (Hornung et al., 2019). These salient viral identities have heightened inter-group differentiation and explain the rampant racism against the Chinese (Aratani, 2020; Nature Editorial, 2020b), as well as initial policy responses of border closures oriented to protect “Us” against “Them.” Despite COVID-19’s transmission trajectory from Asia, through Europe, to North America, the proclivity of individuals and nations to associate the virus with others narrowed policy choices, delaying precautionary social-distancing measures. Emerging salient viral identities are coalescing with social and political identities, as COVID-19 responses are hijacked by the entrenched identity politics. For example, US Democrat governors tend to close their states, and citizens to follow social-distancing rules, while Republicans behave oppositely (Adolph et al., 2020), such that social-distancing behaviours are reflecting politicised and polarising viral identities (Coppins, 2020). In contrast, Asian countries such as Singapore, South Korea, and Taiwan (whose Vice-President Chen Chien-Jen is an epidemiologist; Cyranoski, 2016; Smith, 2020), with experience in SARS or Middle East Respiratory Syndrome (MERS), recognised the emerging domestic viral threat and acted swiftly to monitor cases, trace contacts, and contain the spread of SARS-CoV-2 (Graham-Harrison, 2020). Another national exemplar in its COVID-19 response, New Zealand adopted a precautionary strategy, declaring a national lockdown prior to any domestic COVID-19 deaths (Radio New Zealand, 2020).

Globally, diverse viral behavioural identities or “COVID-19 personality types” have emerged, including: *Deniers*, who downplay the viral threat, promoting business as usual (Gerbaudo, 2020); *Spreaders*, who want the virus to spread, herd immunity to develop, and normality to return (Coppins, 2020; Schibbye, 2020); *Harmers*, who may spit or cough at others (Busby and agency, 2020) or dub COVID-19 “Boomer Remover” (Schmich, 2020); *Realists*, who recognise the reality of its harm and adjust their behaviours (Davidson, 2020); *Worriers*, who stay informed and safe to manage their uncertainty and viral-induced fear (Venuleo et al., 2020); *Contemplators*, who isolate and reflect on life and the world (Rees, 2020); *Hoarders*, who panic-buy food, toilet paper, and other products to quell their insecurity (Ang, 2020); *Invincibles*, often youth, who believe themselves to be immune, flocking beaches and partying (BBC News, 2020); *Rebels*, who defiantly flout social rules restricting their individual freedoms (Coppin, 2020); *Blamers*, who vent their fears and frustrations onto others, discriminating against racial groups or health-care workers (Pandey, 2020); *Exploiters*, who exploit the situation for power (Parker and Mounk, 2020), profit (Nicas, 2020), or brutality (Ratcliffe, 2020); *Innovators*, who design or repurpose resources, for example, for facemasks, ventilators, and other medical equipment (Pollina and Piovaccari, 2020); *Supporters*, who show their solidarity in support of others through, for example, claps, songs, and rainbows (Vince, 2020); *Altruists*, who, like the “caremongers”, help the vulnerable, elderly, and isolated (Moscrop, 2020); *Warriors*, like the front-line health-care workers who combat its grim reality (International Council of Workers, 2020); and *Veterans*, who experienced SARS or MERS and willingly comply with COVID-19 restrictions (Graham-Harrison, 2020). Such salient viral identities are fluidly emerging (and disappearing) in society in dynamic response to COVID-19, but they, and their impacts, have yet to be recognised in science and policy.

### Science: forecasting viral transmission and impact

Recognising COVID-19 identities can refine forecasts of SARS-CoV-2 transmission and impact. Epidemiological models

simulate viral infection and spread either by assuming that individuals within populations or demographic groups (defined by age, sex, health, socio-economic class, social contacts, etc.) behave identically (equation-based models) or by relying on demographic and mobility data to guide individual behaviours (agent-based models) (Adam, 2020; Economist, 2020). One unknown in these models is how people react to social-distancing measures: UK and US models assumed a uniform 85–90% reduction in social contacts, as reported by Chinese citizens (Adam, 2020). However, unlike authoritarian regimes, liberal democracies cannot compel their populace to follow state-imposed restrictions. Variance in individual responses and willingness to comply with COVID-19 policy interventions can be captured if epidemiological models group individuals by their salient viral identities, informed by demographic variables. These viral identities reflect, *inter alia*, plural values, social identities, situational contexts, and risk tolerances. To forecast viral transmission within populations accounting for different responses, identified viral behaviours can be clustered by their projected compliance, e.g.,: “Non-compliers” (*Deniers, Harmers, Invincibles, and Rebels*), “Partial Compliers” (*Spreaders, Blamers, and Exploiters*), and “Compliers” (*Realists, Worriers, Contemplators, Hoarders, Innovators, Supporters, Altruists, Warriors, and Veterans*). By projecting differential impacts in COVID-19 transmission and deaths correlated with variable behavioural responses and policy compliance, modelling can reveal the benefits of *shifting the behavioural curve*, not just flattening the viral curve, to induce adaptive responses for secondary viral waves. “Partial Compliers” are likely more susceptible than “Non-compliers” to change their behaviours to become “Compliers”, so policy design and communications can target their concerns to induce the desired compliance rate, modelled at 80% for measures to be effective in Australia (Chang et al., 2020). Policy responses and communications thus can be tailored to resonate with the diverse values, needs, interests, and contexts of individuals within pluralistic societies.

### Policy: tailoring interventions and communications

One demographic group rarely addressed directly in policy design and communications is children, who are less vulnerable to COVID-19, but nonetheless affected by containment measures and impact the ability of their parents to cope and to comply with policies. Recognising this, Norwegian Prime Minister Erna Solberg, 4 days after declaring a national lockdown, held a televised interactive press conference for children, where she addressed their fears over the coronavirus, reassured them that most would not get seriously ill, and explained that schools were closed and public activities were cancelled to minimise infections (Solberg, 2020). Similarly, in New Zealand and in two Canadian provinces (Woods, 2020), the Easter Bunny was declared an “essential worker,” but with reduced service and area restrictions, to deliver Easter chocolate, candy, and treats to children. In lieu of the usual Easter egg hunts, New Zealand Prime Minister Jacinda Ardern suggested that children place drawn Easter eggs in their front windows for the neighbourhood children to find (Chappell, 2020). While targeting children (as *Worriers*) and offering them (and their parents, as *Realists*) coping strategies, these policies reinforced that essential work continues, albeit delayed or reduced, and social-distancing guidelines must be obeyed by all. Globally, in response to observed behaviours and in efforts to induce greater compliance, the WHO adapted its policy messages, replacing “social distancing” with “physical distancing,” to stress that social contacts should be maintained even when physically separated (Aziz, 2020). Meanwhile, scientists

emphasised that COVID-19 can afflict the young, as well as the old, particularly as asymptomatic spreaders (Huang, 2020). Tailoring policy design with nuanced communications for diverse COVID-19 demographic and behavioural groups can enhance coping and compliance, as individuals identify with their values, concerns, and interests being addressed by policy-makers. It also could foster empathy and understanding of others, by explicitly recognising the values and identities of diverse groups within populations.

### Society: deliberating value trade-offs

Echoing Donne's *Meditation*, each life extinguished from common humanity diminishes us all. But with collective grieving of the global death toll may come collective healing. "No man is an island," but in the global COVID-19 pandemic, we must self-isolate to protect ourselves and others, and thereby show our care, respect, and solidarity. This first pernicious COVID-19 wave has been met largely with mobility and social-distancing policy interventions, abruptly removing individual freedoms in liberal democracies, with Sweden's "experiment" of more lax responses a notable exception (Schibbye, 2020). Restrictive mobility policies were coupled with mass digital surveillance in extensive testing and contact tracing in China (Cyranoski, 2020). Meanwhile, authoritarian rule is seizing on the COVID-19 crisis to erode democracy in Hungary, where government rule-by-decree is enacted indefinitely (Parker and Mounk, 2020), and in the Philippines (Reuters, 2020) and Kenya (Wasike, 2020), where the police and military are authorised to shoot to kill violators of government orders. US democracy dramatically teeters towards authoritarianism, as presidential battles with the media escalate and political favour seems to determine distribution to states of life-saving ventilators as much as infection rates (Parker and Mounk, 2020; Krugman, 2020; Posner and Bazelon, 2020). SARS-CoV-2 is thus heightening inter-group differentiation by emerging viral identities and extending government powers that reinforce discrimination against social and political out-groups, as witnessed in epidemics historically (Snowden, 2019). To protect democratic principles and to enhance compliance, political leaders need to nurture the public trust and their "social licence to act" (Boyd, 2020). This can be achieved by deliberative democracy (Dryzek et al., 2019), where public participation (Kaiser, 2015) and inclusive forums (Badger and Kealey, 2019) convene citizens, scientists, and policy-makers to reflect, debate, and evaluate the plural values, perspectives, and interests within society to inform public policy decisions. In recognising the basic human needs for respect, agency, and dignity driving the current identity politics (Fukuyama, 2018) and politicisation of the pandemic (Posner and Bazelon, 2020), liberal democracies can strengthen their legitimacy and accountability in COVID-19's wake.

The global coronavirus pandemic has revealed both the exogenous vulnerability and endogenous fragmentation of the human community, but embracing diversity can emerge societal resilience, just as biological and response diversity enhance ecosystem resilience (Elmqvist et al., 2003). As we socially distance and retract our activities, global consumption and pollution have contracted also, easing chronic human ecological over-burden. At this defining cataclysm in human history, the science-society-policy nexus needs to be fortified with public participation, structured deliberation, and evidence-informed decision-making to negotiate the complex value trade-offs (Lam et al., 2019) that COVID-19 policy options manifest in public health, the market economy, and civil liberty (Amat et al., 2020; Economist, 2020). The pandemic raises ethical issues that require nuanced policy responses, such as whether to allow

trusted visitors to mental health institutions and long-term care facilities where residents may otherwise suffer psychological or even physical neglect or abuse (Spagnuolo and Orsini, 2020). It also highlights broader moral questions that need to be deliberated democratically, such as how we value economic and social roles in society (Sandel, 2020) and how we can restructure the market economy to encompass broader societal values (Carney, 2020). As humanity frees itself from the COVID-19 pandemic, liberal democracies need an ethical policy agenda with three priorities: 1. to recognise the diversity of individuals; 2. to deliberate and negotiate value trade-offs and 3. to promote public buy-in, trust, and compliance. This would pave the way for ethical governance that can reconcile plural values, perspectives, and knowledge (Lam et al., 2019; Lam, 2019), needed also for global commons challenges such as fisheries and climate change, where the impacts are less immediate, but no less dire. The COVID-19 pandemic thus can unite us in our common humanity, but only if we adapt to recognise the dignity of all individuals and value the human diversity currently dividing us.

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### Competing interests

The author is affiliated also with the University of British Columbia and the University of New Mexico.

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