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Coming to Terms:

Social Contracts and the Attenuation of Individual Differences to Conserve Common Goods

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Abstract

Throughout the coronavirus pandemic, state and federal authorities in the U.S. typically framed preventive guideline adherence as necessary to reduce risks of infection and disease, rather than as part of an exchange to conserve a common good, such as ICU capacity. This risk avoidance framing coincided with research showing an association between a variety of individual- (e.g., personality traits, social cognitions) and group-level factors (e.g., political party affiliation) and guideline adherence. These findings implicate various discretionary processes in the practice of adherence. While consistent with public health precepts for avoiding undue constraints on individual liberties, such processes can undermine the utility of guidelines. Given the confluence of individual and group effects on adherence, personality and social psychological approaches are well suited to inform public health research of the sort needed to test strategies for improving adherence at the population level (*cf.* Klein et al., 2013). A select list of relevant evidence- and theory-based constructs is presented that could inform research on the effects of the framing and terms of social contracts for guideline adherence. Ultimately, evidence for the utility of social contracts is derived from empirical tests of terms and framing that, when implemented, reduce the influence of discretionary processes on adherence and produce predominating effects for the terms themselves.

Introduction

The Framing and Practice of Preventive Pandemic Behaviors

“[E]ach person is to have an equal right to the most extensive basic liberty compatible with a similar liberty for others.”

— John Rawls, *A Theory of Justice* (p. 60)

There is a tension in liberal societies – long a focus of economists, philosophers, politicians, and social scientists alike – between individual liberty and the common good. Throughout the coronavirus pandemic, this tension has been readily apparent throughout the United States, and has been further intensified, in part, by elections, social injustices, economic hardship, and varieties of mis- and disinformation. Research has shown individual differences in beliefs and dispositions, as well as affiliations with political and ideological groups, correspond to varying degrees of adherence to governmental hygienic/behavioral guidelines (Aschwanden et al., 2020; Bogg & Milad, 2020; Brennan, 2020; Clark et al., 2020; van Kessel & Quinn, 2020). Accordingly, pandemic-defined common goods for health (*cf.* Soucat, 2019) – specifically, ICU capacity (<https://carlsonschool.umn.edu/mili-misrc-covid19-tracking-project>) and workload (Morgantini et al., 2020; Sasangohar et al., 2020) – have been subject to the expression of a variety of individual-level choices, preferences, and tendencies.

Individual differences in guideline adherence were to be expected, given prior evidence showing associations between various beliefs, dispositions, and group affiliations and an assortment of health-related behaviors and outcomes (*cf.* Armitage & Conner, 2000; Bogg & Roberts, 2013; Chapman et al., 2009; Kannan & Veazie, 2018). However, the societal context of individual difference factor associations with guideline adherence differs from other health-

related behaviors in that one of the purposes of implementation is to conserve the availability of the common good of healthcare access, rather than promote a given individual's health. Unlike governmental recommendations related to nutrition or physical activity vis á vis chronic diseases, coronavirus guidelines and related emergency measures were introduced to staunch acute and predictable (*cf.* <https://www.aha.org/guidesreports/2020-04-09-compendium-models-predict-spread-covid-19>) losses of a common good with clearly defined capacity limitations (i.e., counts of ICU beds, vents, and staff; e.g., <https://covid19.ca.gov/state-dashboard/>).

Furthermore, the goal of sustained change of typical health behavior promotions (i.e., those intended to benefit an individual's health, such as smoking cessation or reduced sedentary time) differs from the variable timeframes for the implementation of guidelines and emergency measures, which might expand, contract, and cease as the indicators of coronavirus rates and effects (e.g., ICU burden) change. In contrast to models of maintaining behavior change (Schwarzer et al., 2007), an analogy of adjustable "dials" has been used by public health experts to characterize coronavirus guidelines and emergency measures (<https://www.theatlantic.com/health/archive/2020/09/pandemic-intuition-nightmare-spiral-winter/616204/>; <https://www.npr.org/sections/health-shots/2021/01/23/959786884/the-vaccine-rollout-will-take-time-heres-what-the-u-s-can-do-now-to-save-lives>). As such, guideline adherence, while amenable to the general tasks of developing behavior change interventions (e.g., Abraham & Denford, 2020), does not perfectly square with the shared perspective of many approaches to formulating health behavior change interventions. Such approaches have focused on achieving *enduring* change (Michie et al., 2018), entirely outside of the context of pandemics (e.g., only one hit for "pandemic" is returned from a text search of the 1,144-page *Handbook of Behavior Change*; Hagger et al., 2020).

The Roles of Governance and Public Health in Individual Differences in Adherence

During the coronavirus pandemic, outside of emergency orders for congregate settings, adherence to guidelines has been functionally discretionary. Despite some state and/or county mandates for mask wearing and the statutory possibility of enforcement, fines, and imprisonment (e.g., https://www.michigan.gov/coronavirus/0,9753,7-406-98178_98455-549437--,00.html), individual-level advisements have been framed as guidelines, prevention, health protocols, etc., absent of monitoring or enforcement (<https://floridahealthcovid19.gov/prevention/>; <https://coronavirus.health.ny.gov/protect-yourself-and-your-family-coronavirus-covid-19>; <https://www.dshs.texas.gov/coronavirus/opentexas.aspx#protocols>). Communication at the federal level (which does not have direct public health statutory authority in the U.S.) has used similarly guiding, rather than directing, language (e.g., <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>).

The pervasive emphasis on guidance, rather than requisition with enforcement, is consistent with precepts of public health policy, which emphasize the avoidance of perceived coercive and involuntary measures, such as punitive violation regimes (*cf.* Kass, 2001). Given this ethical framework, it should be expected that individuals who are free to respond as is deemed suitable – despite entreaties and data-driven proclamations to the contrary – would then express such liberty to the detriment of a common good.

While avoiding the perception of dictates regarding mitigation measures, governmental advisements to the public omitted any reference to an exchange or compact, as well any reference to the conservation of the common good of healthcare access. Other than possibly receiving the diffuse benefit of reducing community spread or the indeterminate benefit of reducing individual exposure risk (e.g., “your actions save lives” (California), “prevent illness”

(Florida), “protect yourself and your community” (Michigan), “protect yourself and your family” (New York), “help protect the health and safety of all Texans,” “slow the spread” (CDC), etc.), guideline adherence would not correspond to a tangible offset of the collateral harms associated with implementation, including reduced or lost employment, housing, childcare or schooling, healthcare, social integration, recreation, and autonomy. Guideline adherence has generally been framed as an individual choice with an ambiguous individual benefit and unstated consequent costs. Despite the underlying goal of managing ICU capacity, the public-facing framing of guidelines has not referenced the conservation of this common good. Notably, even among pandemic trackers, ICU bed and vent counts have been a secondary concern, following mortality data (e.g., <https://covid19.healthdata.org/united-states-of-america?view=total-deaths&tab=trend>).

Public health researchers and bioethicists readily acknowledge the harms that can follow from advisements and measures intended to alter daily social and behavioral practices (Gostin, Hodge, & Wiley, 2020). Contemporary perspectives on public health responses during a pandemic emphasize a careful consideration of harms and the timely provision of offsets to individuals abiding by advisements and measures. The exchange of individuals’ social and behavioral constraints for resource conservation and collateral harm reduction has been referred to as a social compact or bargain (Gostin, Friedman, & Wetter, 2020). To date, the sort of social contract – implied or otherwise – advocated by health policy specialists does not exist in the U.S.

The general form of a social contract between stakeholders with statutory authority and individuals subject to that authority would involve an exchange of guideline adherence for the conservation of ICU availability *and* the provision of offsets for collateral harms to well-being. The essential dynamic for establishing such contracts is the negotiation of terms that would result in a reduction in the influence of individual-level predictors on adherence and an overriding

effect on adherence of the terms themselves. That is, the binding elements of a contract should be among the primary drivers of adherence, rather than between-individual variation in assorted dispositions and beliefs.

Personality and Social Psychological Means to Test Social Contract Framing and Terms

Personality and social psychological approaches are readily applicable to public health research of the sort needed to test interventions for adherence in the service of a common good for health (*cf.* Klein et al., 2013), especially given the confluence of individual difference and group effects on adherence (e.g., Aschwanden et al., 2021; van Kessel & Quinn, 2020). Such approaches often focus on testing and identifying conditions – moderators of effects – that shift the expression of individual differences and a related outcome of interest (Klein et al., 2015). More broadly, one of the conclusions from the person–situation debate was that the influences of traits and beliefs on behaviors and related outcomes are generally weaker in “clearly normatively scripted situations” (Kenrick & Funder, 1988, p. 31), such as those that might be created through social contracts.

Figure 1 displays a select list of relevant evidence- and theory-based constructs that could inform tests of the effects of the framing and terms of social contracts for guideline adherence. As depicted in the 2 x 2 x 3 (12-cell) multi-factorial design in Figure 1, the content of the scenarios could vary by (at least) three independent variables. Of particular interest here are frames of the need for adherence, communication sources about adherence, and terms of adherence. In keeping with substantial research on loss- versus gain-framed messages, frames of the need for adherence could include avoiding infection and disease (loss) versus promoting healthcare access (gain) (O’Keefe & Jensen, 2007). Because adherence is comprised of preventive behaviors, the expectation would be that a gain-framed message should be somewhat

more effective in promoting expected adherence. Based on related work emphasizing the importance of message acceptance by perceivers (*cf.* Rothman & Salovey, 1997), two levels of adherence communication sources (e.g., partisan versus bipartisan and public health) could be included to test how (dis)concordance in belief orientation between communicators and perceivers affects expected adherence. Terms of adherence pertain to the frequency of reporting one's personal adherence behaviors (e.g., no reporting, bi-weekly reporting, weekly reporting) and an associated remuneration credit (e.g., no credit for no reporting versus bi-weekly credit or weekly credit). A wide range of behavior change research implicates self-monitoring (i.e., recording one's own behavior) as an effective intervention modality (Webb & de Bruin, 2020). Moreover, based on research demonstrating the utility of regular frequent incentives for new habit formation (Gneezy, Kajackaite, & Meier, 2020), these levels could be used to test the effects of the presence/absence and varying intermittence of reporting and associated incentives on expected adherence.

It is important to note that any single design could not accommodate all of the constructs (and levels therein) of interest. However, tests of the combinations of variables could share the following methodological features: randomized multi-factorial experimental design; assessment of evidence-based guideline-related individual difference factors (i.e., covariates); assessment of expected adherence to CDC guidance embedded within detailed hypothetical candidate scenarios (i.e., dependent variables; <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/index.html>); and representative and/or targeted sampling (e.g., area probability, stratified random, social/political/demographic groups) via online assessment platforms (e.g., CloudResearch, Ipsos KnowledgePanel®, Prolific).

Scenarios pertaining to the reporting/crediting schemes (see Figure 1) could be further prefaced with a description of the means of reporting/crediting (e.g., SMS text messaging for enrollment and reporting; EBT or QR codes for remuneration). Moreover, in keeping with a non-punitive approach to public health guidance, receipt of an adherence credit in the relevant scenarios (e.g., \$20/bi-weekly versus \$10/weekly) could be described as being based on completion of the report, rather than reporting perfect adherence (and also could be described as independent of other federal stimuli). Supplemental designs, using variations of Figure 1, could be used to probe alternative credit amounts and/or frequencies that could be associated with the greatest frequency of expected adherence. In principle, ineligibility for participation in such a reporting/crediting contract should be difficult and could be described as such in the relevant scenarios. The largest benefit to the common good of ICU capacity would be predicated on the greatest rate of (voluntary) enrollment.

Although specific and granular, highly detailed scenarios improve verisimilitude, visualization, and predictive utility (FeldmanHall et al., 2012). Moreover, descriptions of specific sources of adherence communication (i.e., actual public figures) would further improve the veracity of the scenarios. Indeed, beyond the select variables highlighted here, additional independent variables could include adherence communication frequency (e.g., weekly, as needed), adherence communication metrics or coding (e.g., single numeric, color), complementary communication sources (e.g., media trusted messengers, social network trusted messengers), and implementation timelines (e.g., continual, intermittent, sunset).

Regardless of alternative variables to be considered, the approach described in the present review could systematically identify means to reduce the effects of discretionary processes on adherence. Assuming the implementation of a form of social contract, some effects of individual-

203 level and group-level factors would likely persist, albeit at reduced levels. Nonetheless, the
204 public health goal of narrowing the adherence gap could be addressed – a goal which, despite
205 vaccine rollouts, will remain pertinent for some time.

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284 **Figure 1.**

285 Example Effect Matrix of Three-Factor Experimental Design for Expected Coronavirus Guideline Adherence

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