"Official Action"
A Roadmap for Using Behavioral Science in Public Administration Reform

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December 2020

Acknowledgements

Authors' Note

The last decades have seen the rise of two related phenomena in government: the application of insights from behavioral science—the study of how humans make decisions and take actions—to the delivery of an ever-widening set of public services, and the use of incremental, iterative innovation in the reform of public administration itself. This paper attempts to marry these together, presenting a "roadmap" for instrumentalizing the behavioral lens, a necessarily gradualist approach to innovation, as a complement to existing approaches to public administration reform.

We are not the first to attempt this union: one need only search the internet for "behavioral public administration" to gain a sense for the excitement that exists around novel research in this area. As applied researchers who are primarily interested in how things get done in the "real world", however, our unique focus is on the pragmatic choices our colleagues in this emerging field can make to maximize their chance of delivering cost-effective impact. This means considering the existing (though still nascent) literature not simply as a blueprint for a set of specific solutions that have been previously tested, but rather as a complement to decades-long experience that teaches us where to look for each of the ingredients that go into creating successful policy innovation: the selection of target problems, the filtering of their determinants, the design of potential solutions and evaluation methods that are appropriate for the task at hand. For instance, where others have

focused on behavioral biases that creep into decision-making at the political level, we narrow our investigation to the behaviors of mid-to-lower level officials responsible for policy implementation, given their under-recognized importance, ubiquity and frequency (which we judge to indicate the large potential impact that can be realized from targeting them). Similarly, we focus on several cross-cutting issues of public service that each benefit from their own communities of practice, such as anti-corruption policy and frontline worker efficiency, as self-contained case studies that exemplify the challenges and opportunities in this field.

We acknowledge that making such choices necessarily means failing to both appropriately categorize and comprehensively engage many important issues and approaches. We believe that this is justified in the hope of providing pragmatic guidance—born of our own experience in applying behavioral insights in myriad policy domains—to organizations and individuals on the front lines of applied innovation in government reform. We remain open to other opinions, of course, and hope through this paper to stimulate a wider conversation on the ways that existing applied efforts in this area can be continually enriched. We therefore invite you to get in touch with us to share your experience, lessons you have learned, and views on potential future directions for behavioral insights in governance. We thank you in advance for your contribution to this new and exciting field.

About ideas42

We are a non-profit looking for deep insights into human behavior—why people do what they do— and using that knowledge in ways that help improve lives, build better systems, and drive social change. Working globally, we reinvent the practices of institutions, and create better products and policies that can be scaled for maximum impact.

We also teach others, ultimately striving to generate lasting social impact and create a future where the universal application of behavioral science powers a world with optimal health, equitable wealth, and environments and systems that are sustainable and just for all.

For more than a decade, we have been at the forefront of applying behavioral science in the real world. And as we've developed our expertise, we've helped to define an entire field. Our efforts have so far extended to 40 countries as we've partnered with governments, foundations, NGOs, private enterprises, and a wide array of public institutions—in short, anyone who wants to make a positive difference in people's lives.

Visit ideas42.org and follow @ideas42 on Twitter to learn more about our work. Contact Josh Martin (jmartin@ideas42.org), Managing Director, for inquiries related to this paper or our international governance team at governance@ideas42.org with questions or suggestions on potential collaboration opportunities.

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Contents

>> *Introduction*

Why take a behavioral approach to public administration?

The world continues to grow wealthier, but not necessarily better governed. The rapid economic growth of the last several decades has resulted in a majority of the world's most impoverished citizens now living in middle-income countries. The inequality this implies is perhaps the clearest indication of stagnation in government: the systems required to manage and deploy newly created wealth to support broader development goals have not kept pace with wealth creation itself.

Direct evidence of this fact is most visible in the **widespread and severe shortcomings in everyday public services** that even citizens in relatively prosperous middle-income countries continue to expect from their governments.[1] To name a few examples, recent studies in India have found a 23.6% rate of workplace absence among teachers in rural schools, climbing to up to 30% for primary health providers—and when the latter do show up, more than half the time they lack formal training.[2,3,4] Service delivery-related protests in South Africa in 2018 were at their highest levels since 2004.[5] Despite 2018 being marked as the "Year of Anti-Corruption", half of surveyed citizens in Sub-Saharan African nations believed their country was becoming more corrupt, with one in four acknowledged having to pay a bribe to access health care or education.[6] In much of the world, driver's licenses are commonly bought rather than earned.[7]

At the same time, there are limitations in public service delivery despite considerable investments in and focus on the "modernization" of systems, technology and human capacity in government in recent years. The World Bank's International Development Assistance program has committed more than $14 billion from 2015-2019 to public administration reform—its largest sectoral commitment to date—not counting an additional $1 billion for technology upgrades.[8] Other multilateral and bilateral agencies routinely make commitments in the billions of dollars for similar goals.

Why have such investments failed to deliver more capable and responsive governments?
For one, the current global COVID-19 pandemic has highlighted how political trends in many countries can interfere with effective crisis response by the institutional bureaucracy, even at local levels, as authoritarian-leaning figures in central governments seek to control the public narrative. But political trends alone cannot explain an ineffective bureaucracy during non-crisis times, since (with some exceptions) most governments—whether liberal or illiberal in political character—still retain a substantial incentive to meet the demand for public services.[9]

Popular imagination and public institutional literature alike often assume that bureaucrats and officials are not as motivated or interested to serve as they should be, but are rather more directly driven by financial incentives, narrow self-interest or career concerns.[10] (One pervasive trend, for instance, has been to treat public officials more like private employees through the use of performance-based incentives as a motivational tool).[11] While the topic of bureaucrat motivation is

complex, there is nonetheless evidence indicating that, while they may not always meet the highest ideals of public sacrifice, bureaucrats and other officials bear little resemblance to the stereotypes ascribed to them. In fact, public officials have often been shown to demonstrate higher pro-social motivation, show greater endurance when working through challenging conditions, and frequently work longer hours than their private sector counterparts.[12,13] Any explanation for governance shortcomings must therefore accommodate both the large amount of resources that have been dedicated to improving public sector performance and the intrinsic motivation of governments—both bureaucrats and their political supervisors—to deliver quality services.

The emerging field of behavioral science provides a parallel but complementary lens through which to examine institutional failures. Central to the behavioral perspective is a simple insight: ***human behavior is driven not only by explicit pecuniary incentives, information gaps and intrinsic motivation, but also by the context in which routine decisions and actions occur.*** Looking deeply within this context is critical to understanding bureaucrats' agency over public policy.[14] By moving beyond the typical rationalizations of public sector behavior that are most often found in the public domain—such as the beliefs that teachers who do not show up to class are simply uninterested in delivering education, that vehicle licensing inspectors are corrupt by default, or that there are simply not enough call center employees to follow up on every citizen complaint—an entirely new conversation about progress in public administration can occur. Understanding the subtle, contextual and systematically biased ways in which decisions and actions are produced makes it possible to envision new solutions that do not require contentious legislation, costly resources or bold "sensitization" campaigns, but which may nonetheless be effective complements to existing approaches for attenuating the thorny challenges that have plagued public administration reform for decades.

The new "muddling through"

The first step in applying a behavioral lens is to recognize that ***government service provision, at its root, is about the behavior of individuals.*** Many of the most consequential behaviors at first glance may have little to do with the service that is ultimately provided. A road in rural Côte d'Ivoire becomes pockmarked with potholes over time because the initial drafter of the terms of reference for building it failed to include adequate provisions for routine maintenance.[15] Secondary school children in Bangladesh lack textbooks because a regional official may have submitted an expenditure request days after an internal planning deadline.[16] A burst water pipe on a resident's property in South Africa stays broken for weeks because call center employees struggle to sift through the dozens of available maintenance request categories needed to route the request to a department that can take action.[17]

This is not the way that most people talk about government. To relegate the macro-level failures of a polity to the actions of specific individuals may appear to minimize, or even excuse, the negative influence of the broader "system". But systems—and institutions—are created by individuals,

ordinary people who play particular roles so that the system can function effectively. It is possible to hold systems accountable while simultaneously recognizing the role of individual behaviors within them. While we may not be able to say *why* these behaviors occur without investigating each in the context of the broader system, our only basis for taking practical action to improve public administration is to recognize that they occur extensively and may have devastating (or uplifting) consequences for development across the world when they do.

In recent years, a new movement in the research and practice of government reform has grown up around the notion that improvements can only be legitimate, effective and sustainable when they build on what is already in place by carefully removing constraints one-at-a-time and learning from the process.[18] This incremental approach stands in contrast to the view traditionally employed in various fields of public administration reform (and still commonly held by activists) in which problems, from the political echelon all the way down to the lower reaches of the bureaucracy, are assumed to stem from an "internal rot" that must be rooted out before any positive changes can occur. Using Charles Lindblom's seminal 1959 doctrine of "successive limited comparisons" as the blueprint for incremental solutions to policy problems, this new paradigm heralds a more pragmatic, modern application of the older discourse of "muddling through"—by marrying an incremental outlook with innovation methodologies adapted from empirical social science and technological product development.[19] The result is to be found in a commitment to locally grounded, rigorously evidence-based, iterative and incremental adaptation at the expense of hasty, highly ambitious or theory-driven design.
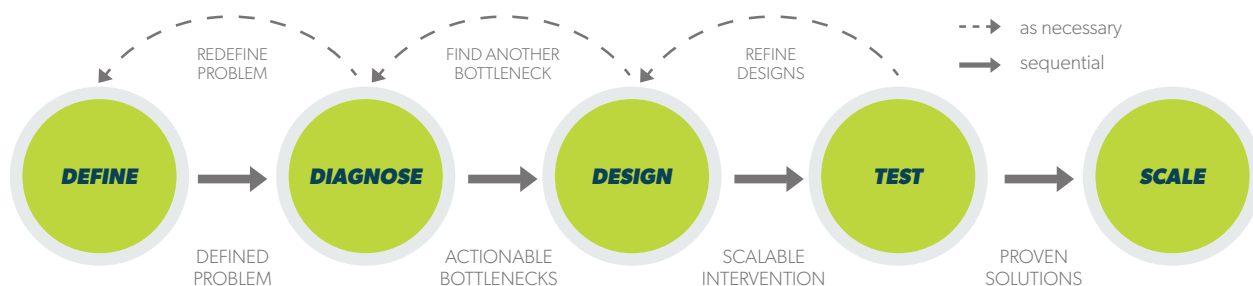
A methodology for applying behavioral science to improve government performance

With its roots firmly in the new incremental paradigm, applied behavioral science can help complement existing approaches to public sector reform through light-touch, low-cost changes to the context in which public servants make decisions and take actions to maintain the social contract. But governments are complex organs, composed of thousands, or even millions of staff, with roles spanning professional hierarchies and thematic domains. Where should behavioral designers begin if they want to change government behaviors to the greatest ultimate effect?

First and foremost, we must focus our attention on challenges that can be readily tackled by the light-touch tools at our disposal. This means ***identifying a specific, relevant behavior*** that members of the target population have the motivation to pursue, yet often do not. The behavioral designer must first break down the larger policy challenge into a set of decisions and actions that can be more readily analyzed and reinforced. This can often be done through observation, data analysis, and interviews with key informants. Take for instance the hypothetical lack of textbooks for secondary school children in a given country as an illustrative example. While the most obvious explanation for this phenomenon is that policy-makers have not allocated the resources needed to purchase more books, closer investigation reveals that having a shortfall is in fact the outcome of a series of lower-level decisions and actions, or lack thereof, by staff at various levels within the Ministry of Education. Officials must follow procurement steps, consult with supervisors, contact suppliers, and so on, leaving many places where the process can break down. A behavioral designer seeks to pinpoint the action or actions that have the greatest bearing on the eventual undesirable outcome. In this case, for instance, the relevant behavior might be the tendency to submit local expenditure requests only after a planning deadline has passed, which leads funds intended for purchasing textbooks for the coming year to no longer be available. Defining the "problem" in this way therefore allows behavioral scientists to target low-hanging fruit—behaviors that could potentially be reinforced with not only the lowest cost, but also the smallest risk of failure. By default, such an approach brings the entire method into line with the goal of making incremental improvements in existing systems rather than overhauling them.

The second step in the behavioral design methodology is to ***diagnose*** missing decisions and actions by deploying scientific findings from psychology and adjacent disciplines to explain how context influences behavior. Qualitative research, including on-site observation, is critical to gathering information about the relevant context and verifying hypotheses once formulated. In the example of tardy expenditure requests, an investigation of the context for submitting the requests might reveal that a reminder notice sent several weeks before the deadline was confusingly worded and lacked clear instructions that might have prompted on-time submission. Applying the same lens to the broader working environment, it may be possible to discern that the expenditure request deadline generally falls during a particularly busy moment in the calendar when most officials are preoccupied and unable to focus on a hassle-laden task such as filling out an expenditure request form.[20,21]

Once contextual barriers have been hypothesized, the next step is to ***design*** interventions that mitigate the most significant contextual hindrances. If the latter are truly contextual, the resulting tweaks will almost always prove light-touch and low-cost to implement. The language of the previously mentioned reminder notice, for instance, could be simplified and made more actionable. The deadline for submitting expenditure requests could be moved to another time in the quarter, or better yet, could be re-made into a phased "soft deadline", giving submitters several "second chances" before funds are allocated. Such interventions, of course, will be most successful when created by or with those who actually interact with the procedure in question,

and undergo several iterations of user-testing and improvement to ensure feasibility, sustainability, and context-appropriateness.

In any applied science, hypotheses remain speculative until they can be tested in the field. The relative newness of behavioral science places a premium on rigorous **testing** as a demonstration of the validity and efficacy of interventions, most often through experimental impact evaluation (or quasi-experimental methods where necessary). Once tested, the interventions can be improved upon, re-tested and ultimately **scaled** through available channels to benefit all members of the original target population experiencing the same behavioral bottlenecks (such as across the Ministry of Education's regional staff, or perhaps to adjacent ministries struggling with their own expenditure request procedures).

In this paper, we roughly follow the steps described above to survey the opportunity for applying behavioral science to improve government performance with particular applicability to specific challenges that are faced by many developing countries and are in need of innovation to complement existing approaches:

1. We examine the **decisions and actions** that bureaucrats must take at different points in the service delivery process, identifying several cross-cutting challenges that apply to most environments.

2. We explore several **illustrative features of the context** that are common to all who work in public service and might—as predicted by the psychology literature—play a role in setting policy implementation off track.

3. We apply the **behavioral lens** to areas of state capacity-building, such as corruption and transparency, complaint management systems, and the performance of publicly employed last mile service professionals.

4. To illustrate how these challenges play out in real world contexts, we provide an **in-depth cross-sectoral case study** from recent fieldwork on decentralization in Nepal.

5. We discuss the **challenges in testing** and measuring the impact of innovations in government performance.

6. We end with a discussion of **upcoming opportunities** to enrich efforts to improve public administration reform.

Defining the Problem: Actions that Matter to Behavioral Public Administration Reform

The search for "low-hanging fruit"

A behavioral science-based approach is not appropriate for every challenge in public administration, in every institution or in every country context; selecting those for which it is most likely to produce meaningful impact requires careful examination. First, we must look for **behaviors that are systematic,** meaning that they are carried out by a large number of people on a frequent—if not routine—basis. Even when behavioral interventions produce relatively small changes (as they typically do), scaling them up to a large group can still achieve significant societal-level impact. It is therefore critical to identify behaviors that are broadly applicable across public service employment whether in a regional ministry of health, a municipal executive office or a national-level project implementation unit. Regardless of the task, be it securing high-level political approvals or providing routine expense documentation, a large number of government officials must effectively engage with systems—technological and otherwise—to allocate and monitor the usage of public resources. Furthermore, focusing on tasks common to all who work in policy elaboration and implementation, without regard for economic sector of interest, offers a potential pathway to scale interventions that deliver impact to a much wider audience.

A second criterion is that there must be a **gap between an actor's intention and the actual behavior they pursue.** While a sub-optimal behavior (plentiful throughout government structures in every country) can usually be readily observed, it is far more difficult to surmise an individual's true intention, which may be unconscious and thus beyond the reach of the individual's own awareness. On the one hand, public servants may declare a conscious intrinsic motivation that animates them to do their job even when they might incur some cost for doing so; for instance, by choosing to work in public service despite their potential to make a higher salary in the private sector, staying late to finish projects at the expense of leisure time, paying for office furnishings out of their personal funds, or, perhaps, reporting a misdoing on the part of a superior despite the risk of retaliation. On the other hand, we might assume that most individuals would hold at least a moderate intention to behave in line with powerful explicit incentives that exist for good performance, such as those put in place as part of performance management schemes (provided, of course, that these incentives are high enough to truly motivate them). **When a public servant already has a reasonably strong intention to perform their role, simple changes to the context will be a viable means of improving their performance** (since these changes are designed to remove whichever contextual constraints may currently be holding them back).

Where are we likely to find such "intention-action gaps" in government? For one, while absenteeism, particularly of teachers in public education systems, remains a pervasive challenge in the developing world, it seems safe to assume that most public servants have at least a weak motivation to come

to work on a regular basis.[22] The fact of having applied to become a public school teacher signals a desire to *actually teach*, aside from any explicit salary-based incentives that exist for doing so, even if these are irregularly enforced (and there is substantial evidence now emerging to show that it is possible to meaningfully tackle absenteeism with light-touch monitoring interventions, countering the "irresponsibility" narrative often used to describe public servants).[23] Similarly, observed gaps in office routine or professionalism from

Choosing the right problem to solve

Behavioral science-based solutions will work best on public servants' actions that:

- ✓ **Occur frequently,** routinely or are undertaken by large numbers of people
- ✓ **Don't match the intention** of the actor (or their perceived best interest)
- ✓ **Are not directly influenced by politics** or those who have power to act outside the prevailing system

time to time—lateness to meetings, for instance, or neglecting to follow up on communications—should be viewed as most likely accidental, incidental or circumstantial. There may of course be individuals (so-called "bad apples") who have chosen public sector employment for largely corrupt reasons and thus have little intention to perform even the most routine aspects of their jobs; but at a population level, the prevalence of pro-social intentions in public service throughout the world makes clear that ***closing intention-action gaps through applied behavioral science (rather than reinforcing intention by itself) is likely to have at least a moderate impact on issues of under-performance*** in many settings.

But what of more complex tasks—beyond simply showing up and doing one's job to a minimum degree—that arguably drive the greater part of the shortcomings we observe in public administration? Public servants are routinely challenged in numerous ways, such as in making difficult policy execution decisions, building consensus between different departments, following complex protocols and seeking innovative solutions. So central are these functions to creating public value that, from the outside, it is tempting to view failures to perform them as necessarily the result of incompetence, negligence or corruption. Yet making this leap ignores the potential for other human factors to intervene. A well-known example is path-dependence in procurement, in which the same pool of firms is repeatedly solicited to provide public services, to the detriment of innovation, competition and service quality.[24] While the possibility of self-dealing, kickbacks or apathy cannot easily be ruled out (at least not without exhaustively evaluating the strength of the true economic incentives that underlie the lack of action), it is arguably just as likely that the hassles involved in constantly canvassing for new suppliers and reaching out to these simply prove too imposing for procurement officers to handle alongside their other routine duties.

While all behaviors, from the simple to the complex, may be influenced to a comparable degree by the context, the same may not be true of the actions of officials at different levels of the bureaucratic hierarchy. When considering bribe-taking, for instance, there is a marked difference between the behavior of lower-level officials, such as frontline policemen or municipal inspectors, and that of senior politicians. The corrupt behavior of lower-level officials can often be rationalized

in terms of a private benefit that dominates existing incentives (usually the threat of enforcement and sanction given the relative absence of rewards for performance integrity at low ranks in the civil service). But there are also numerous examples of cases in which such behavior presents puzzlingly little personal gain when compared to the risk-adjusted benefits of avoiding sanction. The same is not true, of course, for higher officials who, by virtue of their power, can command larger bribes, subvert higher contracts, engage in collusion and manipulate adjacent structures to ensure they are not held accountable.[25] Because of this power differential and its consequences for the severity of incentives that individuals who wield it are under, focusing on the behavior of mid-level and lower-ranking officials offers a more reliable means of ensuring that target behaviors are highly susceptible to the influences of context (and thus represent the "low-hanging fruit").

Issues of focus in this paper

Taken as a whole, then, the need to identify behaviors that are both systematic and plausibly intentional leaves us with several overlapping guidelines for reducing the immense diversity of government behaviors to a manageable set: (1) behaviors common to most policy domains or institutional types; (2) basic duties associated with lowest-common-denominator professionalism, e.g. showing up to work and completing routine administrative tasks; and (3) the effective execution of more complex tasks exercised by mid-level or lower-level officials that are under weaker existing incentives (when compared to higher-level officials or political superiors) to do the opposite of the prescribed behavior. Our analysis pays particular attention to a narrow set of high-visibility government functions—each exhibiting many behaviors that satisfy these guidelines—as illustrative examples of the diversity of fields of government performance that are ripe for a behavioral approach to complement conventional reform initiatives (see Applying the Behavioral Lens to Specific Public Administration Challenges):

1 **_Complaint and request resolution._** Responsiveness to constituents' needs is a core function of governments in a democracy. Intake staff and their managers in government must route service requests and issues that constituents raise via government platforms (from road potholes that need filling to allegations of corruption) through a number of steps on their way to resolution, such as geotagging a request properly, marking a request completed, or forwarding an incorrectly routed request to the correct destination. A growing body of evidence suggests that the propensity to speedily, effectively and fairly resolve complaints may be at least partially influenced by the context in which officials pursue these necessary sub-tasks, particularly those involving extensive interactions with both other departments and digital complaint management systems. The need to sift through a large volume of complaints per day and navigate cumbersome software systems makes the job particularly challenging. For instance, the natural tendency to focus on resolving as many requests as possible may lead officials to de-prioritize other equally (or perhaps more) important aspects of requests, such as citizen satisfaction with the work accomplished and equity between complaints submitted from areas of differing average household income. Given the cost associated

with uprooting and upgrading legacy inter-departmental systems, improving interactions between citizens, officials and the existing complaint management platforms they use through a behavioral lens offers a potentially powerful means of boosting both service quality and civic accountability.
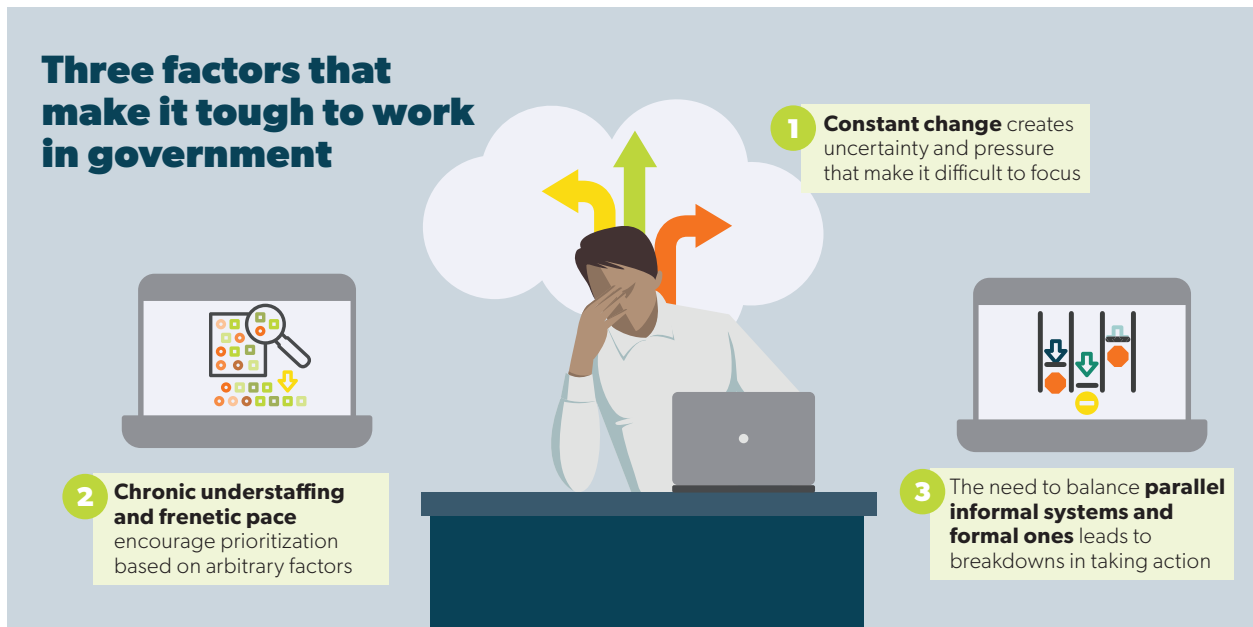
2 *Fighting corruption.* Corruption is often viewed in the popular imagination as the rent-seeking behavior of an elite inner circle in the political echelon, but this underestimates the vast sums lost to lower- or mid-level officials in the form of opportunistic graft, informal payments or "speed money".[26] While we cannot discount the importance of incentives such as low deterrence—through infrequent monitoring and non-enforcement of sanctions—in enabling corrupt behavior, there is also evidence to suggest that at least a substantial portion of this behavior is encouraged by various features of the context through which an individual official's personal integrity and sense of public service may be filtered, such as exposure to the behavior of peer colleagues.[27] Beyond overtly corrupt behaviors, there are many other individual actions within the bureaucracy that contribute meaningfully to background levels of accountability, oversight and transparency, such as the proactive publication of publicly held data, the efficient processing of disclosure requests and the publication of report cards on performance for public scrutiny.

3 *Frontline service provision.* As memorably argued by Lipsky, most interactions with government occur with "street-level bureaucrats".[28] Many developing nations in particular rely heavily upon large contingents of public employees who effectively serve to extend the services of the state to rural or underserved areas—agricultural extension workers, community health agents, vaccination professionals and even teachers.[29] Many of these functions also overlap, compounding the weight of responsibilities felt by individuals. While levels of intrinsic motivation are generally viewed as high among these agents, the challenges of basic role performance are widespread: not showing up for work, failing to visit an adequate number of sites in a given time period and poor reporting from the field are all frequently observed characteristics of frontline public employees.[30,31]

Finally, we must consider the broader institutional context within which the above challenges occur to aid in geographic targeting. Behavioral enhancements deliver the greatest value in situations where the need for them is most obvious, as we have seen above, implying a focus on countries where public institutions are relatively weak or ineffective. On the other hand, the value of behavioral interventions relative to other policy considerations depends at least in part on their potential to complement existing systems (ensuring they can be implemented at relatively low additional cost). While reform initiatives in any setting might stand to benefit from a behavioral approach, therefore, an ideal nexus between the need and readiness for such an approach is to be found primarily in lower-middle-income countries.[i]

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[i] In this paper, we loosely use terms such as "lower-middle-income countries" to refer to polities where, despite frequent underfunding, existing levels of digitization, human resources, physical facilities and legal instruments are sufficient to facilitate baseline public administration. We acknowledge substantial heterogeneity within any geographical categorization with respect to these conditions, and accordingly cite as broad a range of examples as possible.

How Does Context Influence How Public Servants Make Decisions and Take Actions?

Three factors that make it tough to work in government

1 **Constant change** creates uncertainty and pressure that make it difficult to focus

2 **Chronic understaffing and frenetic pace** encourage prioritization based on arbitrary factors

3 The need to balance **parallel informal systems and formal ones** leads to breakdowns in taking action

Working in government is harder than we often think

What determines how public officials perform in their roles? Decades of research in psychology have shown that discrete features of the context in which decisions and actions are taken—how space is organized, the observed actions of peers, the time of day, and myriad others—can obstruct, distort or bias human behavior. Once we identify these contextual influences, we can apply scientific findings to interpret their likely impact on public administration behaviors and, ultimately, on governance outcomes.

Unfortunately, the diversity of contexts in which public sector employees work makes it challenging to identify ways in which features of these contexts might influence decisions and actions across the board. A frontline community health worker in Madagascar spends most of their time outdoors, whether traveling between villages, talking to people in their catchment area or setting up makeshift service delivery clinics. By contrast, a white-collar civil servant in Côte d'Ivoire's ministry of planning spends the day in front of a computer screen and might go several workdays in a row without leaving their office. Complicating the picture further, the demographic identity of the individual in question can greatly affect their experience in similar roles: women and historically underrepresented ethnic groups, for instance, may face differential access to opportunity, power and trust. Additional diversity arrives in the form of idiosyncratically differing office routine, technology usage, social interaction and many other aspects of the working environment.

However, despite the uniqueness of each environmental and individual circumstance, the majority of public servants share at least some c*ritical contextual similarities that conspire with human psychology to prevent these workers from doing their best work.* Three broadly applicable phenomena may illustrate (far from comprehensively, of course) how difficult it often is for even the most motivated, competent and resourced officials—of any role or group identity—to perform their functions.[ii] First, public servants in many settings face pervasive uncertainty, a consequence of a changing political landscape and the constant reallocation of resources. The resulting cognitive pressure can place strain on the ability to concentrate and thus execute responsibilities effectively. Next, chronic understaffing leads to competing responsibilities and overfull agendas that can distract focus from critical priorities. Last, the need to carefully balance working within the strictures of formal protocol while frequently (and just as necessarily) pursuing parallel informal channels to get things done makes breakdowns in policy implementation likely.

The pressure of constant flux makes all aspects of the job more difficult

If economic and political instability make uncertainty a common feature of daily life for residents of developing countries, *public officials may find the inability to predict even short term constraints paralyzing.* Although most public servants are career professionals rather than political appointees, the prevailing political mood can penetrate the working environment of even the most experienced civil servant, especially in developing countries where political changes can occur unexpectedly and at any level. Overhauls of even the basic precepts of employment often accompany more marginal policy changes on the docket. Tweaks to the budget cycle, for instance, can be just as frequent (and disruptive) as routine rises and falls in budget levels themselves. Debates over the fundamental structure of government can produce sweeping re-organizations that challenge entrenched habits, to the point of changing the nature of the job. Changes to the supervisory structure of a department can bring chaos and create confusion about where one needs to go for instructions or approvals. There is also the constant danger of dismissal based on one's perceived political loyalties, or of simply being made redundant in the latest organizational reshuffle.

The pressures linked to pervasive uncertainty do not just cause annoyance, they can distract from cognitive tasks that are critical to good public administration. Recent research in cognitive psychology has shown that, like time and money, cognitive resources are also limited (a phenomenon referred to as "*cognitive scarcity*").[32] Environmental stressors—such as the constant state of being poor or more transient states such as hunger, fatigue, overwork and emotional stress—utilize outsized

> ### *Cognitive scarcity*
> People have a finite amount of brainpower which can become reduced or depleted, especially when experiencing feelings of not having enough of something (for example, time). This can lead to 'tunneling', which can inhibit the cognitive power needed to solve problems, reason, or retain information, as well as impair executive control, compromise people's ability to plan and lead to procrastination.

[ii] The full range of cognitive phenomena that find their way into the routine decisions and actions of the developing world's public servants and therefore negatively impact governance outcomes—even if we restrict focus only to those at lower levels of policy implementation—are too varied and numerous to list here in full. In the sections that follow we will attempt to study several of these factors holistically through deep-dive examinations of particular governance objectives, followed by a cross-sectoral look at the case of decentralization in Nepal.

cognitive resources and effectively impose a "bandwidth tax," making it harder to apply focus in other areas. This can lead to adverse outcomes, in public administration as in other fields, that may at first appear unrelated.[33] The threat of an imminent departmental reshuffle, for instance, may create stress for lower-level officials. This can make them less likely to successfully follow routine tasks that require focused attention, such as filling in forms, proactively sharing information with colleagues or adhering to formal protocols.

The overriding focus on the present that accompanies such stress can lead to self-reinforcing resource scarcity in the future. The possibility of looming budgetary austerity, for instance, may induce an advisor at the transport ministry to neglect to pay attention to the details of a long-term road maintenance budget, eventually leading to infrastructure decay and the need for unforeseen outlays. A field inspector may forget to file an activities report that their supervisors could use to justify a budget increase for the following year. Making matters worse, the frequent shifting of direction and the pressures that come with it pose particular difficulties when layered atop other extant factors that contribute to cognitive scarcity, such as the fast-paced nature of managerial positions, the physical demands and long hours that field-based frontline workers contend with, or the low wages that keep many public servants on the edges of poverty in developing countries. Importantly, research has suggested that women and other historically marginalized groups—who are disproportionately represented at lower levels of the bureaucracy in any case (though they may still be underrepresented in government overall)—face additional taxes on their cognitive bandwidth due to stress stemming from casual discrimination, further reducing the mental slack they can draw upon to overcome the challenges posed by their working environment.[34]

Unrealistic tasking makes it difficult to focus on what is truly important

Officials across the world are busy, but those in developing countries must do more with less. In addition to a demanding slate of official duties, public sector professionals—especially those working at the community level, such as teachers, health workers or local government officials—must often handle additional tasks like monitoring polling, collecting census information, verifying welfare schemes information etc., without extra compensation or assistance. Without reinforcements, these professionals must somehow "cope", making difficult choices about how to spend scarce resources—time, money and attention—that may easily be biased by circumstantial factors.[35]

The potential to miss important details when focusing on multiple stimuli—a phenomenon referred to as "*limited attention*"—can result from many cognitive shortcuts, each with their own foundation in psychological science.[36] Individuals who make decisions or take actions in the presence (even if virtual) of their peers are often influenced by what they perceive as the dominant behavior in their peer group ("*descriptive social norms*").[37] When behaviors are repeated day after day they

> **Limited attention** describes the finite cognitive capacity we all have as humans. When that capacity is stretched, it is difficult to process new information and we are prone to miss things that are less prominent.

become habits, and changing them becomes even more difficult (leading to "**status quo bias**").[38] Amidst a multitude of options, tasks and responsibilities, even trivial aspects can determine the amount of attention each item receives. For example, being first (or last) in a series may be the main reason why one particular option in a list stands out and is more likely to be selected (termed "**primacy or recency bias**").[39]

Social norms are rules or standards shared by a group that guide and/or constrain behavior. Perceived social norms can be particularly powerful when people are uncertain what to do. **Descriptive norms** are perceptions of which behaviors are common. This is distinct from *prescriptive* norms, which are perceptions of which behaviors are approved or disapproved.

Primacy or recency bias (the serial-position effect) describes how terms that are located either at the beginning (primacy bias) or end (recency bias) of a list are more easily remembered.

Heuristics are mental shortcuts that humans use to quickly form judgments, make decisions, or solve problems with minimal mental effort. While heuristics can reduce the burden of decision-making and free up limited cognitive resources, they can also lead individuals to miss critical information or act on unjust biases.

A frequent solution for coping with an impossible workload is the use of "**heuristics**", or rules-of-thumb, to approximate complicated calculations with simpler and easier-to-recall surrogates.[40] While heuristics may be effective in reducing cognitive loads, they also create opportunities for systematic errors. For instance, officials responsible for processing citizen requests may prefer to attend more thoroughly to requests that arrive on a particular day of the week, viewing these as more urgent or representative of genuine concerns. Guided by this heuristic, they may not be cognizant that requests arriving on that day are more likely to be from wealthier areas, for example, and thus would miss an opportunity to promote greater equity in responsiveness.

Difficulty balancing formal and informal communication can cause breakdowns with long-term consequences

There are two ways to get things done in government: the formal way and the informal way. The need for transparency, accountability, record-keeping and fairness in the public sector gives rise to myriad formal systems—both paper-based (particularly in developing countries) and digital—for tracking, monitoring and prioritizing activities. However, such systems usually represent only the last step of a longer process with several antecedent steps involving informal communication. For instance, a public works official may ultimately forward a complaint about road maintenance to a work crew using the department's complaints management software, but only after first speaking to the foreman by phone to make sure the crew can handle it. Thus, in functional departments, informal systems can be helpful in plugging minor gaps in formal ones, humanizing communication, and preventing misunderstanding.

Quite often, however, things do not work so smoothly. Technological systems designed to facilitate communication are frequently outdated, posing annoyances ("**hassle factors**") that tax the cognitive bandwidth of their users and significantly reducing the likelihood of effective usage. Non-technological formal systems can also create annoyances or frustration, from figuring out which supervisor to seek approval from to filling out complex reporting templates. Though small by any objective measure, such hassles nevertheless can deter action as individuals succumb to procrastination.[41]

Hassle factors* are inconveniences or obstacles that impede a desired behavior. "Hassles" can be small (finding a stamp in order to mail a letter, for example) but have an outsized impact on our behavior (we might never mail that birthday card after all).

As frustrations accumulate, officials will ultimately gravitate toward alternative informal channels—social media messaging, for instance, instead of an official email server—for critical approvals, consultations or reference information, ultimately leading to the dereliction of formal systems. A persistent lack of trust in formal systems risks creating "**mental models**" (implicit associations received through direct experience) of such mechanisms as substantively redundant, rendering them important only insofar

Mental models* are the frameworks that we use to explain how the world works. These frameworks are formed based on prior knowledge and experience, and they guide the way that we process new information.

as they provide a paper trail to counter future accusations of malpractice.[42] The danger of this perception is that some degree of formality may actually be important for successful outcomes, such as the use of checklists to ensure compliance with project management standards or periodic reporting templates for online publication (which ultimately serves the goal of transparency). Governance objectives ultimately suffer when public sector employees rely too heavily on informal systems, despite what might be perceived in the short-term as greater efficiency in taking momentary action.

Applying the Behavioral Lens to Specific Public Administration Challenges

There is an almost unlimited number of government functions to which behavioral science could be applied, as reform initiatives in any area involving human decision-making and action-taking may benefit from some support (subject, of course, to the considerations we have outlined in Section II for picking appropriate behaviors to focus on). To showcase the diversity of applications across government while staying close to both the academic literature and our practical experience, we have chosen three illustrative examples: responsiveness to constituents' requests and complaints, anti-corruption programs, and frontline worker efficiency. In each subsection we have attempted to summarize the nature of the behaviors that matter for the specific issue in question, as well as the contextual obstacles to the successful fulfilment of these behaviors, relying to the extent possible on recent field tests of promising solutions to complement more established basic findings in psychology and behavioral economics.

OBJECTIVE 1:
Responding to routine requests and complaints

Responding to constituents' needs is at the core of a government's role in a democracy.[iii] Aided by investments in citizen-government communication technology, "civic monitoring" platforms are an increasingly popular channel for citizens to submit complaints, requests and feedback to government officials.[43] Civic monitoring platforms represent one of the few channels citizens have to stimulate government accountability, and thus hold great potential to promote the dual goals of improving service provision and fostering trust between government and citizens.[44] In theory, policy-makers and high-level bureaucrats should have the political will to use civic monitoring and responsiveness systems to gain favor with constituents and increase re-election chances.[45] Nonetheless, **the mere existence or usage of civic monitoring platforms does not guarantee better service provision or governance outcomes:** in low- and middle-income countries in particular, governments' actual responsiveness—whether assessed in terms of speed, accuracy, or equity—to constituents' complaints and requests have often lagged behind the desired level.[46,47,48]

Civic monitoring platforms vary greatly in terms of the level of digitization, the types of people involved in the response process, and their underlying organizational culture. Nonetheless, the process of responding to citizens' requests by frontline and mid-level bureaucrats can be broadly summarized in a series of several common steps, from intake to resolution. First, intake employees (often at a call center) must accurately capture information on the complainant and the nature of the inquiry in a complaint management database. Then the complaint must be forwarded to the

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correct department, where a supervisor must delegate it to the on-duty manager of the relevant task team responsible for actually doing the work. Team members must then filter information on the work they performed against the complaint back to the department, which is responsible for informing the original complainant. (Each of these steps, in turn, involves many further decisions and actions that are critical to ensuring ultimate citizen satisfaction with the entire enterprise)
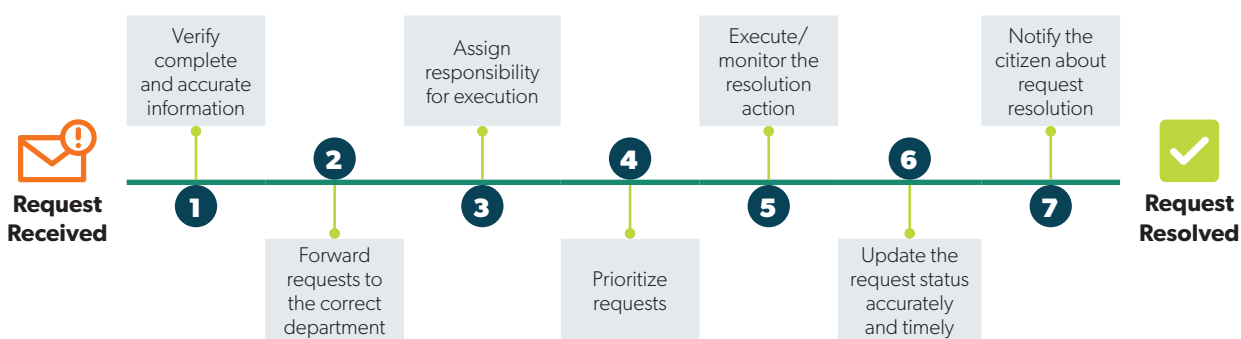
The passage of complaints between so many individuals and systems along the way to resolution necessitates considering even seemingly trivial aspects of the environment, from office routine to minute features of the software in use, as potential obstacles to effectively managing mental bandwidth, making difficult choices, and translating intentions into actions.[49] For one, humans naturally employ implicit analogies or associations to explain causal relationships—sometimes referred to as "**mental models**"—to quickly (though often erroneously) process the world around them.[50] In the context of a civic responsiveness platform, this might mean that a call center intake operator whose performance is mainly evaluated on the basis of the volume of requests they forward may prioritize speed relative to accuracy in all of their sub-tasks, even when doing so actually reduces the volume of requests they can intake (for instance, by skipping important details about the requests, leading to them being sent back for re-forwarding). Similarly, officials may not be consistently updating requests' statuses because they perceive that their co-workers are not doing it either—an example of the influence of social norms, or the perception of how peers act.[51,52] In field experiments, public scorecards and certificates of excellence have been shown to improve employees' performance.[53,54]

Another bottleneck could arise because people are less likely to act when they encounter even seemingly minor obstacles. Complaint management interfaces are replete with such **hassles:** dropdowns for selecting the category for a requested service, for instance, can feature hundreds of options and lead officials to select based on seemingly arbitrary factors rather than spending the mental effort needed to find the right one. "**Gamifying**" some of the less stimulating tasks (for instance by incorporating transient, non-pecuniary rewards) can make them more exciting,

Gamification is the use of game elements in a non-game environment in order to induce desired behaviors. For example, the design of a product, system, or service can borrow elements from games, such as quests, stories, and badges to motivate users to interact with it.

thus potentially improving officials' performance on them. A study conducted among employees of a pension department in the UK, for example, found that a gamified market for ideas that used virtual currency as well as social recognition led to improvements in employee participation and potential departmental efficiency.[55]

Improving government responsiveness to civic complaints clearly requires more than simply allocating more resources or hiring more motivated officials. Careful attention to each of the bottlenecks listed above can help to improve accuracy, speed, satisfaction and equity at each of the many steps on the way from intake to resolution. Some of these fixes are relatively costless: reducing the number of menu options in software interfaces, for instance, can remove substantial hassles and encourage proper forwarding. On the other hand, pointing out false mental models or social norms may more successfully be accomplished with new technological features or targeted training modules with higher associated costs.

OBJECTIVE 2: Fighting corruption

Corruption, broadly defined as the use of public office for private gain, diverts available resources away from public needs, increases inequality, and dilutes trust in public institutions.[56,57] While corruption can take many forms at many levels of government, most anti-corruption efforts tend to focus on preventing its most obvious manifestations: embezzlement, self-dealing and bribery. These consist of the immediate corrupt actions perpetrated to directly steal resources from the public: a policeman demanding a fee for protection; a procurement manager soliciting bids from family members' companies; a municipal official that asks for a kickback from a new restaurant applying for a licence.

Such brazen actions are only the tip of the iceberg, however. Effective anti-corruption policy must also consider behaviors that enable corruption through effectively defanging governmental accountability systems: a financial officer falsifying records to enable embezzlement by the boss; a departmental auditor failing to comprehensively report on the evidence; or a local comptroller neglecting to implement the auditor's corrective recommendations. An even deeper layer involves behaviors that are essential for ensuring that external public scrutiny can take place. These are the actions that ultimately ensure transparency and (at least in theory) accountability, such as publishing internal records to official websites, declaring potential conflicts of interest, and responding promptly and accurately to requests for information. Their non-performance is, thus, a further enabler of corruption.[58]

In a simple model of corruption in the public sector, the *opportunity* for corruption depends on the *size of the rents* under a public official's control, the *discretion* that the official has in allocating those rents, and the *accountability* that official faces for their decisions.[59] In developing country settings, public officials often have ample levels of discretion coupled with weak accountability.

Such models make it tempting to view corrupt behavior exclusively as a moral vice motivated essentially by self-interest—even in the case of "street-level" officials who, despite their relative powerlessness, do exercise considerable discretion in conducting routine duties.[60] (Indeed, evidence exists to support the view that self-interested motivations sometimes play a role in self-selection into the public sector).[61,62] Thus, interventions that lower economic incentives, such as through increased monitoring, have proven effective in reducing corruption. For example, a study in Peru showed that notifying officials that they would be monitored by civil society led to a decrease in the costs of public works.[63]

However, this is not the complete picture: research has begun to demonstrate that **_corrupt behaviors may stem in substantial part from contextual influences, rather than being driven solely by the moral character or the incentives the actor faces._**[64] Local officials, for instance, often indulge in corruption not for purely financial reasons but also because they observe their colleagues engaging in similar behavior (**social norms**). A recent lab-in-the-field study in South Africa showed that, when exposed to posters depicting bribe-taking as an infrequent activity, participants in an incentivized game were less willing to accept bribes.[65] In Cameroon, simply publishing the names of top-performing customs inspectors was associated with a reduction in revenue leakage to private purposes, pointing to the potential role of social recognition.[66] A number of studies have also noted the importance of "feeling watched" even without a corresponding threat of enforcement: a field experiment in Pakistan showed that SMS messages requesting feedback on services from citizens reduced petty corruption among last mile providers, while in Uganda, giving parents tools to monitor education officials' use of funds similarly led to a decrease in diversion of funds.[67,68] Similar evidence exists for corruption-enabling behaviors such as neglecting to report gifts: government officials in Mexico were more likely to report Christmas gifts if they received e-mails featuring moral and social norms before the winter break.[69]

Such examples hardly represent the full set of behavioral approaches to fighting corruption found in the literature to date, let alone that of possible solutions not yet tested. Nevertheless, they provide a glimpse of the creative ways in which behaviorally inspired innovation can readily be built into existing systems for promoting transparency and accountability. They also illustrate the need for care in designing effective anti-corruption policy. One well-known initiative, called "Integrity Icon", builds on common "naming and shaming" approaches in which social and reputational incentives are used rather than financial ones. "Integrity Icon" does this by highlighting top performers through nationally televised recognition, and has recently been put to practice in several countries from Mali to South Africa and Nepal.[70,71,72] While there may be a clear benefit to making good and bad behavior salient, there is also the potentially opposing risk of appearing to "normalize" corrupt behavior (i.e. by making it seem ubiquitous) and thereby tacitly encouraging others to follow suit. Rather than adopt promising solutions "off the shelf", program designers should take care to carefully investigate the contextual drivers of observed behavior in each environment separately, select interventions that build on existing indigenous systems and test each iteration to incrementally deliver better-functioning programs.

OBJECTIVE 3:
Improving the performance of frontline service personnel

The responsibility for executing public policy often falls most heavily on publicly employed service personnel, whose duties primarily involve direct engagement with the public. Frontline service personnel may be call center staff fielding inquiries from concerned citizens, immunization agents going door-to-door in rural areas, agricultural extension workers conducting training for farmers, teachers, nurses, and myriad others. Frontline personnel are responsible for tasks as diverse as raising awareness of public health measures, ensuring access to services for local communities, identifying beneficiaries for social assistance schemes, collecting critical data, or handling administrative tasks.

A defining characteristic of frontline service workers in many developing countries is their often unrealistic workloads.[73] For example, in Chad, three trained medical personnel serve a catchment area of 10,000 inhabitants, a size for which the Millennium Development Goals' guidance for low income countries recommends more than seven times as many trained workers.[74,75] Unsurprisingly, it is generally recognized that frontline workers display low productivity, inaccurate or incomplete implementation of program guidelines or absenteeism.[76,77] These challenges can have serious consequences for social indicators and access to essential services.[78,79,80] Given the extent to which governments depend on their performance, supporting frontline staff to meet their challenging targets while still maintaining good service quality is a crucial public policy imperative.

The prevailing popular narrative about low performance among frontline workers is that either they lack intrinsic motivation or compensation and accountability incentives are inadequate. Studies in India, Rwanda and Mexico have indeed shown the potential for greater compensation and better-structured incentives to improve performance of teachers, health workers and other field staff.[81,82,83,84] Even when the funds necessary for such compensation improvements are available, however, the impact of financial incentives is limited, and there is the potential for the tactic to backfire by reducing efforts among pro-socially motivated workers (through "externalizing" their motivation).[85] In Uganda, a study of health workers whose job also included selling products, found that although advertising higher potential earnings attracted more candidates, it discouraged the more socially motivated and experienced applicants.[86] Another study with nurses in India found that all of the initially positive impacts of financial incentives eventually eroded, possibly due to nurses learning to exploit loopholes in the system.[87] Furthermore, measuring and quantifying frontline workers' performance is not straightforward, which makes rewarding higher performance difficult (and costly) in practice.[88]

The conventional focus on financial incentives as the bedrock of programs to improve retail service delivery is challenged by an emerging body of research demonstrating that low-cost tweaks to existing management structures and working environments can significantly improve frontline workers' performance without changing compensation schedules. For one, so-called "*non-financial incentives*" have shown potential to work as effectively, and sometimes better

than, financial incentives. In a study in El Salvador, community health teams were awarded points for meeting team-level performance targets. The points—redeemable for in-kind items, such as air conditioner units, laptops etc. to be used by the entire team—led to an improvement in both the quality and the quantity of services provided.[89] In Zambia, star-shaped stamps and thermometer-type displays of achievement improved the distribution of condoms by rural health workers, and were more effective than financial incentives.[90] In Nigeria, public sector workers were provided with stars and an official photograph with a senior government official to encourage administrative staff to maintain records in a careful and consistent manner.[91] Non-financial incentives can also affect the types of candidates that apply for a position, thus holding potential to improve job effectiveness. For example, posters making salient career advancement opportunities associated with the role improved the quality of recruitment and the subsequent performance of health workers in Zambia, compared to recruitment through posters highlighting prosocial motivations ("serve your community").[92]

Sometimes, simply reducing the cognitive burden faced by frontline staff—making the job itself easier or shaving off unnecessary interactions with management, for instance—can yield performance dividends. In Guatemala, reducing routine *hassles* faced by rural vaccination workers by providing lists of individuals in need of services boosted vaccination rates and take-up of prenatal care.[93,94] And, contrary to the widely prevalent notion that tighter supervision and accountability improves public sector performance in all cases, management practices in Nigeria that gave implementation personnel greater autonomy produced better quality and completion rates of public-facing projects such as electrification and infrastructure construction.[95]

Although much remains to be uncovered about the optimal means to stimulate public sector frontline workers to perform to the best of their ability—in Zambia, for instance, while employer recognition and social visibility enhanced health worker productivity, explicitly comparing an individuals' performance to that of their peers reduced it—it seems clear that *frontline workers are motivated by more than just compensation or the possibility of sanction.*[96] Behavioral interventions that help workers focus on the positive aspects of their jobs—such as appreciation for meeting targets, recognition among peers or affirming their existing service-related identity—may help activate workers' intrinsic motivation to serve the needs of communities. Other behaviorally informed means of reducing cognitive load—such as reminders, action prompts or checklists—may support frontline workers in navigating their difficult jobs and responsibilities and thus lead to better performance.

A Behavioral View of Nepal's Transition to Federalism

In 2008, Nepal became a federal republic and initiated its transition to a decentralized three-tier system with federal, provincial and local levels of governance. This move represented a stark departure from the previous highly-centralized form of government that Nepal had followed for more than two centuries. The new Constitution, promulgated in 2015, created seven provincial and 753 local governments across the country and represented an important first step toward decentralization. In practice, however, federalism only began when the first national and sub-national elections were held in 2017. The elections, along with the rollout of the Local Government Operation Act 2017 (LGOA), facilitated the implementation of constitutional provisions that allowed for greater autonomy, scuh as executive, legislative and judicial functions and responsibilities for the newly established local governments.[97]

Three years after the elections, Nepali citizens appear to feel increased trust and satisfaction with the services delivered by local governments compared to those in pre-transition years. In a 2018 citizens survey, a large majority (83%) reported greater trust in their local governments, and more than half (56%) said they have had more interactions with them since the transition. Furthermore, 80% were optimistic that their representatives would address local needs in the following five years.[98,99] However, despite this progress, in interviews with governance experts and political observers in Nepal, we heard concerns that local government officials may not be engaging in autonomous policy-making and effective budget allocation when it comes to issues such as service delivery improvement, local development, and effective management of resources. If left unaddressed, a lack of autonomous action by local government officials threatens to impede key goals of the transition.

In previous sections, we have discussed ways in which certain common features of bureaucracies in developing countries can exacerbate cognitive scarcity and reduce effectiveness on the job. Some ways in which this can occur are through constant and often chaotic changes to the working environment, the need to handle a multitude of tasks with little support, and the balancing of different channels of communication. This case study traces how these and other related factors challenge Nepal's local public servants, illustrating how the psychology of local officials and the design of their environment can influence the decisions and actions they must take to ensure successful decentralization of government.

A behavioral deep dive into federalism in Nepal

After the transition, federal officials' roles changed from decision-making and implementation to light-touch facilitation. This led to a radical transformation of job expectations for local and provincial level officials: for the first time, they were required to actively engage in budget-making and resource

planning rather than simply enact plans formulated at the federal level. Local governments now had both centrally appointed administrative staff and locally elected representatives who were expected to interact extensively to meet the needs of their communities. To better understand how these changes may have produced contextual barriers that impacted performance, ideas42 conducted field research in two provinces in Nepal in late 2019.[iv] In our research we observed and interviewed officials, planners and development agencies from all three governance tiers, as well as residents.

On the whole, the local officials—and especially elected representatives—we spoke to appear to have had some success progressively adapting to their new roles. This was attested by many accounts of extended public services. Some examples of these accounts include:

▸ Citizens reporting extended access to their local ward office[v]

▸ Improved support on requests such as water supply or waste management

▸ Faster delivery of certain services: one example is the case of getting a birth certificate, which used to take several weeks but was now possible in just a couple of hours.

▸ Increased innovation: in one instance, a ward chairman introduced the use of tongs for garbage collection to increase efficiency.

▸ Increased working hours

Nonetheless, federal officials overseeing the transition to federalism also acknowledged persistent concerns, primarily around the insufficient use of new executive and administrative powers at local levels, leading to delayed local development and inefficient resource management. In particular, three broad but critical local government functions linked to decentralization were commonly cited as persistent concerns: ***conducting autonomous policy design, allocating resources intentionally, and effectively incorporating available constituent data when making policy.***

Federal officials we interviewed believed that the problem with the utilization of these new powers existed primarily with civil servants and elected representatives who were "not skilled" and "not motivated" enough to be effective. This view led them to promote the need for regular functional and administrative trainings on the rule of law, good governance, and managing judicial committees, among other duties.

While local-level officials could always, of course, benefit from additional training or enhanced selection procedures, it was clear from our investigation that there are nevertheless plenty of resourceful, motivated individuals whose successes could be replicated in other wards without significant reform. For example, an enterprising chairman whose ward lacked a public hospital

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[iv] The findings and insights presented here are based on research that took place prior to the COVID-19 pandemic.

[v] Wards are the lowest strata of governance at the local level and are led by the ward chairman.

began to send health workers to the homes of citizens to conduct regular check-ups. Inspired, the chairman of a neighboring ward equipped his office with medical equipment for basic tests for citizens who wanted to avoid the long waits at the ward hospital.

Indeed, interviews with key informants revealed that many of the observed inadequacies were less indicative of a lack of knowledge or intention than of contextual changes that have arisen during the decentralization process and may impact the cognition of both elected and career local administrators in their routine functions. The sections below attempt to highlight specific psychological influences that surfaced in our investigation, as well as provide illustrative solutions to help meet the goals of the transition to federalism.

PROBLEM 1: Over-reliance on federal policy making guidelines

Local governments in Nepal are mandated to perform tasks as diverse as overseeing public services, developing municipal plans, building a community vision, implementing social indicators, collecting revenue, and representing constituents in municipal legislative processes. Despite recent constitutional provisions that provide autonomy to legislate and execute policies in areas such as primary and secondary education, health and sanitation, and local development, *local officials in Nepal have frequently continued to rely on federal guidelines rather than create locally appropriate policies.* This overreliance on central guidance can lead to confusion, implementation delays, and reduced quality of public service delivery.

No straightforward explanation can fully account for this reluctance to use new administrative powers. Certainly, centrally appointed civil servants and elected representatives at the local level may be apprehensive of the scrutiny they might receive if local policies were to clash with federal frameworks.[100] Furthermore, the rocky rollout of the decentralization reforms itself may lead to overlaps and delayed service delivery, further aggravating the preference for central guidelines. Some factors that could contribute to these overlaps and delay include a lack of clarity in articulating jurisdictions and the allocation of functions among levels, the need to depend on federal fiscal transfers for local revenue, and the inability to directly recruit staff at the local level due to a lack of necessary legislation. While these are all undoubtedly important contributors to an over-reliance on federal directives, several complementary factors may help to further explain the issue.

First, humans have an inherent (and often unwitting) preference for existing states, especially in circumstances affected by recent changes that do not leave the cognitive bandwidth necessary to chart a new course. Psychology literature refers to this phenomenon as "*status quo bias*", and in public administration it often manifests systematically as "*path dependency*".[101] As municipal administrative positions have been associated with the central government for a long time, local officials may ignore their recent constitutional mandate to engage at the local level and wait for federal policy guidelines simply because this is what they are used to doing, and to do anything different would require more cognitive effort than they are able to put forth in the current atmosphere of governmental turbulence. This preference for the status quo is also seen among

elected representatives who, in the immediate years following the transition, received model policies from the federal government. Despite it being three years since the transition, elected officials prefer—perhaps even without being aware of their preference—to continue to simply contextualize federal policies for the local government, rather than expending additional cognitive energy by treading into the unfamiliar waters of proactive policymaking.

The way decentralization has been coached and framed over time within the government may also reinforce local officials' existing "**mental models**" (subconscious schemas) about their roles, and in particular that it is not in their authority or capability to act autonomously of federal authorities. In Nepal, Kathmandu (the capital city and headquarters of the former unitary government and current federal level) continues to be seen as the symbol of government. Elected representatives we met mentioned that some civil servants continue to align to the "guidelines from Kathmandu" and view themselves only as representatives of Singha Durbar—the seat of the central power in Kathmandu—rather than as autonomous agents at the local level, as mandated by the constitution.[102] The carryover of heavy bureaucratic culture into the local government is seen by many policy professionals as a consequence of the assumption by civil servants that they are only meant to replicate practices of the Singha Durbar. Such mental models reinforce the preference to simply adopt approaches and guidelines from the "top" rather than develop locally relevant policies on their own.

Finally, even when the benefits might be large, small **hassles** can lead to procrastination or deferral of action—particularly when multiple channels of communication must be used in parallel. Autonomous local policy-making in Nepal requires setting up and learning new processes and interacting with a variety of unfamiliar political and administrative stakeholders, both within the formal institutional structure of government and, less formally, among the broader group of local community power brokers in the constituency. Officials mentioned situations where confusion about newly created roles and duties led to frequently having to seek approval or clarification from superiors, or to coordinate with multiple departments and individuals before making a decision. Hassles related to identifying the right department or person, or making the initial phone call to connect with a stakeholder, can deter public officials from taking action, defaulting them to older patterns of functioning.

PROBLEM 2: Ad-hoc budget allocation

The decentralization of resources leading to the relative financial independence of local governments is a key aspect of Nepal's governance reforms. Local governments receive four types of constitutionally mandated fiscal transfers from the federal government, which they must allocate to development and administrative areas such as local infrastructure, education, health, road construction or sanitation. To ensure that budgets are effectively allocated, local officials receive some training—though of varying frequency and quality—on budget processes and planning tools to support them in this relatively new and complex task.[103]

Regardless of the level of training provided, we found that instead of a careful analysis of communities' needs using official tools and processes, **local officials tended to allocate resources based on circumstantial factors, such as their observation of similar decisions made by peers in other wards**—or in other words, what they perceive to be the *social norm*. In discussions, for example, officials mentioned that they often hold informal meetings to make sure their budgets are comparably divided among use areas. Given the variation in demographics and requirements even across wards of the same municipality, this type of replication can lead to allocations that are grossly misaligned with a community's needs.

Journalists and policy professionals also expressed concern that investments in transportation infrastructure, although important in a country rebuilding itself after a devastating earthquake only a few years past, may be unwittingly over-prioritized at the expense of social development imperatives such as education, health and sanitation.[104,105] In some municipalities, community schools and medical infrastructure are on the verge of collapsing due to lack of funds, as resources have been directed instead toward the construction of roads and bridges.[106,107] While there may in many cases be a robust political platform behind such a prioritization, this could also be a consequence of over-reliance on pre-established *heuristics* or rules-of-thumb. For instance, some elected representatives revealed that they typically use an indicative 70:30 allocation between infrastructure and social development. Further, as is commonly the case in public administration, officials also indicated that they believe their success to be tied to the quantity of funds spent rather than qualitative alignment with policy goals: using up all the allocated budget is seen as a reliable signal of a job well done, which further reinforces the tendency to spend on big ticket items like roadway construction. A final heuristic held that projects of greater 'visibility'—such as large bridge construction—signal effective governance more saliently to the population and therefore create more electoral goodwill for elected representatives. While this is undoubtedly true in some cases, officials appear to over-weight this possibility compared to the potential for backlash due to severe public health or other social service deficits.[108]

PROBLEM 3: Insufficient usage of available data

Several decades of emphasis on the importance of evidence in policy design has led to the widespread recognition that, as UN Secretary-General António Guterres put it in 2018, "Accurate data is the lifeblood to good policy and decision making."[109] Autonomous decision-making of the kind required in any decentralization policy rests on a foundation of accessible and reliable information on local realities. The same is true for some of the behavioral approaches that we have advocated for in this paper: dispelling faulty mental models, uprooting imprecise heuristics, and inducing shifts from the status quo all require us to counter the unreliable foundations of these cognitive shortcuts with evidence. Improving the quality of evidence about citizens' needs and the impact of policy interventions has repeatedly been identified as a significant area of opportunity for successful decentralization in Nepal. This is particularly true in light of the country's

heterogeneity—whether in terms of ethnicity, socio-economic class, geography or climate—at the regional and even municipal levels.[110]

However, it is clear from our limited investigation that even when accurate information is available, local officials often do not systematically utilize it to guide policy decisions. Multiple contextual influences are likely to reduce the chance that policymakers seek out information or use it after it is presented to them. For one, policy-makers—like all humans—tend to be **overconfident** in their intuition, and often rely on anecdotes, personal experience or beliefs. For example, according to a provincial planner, instead of using available data and evidence to identify and prioritize communities' needs, **local government officials often pay more attention to "issues that are in front of their eyes,"** such as damaged roads or bridges. Relying on data would allow officials to overcome the effect of arbitrary *salience*, perhaps leading to more appropriate budget allocations.

Even when confronted with evidence of impending challenges, such as rising primary school dropout rates or falling sanitation standards within their wards, ward chairmen often underestimate these threats due to the erroneous belief that their wards fare better than others. In one ward chairman's words, *"Issues around the quality of teachers are common in the neighbouring municipality where the ward chairman is young, but not in ours".* This natural sense of **overconfidence** in oneself (and in this case, also a strong pre-existing association of youth with inexperience or recklessness) can reduce the likelihood that an individual will be receptive to contrary information.[111]

Our conversations with officials and citizens also uncovered the existence of preferential treatment for requests from citizens from the same ethnic group as the public official. For example, we heard stories of citizens of the same ethnicity as the ward chairman receiving immediate electricity connection upon request, while those from other ethnic groups had to wait a long time just for a decision on the same issue. While this was no surprise, given the incentives that exist for patronage and graft due to over-familiarity in client relationships, in at least some cases such preferential treatment may possibly be influenced by the greater cognitive "*availability*" of the official's own ethnic group's experience, reinforcing the potential for empathy. Such biases— whether conscious or unconscious—can crowd out officials' motivations to analyse the information needed to objectively prioritize complaints. This, in turn, can lead to unfair and unequal treatment, and perceptions (even if not necessarily accurate) of corrupt dealing.

While the benefits of evidence-based policy-making are generally recognized, applying a behavioral lens highlights how access to data and the skills required to effectively utilize it are necessary steps but not in themselves sufficient for mitigating biases in policy-making. Behavioral insights can therefore play a role in actually shaping data presentation to maximize the likelihood of it being used, in addition to mitigating cognitive biases related to the actual analysis and interpretation of the evidence once it is used.

The way forward

Nepal's successful transition to federalism will require additional structural and legislative changes, such as clearer constitutional provisions, effective channels for collaboration across various government levels, and improvements to data collection systems. Our analysis, though limited in scope, shows that interventions based in an appreciation for the cognitive hurdles posed by the recent devolution of decision-making powers will be necessary to optimize the supportive structures that are ultimately put in place. Together, the two complementary approaches have the potential to improve officials' performance as they navigate the adoption of new roles and responsibilities. Three illustrative approaches that could interact successfully with future proposed reforms are:

▸ ***Checklists and reminder prompts.*** To support officials with limited available cognitive bandwidth, it is critical to reduce the most challenging portions of the policy-making cycle to less-demanding protocols. For instance, a checklist could be used to help civil servants who are newly responsible for complex budgeting ensure that they first develop a framework budget that responds to local needs before consulting policy frameworks originating in Kathmandu (as a means of reducing the tendency to rely on national guidelines). Furthermore, to diminish fears of the unknown, officials could be provided with simple tools that break actions into smaller, achievable steps, as well as prompts to follow through on their decisions at the right moment in the planning cycle.

▸ ***Planning tools.*** Exercises that prompt officials to reflect on the purpose of various budget proposals may prevent them from simply copying priorities from another ward and encourage greater attention to each ward's unique characteristics. Simplified management tools could help civil servants articulate the goals, priorities and timelines they have received from the political echelon and assign ownership to reduce both the chance of following faulty heuristics for prioritization and the tendency to defer important but not urgent priorities.

▸ ***Information made actionable.*** Providing accessibly presented, relatable, credible and economical evidence at the precise moment when action is both possible and necessary will maximize the chance of available information being used for its intended purpose. Indicator dashboards should include clear threshold levels for taking action, such as the number of citizen complaints required about a particular roadway before funds need to be added to the budget of the local public works department responsible for conducting repairs. Another strategy may be to incorporate visualizations that compare local performance to that of neighboring or similar districts to help officials aspire to a higher level of achievement, as opposed to the lower standards that may result from the misperception that others' performance is lower than it is relative to their own.

Although further research is needed on each of the behavioral challenges and approaches described above, it is clear that behavioral science can offer potentially promising and complementary avenues to develop small yet impactful tweaks to decentralization reforms in Nepal. A more systematic review of the behavioral barriers present at each level can help to elucidate more robust hypotheses and provide a basis for the future testing of solutions on the ground.

Measuring Behavior Change in Government

Having considered several principles for productively focusing behavioral design efforts in public administration on target behaviors and their causes—and examined several specific issues where these may be readily applied—we now turn to ways that innovative reform programs can be tested to demonstrate their utility in field settings. Empirical testing in behavioral design is not simply a "nice to have"—it is the bedrock on which the entire approach stands. If a central tenet of behavioral science is the relative importance of context in determining humans' decisions and actions, context must also influence the effectiveness of behaviorally informed solutions. Thus, even if a particular solution to a behavioral problem has already been shown to work for a particular group of people or in a particular geography or setting, it must still be tested in the new context where it is being proposed.

Testing, particularly in a government setting, can be challenging. As a result, the empirical academic literature on what works in improving bureaucratic behaviors is thin, especially when compared to other domains of development practice, such as financial inclusion, public health or education. For one, government contexts tend to involve more complex and idiosyncratic decision-making and action-taking, with many actors and interlinked behaviors whose natures change—often chaotically, as we have observed above—from moment to moment. This makes it particularly difficult to identify "clean", systematic, experimental approaches to testing, while the presence of many potential confounding factors similarly undermines the credibility of quasi-experimental methods. Low sample sizes—a consequence of relatively small, specialized teams operating within otherwise sprawling departments—can further reduce the credibility of findings and limit viable avenues for testing. Moreover, random assignment—the gold standard for identifying cause and effect—can occasionally pose ethical challenges, while data to measure behavior change can be difficult to access or collect. (Behavioral scientists do enjoy at least one comparative advantage: applied behavioral science is about incrementally improving existing practice, which limits the practical and ethical challenges associated with randomizing subjects to receive light-touch behavioral "treatments" relative to studies in which more costly or potentially harmful interventions are being tested).

While an exhaustive discussion of empirical methods and approaches to measurement is beyond this paper's purview, we recommend several "rules of thumb" to practitioner organizations and applied researchers seeking to incorporate behavioral design into state capacity reinforcement programs:

▸ *Use administrative data.* Utilizing data collected passively ("administrative data") through extant (usually technological) systems, which are ubiquitous even in developing country institutions, reduces the costs of testing and lowers the stakes, allowing for multiple attempts in case of failure.[112]

▶ **_Measure the (more easily) observable_** Certain behaviors may be hard to observe and quantify. In such cases, measuring proxies may be the only feasible approach. For example, although an intervention may aim to improve the quality of public servants' communications with citizens, directly observing such communications would be costly and unwieldy. Possibly easier proxies would be either an antecedent behavior, e.g. the writing of comments to accompany complaints in the system, or the relevant ultimate outcome predicted by theory, e.g. citizens' satisfaction with the process.

▶ **_Measure at the right level._** While most behavioral interventions in government ultimately aim to improve the welfare or satisfaction of citizens, such impacts may take longer to materialize than practicality demands, in addition to being difficult and expensive to measure. Measuring inputs (such as attendance) or intermediary outcomes (for example, number of meetings attended) can offer much faster feedback on the effectiveness of an intervention, as well as lower data collection costs.

▶ **_Test early and often._** Government settings are in constant flux, with political changes producing long periods of policy uncertainty—particularly in developing countries where elections are frequently disputed and ministerial cabinets frequently reshuffled. Personnel changes, even in the case of regular civil service rotations, may appear at the last-minute to disrupt carefully laid testing plans. Plan to test as many times as possible, anticipating that interruptions in data collection, irregularities in implementation, or other failures are likely to occur.

▶ **_Prioritize impact over mechanisms._** In a drive to understand the precise causes of behavior, researchers can sometimes find it tempting to test several versions of an intervention in parallel, particularly when in a "tinkering mindset".[113] However, the additional information gained from a multi-arm behavioral trial must justify the additional expense and complication such a design introduces. This is rarely the case when testing in fragile settings with limited methodological robustness to begin with. Moreover, the importance of teasing out which psychological mechanism is responsible for a behavior can pale in comparison to simply showing that behavioral science, writ large, can play a role in improving governance outcomes _at all_, or that a simple, cheap intervention can have a meaningful effect (in contrast with the existing paradigm prioritizing large-scale and costly reform program). Combining multiple theory-driven behavioral elements into a single intervention's design, especially when it does not substantially increase costs, can promote not only higher impact but also a higher chance to secure institutions' "buy-in" and continual interest in scientifically driven innovation.

» New Directions

In the sections above, we have argued that traditional levers of bureaucratic reform—those requiring greater resources or time than may be available in a developing country setting—should be accompanied by a practical behavioral approach for maximum impact and cost-effectiveness. While certainly not all challenges can be usefully addressed with behavioral solutions, enough "low-hanging fruit" exists to make government a fertile proving ground for applied behavioral science. Many of these are driven at least in part by the pervasive difficulties of working in public service, such as chaotic and constant flux, manifold responsibilities with little support and the need to simultaneously navigate formal and informal systems to get things done. These impediments interact with human psychology to produce deficits in civic responsiveness, anti-corruption policy, and retail service delivery, among many others. In Nepal, we have seen how these and other behavioral bottlenecks have manifested during the central government's recent devolution of powers to local authorities, contributing to passive and inconsistent policy-making at the local level. Last, we have pointed out several ways in which researchers and practitioners can improve existing methods for testing solutions to expand what is known about "what works" in behavioral public administration, creating space for new solutions to puncture the incumbent paradigm of large-scale systemic reform.

Much remains to be explored regarding the application of behavioral science to public administration around the world and to developing countries in particular. While we have cited a number of recent studies that indicate promising individual solutions to particular problems—say, the use of social recognition to improve community health workers' productivity––—most such instances remain isolated demonstrations of potential. They must be rigorously tested in multiple settings and with varied implementation characteristics to effectively prove the concept and enable adaptation by others elsewhere. We must learn more about *how* they work, *who* responds most effectively to them (including the influence of gender and other innate characteristics), and the conditions under which they work best. If we are to argue for more resources to pilot behavioral interventions in conjunction with more conventional ones, we need to have more information on precisely what the former cost—accounting for the potential for unintended (and backfiring) effects. Most importantly, we have yet to see a major policy initiative that knowingly combines many promising elemental interventions into ***a comprehensive suite of reforms to more systematically address the need for better public administration*** across diverse geographies.

One potential avenue for more coordinated research comes from the expanding phenomenon of "behavioral insights teams" in governments across the world. Such organs generally consist of applied researchers trained in economics or psychology working within government to design and test improvements to public service delivery, ranging from facilitating academic persistence to resource conservation and improved tax collection.[114,115,116] Starting in the UK about a decade ago, this model has since been replicated at national and sub-national levels in other countries,

including the United States, Canada, Australia, New Zealand and Singapore.[117] To date, behavioral insights teams have rarely examined internal government procedures, and adoption in developing countries has lagged behind that in wealthier counterparts. Nevertheless, the continued expansion of behavioral innovation capacity in government is a reason for optimism that more experimentation will continue to occur as greater acceptance for the applied behavioral methodology is won.

The advancing application of behavioral science to public policy has not proven inexorable, however. Incremental design and rigorous testing require patience in gathering contextual information, the humility to aim (at least initially) for low-hanging fruit at the expense of more ambitious goals, and the acceptance of failure when highly anticipated reforms do not deliver expected results. These attributes, often elusive in public administration reform, are particularly challenging to promote in a developing world that is struggling under the weight of intractable conflicts, climate change and a trend toward authoritarianism that all threaten to arrest the progress of promising new innovation methods.

The year 2020 has brought further destabilization in the form of the COVID-19 pandemic that is currently affecting most of the world. Though originally viewed through a relatively narrow public health lens, by late 2020 many observers regarded the crisis as pre-eminently a challenge to a country's ability to distribute resources equitably and in a manner driven by the latest evolving science across various economic sectors in order to counter the pandemic's dual threats to life and livelihood without exacerbating inequality.[118] The failure of the global public sector to meet this challenge has had devastating consequences for trust in government as death counts and unemployment figures continue to rise.

But if COVID-19 and its attendant policy challenges have shown us anything, it is that ***innovation in government is as sorely needed as ever.*** This was obvious early in the pandemic as civil servants across the world found themselves rewriting the rule book for public procurement on the fly as they raced to gain access to critical medical equipment and supplies. The strain the pandemic has placed on many other mundane government functions has laid bare the centrality of helping public officials manage their cognitive bandwidth effectively as the difficulties already inherent in their roles compound, forcing them at once to navigate unpredictable change, unmanageable workloads and unhelpful formal protocols. This is to say nothing of the "perfect environment for corruption to flourish" that COVID-19 has provided; itself a daunting challenge likely to prove impervious to incumbent solutions alone.[119]

We hope this paper serves as a nudge toward this needed innovation at a time when the world—and the development community in particular—may be more ready than it has been in decades to consider heterodox approaches to reform. Importantly, the present inclination toward change will not likely result in the wholesale overhaul of government structures, systems and tools as we know them: this would require resources that have already been spent on fighting the pandemic. Somewhat ironically, then, the greatest governance challenge of our time may contain within it the seeds of a distinctly *incrementalist* groundswell, one in which ***the often-overlooked jobs***

individuals must do to keep the system running receive as much attention as the overall system itself, leading to new solutions that hold great potential but are also cheaper and more readily implemented than attempts at whole-system transformation.

Regardless, we hope in some small way to advance the need to better understand these individuals at the heart of the system: the jobs they do, their complex motivations, and the obstacles they must overcome to serve the public interest. If there is indeed no higher calling than public service, there may be no better way to improve social welfare than by helping those who have chosen to serve to realize the full potential of their dedication.

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