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ARTICLE

But does the nudge fit? Institutional structure and behavioural insights

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Abstract

Behavioural science has found growing application in applied public policy settings, offering a vast literature to bring to bear on apparent cognitive errors. The potential, however, is not without peril. Policymakers and scholars may draw unwarranted confidence that successful behavioural interventions from elsewhere will replicate in their institutional settings. In this research, I partner with Minneapolis Public Housing and use a design-based approach to identify interventions that can reduce eviction actions. This study presents three vignettes that demonstrate and categorize the mistakes behavioural science can make when it fails to understand how formal and informal institutional features influence decision-making. But, in integrating methods and theories from the design sciences, public policy and public administration, we have the potential to create behavioural interventions that fit the social context.

Key words: behavioural science; design science; structuration; public housing; implementation science; public assistance

Introduction

'I do not like it at all … It's just so demeaning', Lisa[1] remarked to a group of her fellow public housing residents convened to review a draft behaviourally informed late rent reminder letter. 'Oh, I already know what part you're talking about, Lisa … ' another resident chimed in. '"The majority of your neighbours are up to date". I mean come on! Who cares if my neighbours paid? That's not their business'. The room bristled in agreement. 'That part is just such a put down'.

This draft letter, created using the behavioural literature, was disliked by all 12 assembled residents. While they had many critiques, the largest outcry came from the commonly employed behavioural technique of peer norming. The seemingly neutral phrasing was imbued with meaning through residents' past negative interactions with Minneapolis Public Housing Agency (MPHA). Instead of nudging residents to pay rent or ask for help, the phrase aroused annoyance and anger. Only

[1]All names in this paper are pseudonyms.

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by co-designing this intervention with residents did we narrowly miss mailing a nudge that may have produced unintended consequences.

In the last two decades, behavioural science has found a growing application in government. This integration offers the public sector a vast literature to bring to bear on apparent cognitive errors, often to great effect. As MPHA residents showed in the above story, this potential, however, is not without peril. Policymakers and scholars, themselves bounded, may draw unwarranted confidence that successful behavioural interventions may replicate elsewhere.

This was my experience in a 14-month collaboration with Minneapolis Public Housing to apply behavioural insights to eviction prevention. I found participant choices – themselves based on past experience, current context and future expectations – consistently interacted with extant informal and formal institutional structure[2] to produce unexpected outcomes. Attempts to change choice architecture neither landed on virgin soil, nor were interpreted apart from participant's experience with the institution. In other words, the social embeddedness of behavioural interventions matters.

This paper combines a design-based approach and theories on the production of social systems to probe the subconscious routines and schemas that influence choice. I present and discuss three vignettes that demonstrate the importance of working closely with system participants to understand how they make decisions.

In so doing, it builds on burgeoning the subfields of Behavioural Public Policy (BPP) and Behavioural Public Administration (BPA) to apply knowledge of how decisions are impacted by both individual and collective factors (Oliver, 2013, 2017; Grimmelikhuijsen *et al.*, 2017; Bhanot & Linos, 2019; Ewert & Loer, 2020). It also reinforces broader calls that BPP and BPA must not merely be a one-way transfer of knowledge from behavioural science to public policy and administration but incorporate a full array of methods and theories to inform theory and practice (Battaglio *et al.*, 2019; Carboni *et al.*, 2019; Feitsma & Whitehead, 2019; Bertelli & Riccucci, 2020). It joins others in pushing us behavioural scientists closer to Simon's vision of a 'design science' that marshals evidence to improve organizational function (Simon, 1968; Moynihan, 2018; Bertelli *et al.*, 2022).

Behavioural insights, the micro, meso and macro

Behavioural science understands that individuals are not robots making choices based on economic rationality, but instead exhibit predictable cognitive, social and emotional shortcomings (Mullainathan & Thaler, 2000; Thaler & Sunstein, 2008). As the costs of participation increase, like requiring employment verification or conducting intrusive interviews, fewer people participate in social safety net programs (Currie, 2004; Herd & Moynihan, 2018). Recent scholarship has shown conditions of scarcity can exacerbate cognitive errors and undermine attempts to attain or retain public benefits (Mullainathan & Shafir, 2013). This means procedural frictions are, perversely, more likely to sever assistance for the most vulnerable, like indigent and elderly residents of public housing.

[2]Throughout, I follow Giddens (1984) and Sewell (1992) in defining 'institutional arrangements' or 'social structures' as the formal and informal schemas, resources and routines that allow social practices to exist between agents over time and space.

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Here, behavioural science also offers a path forward: reshaping decision environments to reflect our boundedness. While there are many ways to align short-term actions with long-term desires, one common tool are nudges, or small changes to choice architecture that alter micro-level decision-making in a predictable way without restricting choice (Thaler & Sunstein, 2008).

In this research, I set out to understand how public housing residents' individual cognitive errors were increasing the likelihood of evictions and make changes to choice architecture to improve outcomes. While only one prior piece of research (Fitzhugh *et al.*, 2018), looks specifically at nudging payment of arrears in public housing, there are ample behaviourally informed studies that sought to reduce debt for low-income individuals in similar domains, like taxes (Hallsworth, 2014; Castro & Scartascini, 2015; John, 2018; Chirico *et al.*, 2019), credit cards (Adams *et al.*, 2018; Medina, 2021) and child support (Richburg-Hayes *et al.*, 2017). These papers tend to prioritize the theories and quantitative methods of psychology and economics and opens them to the critique that they fail to discuss how the research actually revealed the latent cognitive process it purports to target (Sunstein, 2019).

Two of the above – Richburg-Hayes, Anzelone, and Dechausay and Fitzhugh, Park, and Nolan – richly describe their interaction with system participants that revealed setting-specific cognitive errors. Each documents biases, like locus of control, cognitive scarcity, procrastination, information aversion and salience, and describe selecting interventions that fit the individual and institutional context. Neither, however, systematically reflects on how the institution shaped participants' understanding of alternatives nor considers the social structure to be mutable.

In the fieldwork, I found this relationship between system participants and social structure impossible to ignore. This was not a one-time game. Residents interacted with the same architecture repeatedly, changing their interpretation of it. Residents' interactions with MPHA staff influenced organizational deployment of resources and frontline interpretation of organizational policies. In that way, the meso-level structures were, themselves, an amalgamation of the individual actions of system participants and societal or macro-level forces.

Scholars refer to this process of how social systems – through schemas, resources and routines – are produced and reproduced over time and space as Structuration Theory (Giddens, 1984; Sewell, 1992). In this theory, schemas are the building blocks of social systems. They can be formal rules or informal norms, but both create 'shared understandings among those involved that refer to enforced prescriptions about what actions are required, prohibited, or permitted' (Ostrom, 2011: 17). Resources are 'anything that can serve as a source of power in social interactions' (Sewell, 1992: 9). Resources, usually identified as money, also include knowledge, material artefacts and time. Routines are the everyday interactions that teach and reinforce participants their relationship to schemas and resources.

Schemas, resources and routines represent both the medium and product of the individual actions that constitute a system, or what Giddens (1984) refers to as a Duality of Structure. Individuals interact, reflect and learn, and this collective knowledge becomes part of the social structure. Because of this, the individual actions of system participants and structure they interact with cannot be disentangled. The value of Structuration is, therefore, not in isolating cause and effect, but as a useful

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sensitizing device for researchers looking for patterns and levers to alter behaviour (Giddens, 1984; Turner, 1986; Soss, 2018).

Careful readers may notice a heretofore absence of societal-level or macro-level features. For pragmatic reasons, this research focused on identifying micro-level errors and using this information to influence staff to update meso-level social structures (Moynihan, 2018; Roberts, 2019; Bertelli *et al.*, 2022). That said, macro-level forces, such as public values, technology and capital resources, have a profound power on institutions – with the current zeitgeist constricting or liberating the ability to change them (North, 1990; Moulton & Sandfort, 2017; Jilke *et al.*, 2019). That was the case in this project, where increasing national and local attention to evictions primed MPHA's willingness to make change.

Consideration of all the macro-, meso- and micro levels of social structures would have been obvious to early public administration scholars (Jilke *et al.*, 2019). Herbert Simon wrote on the importance of integrating understanding of bounded rationality in the study of administration, declaring 'for the man who wishes to explore the pure science of administration, it will dictate at least a thorough grounding in social psychology' (Simon, 1947: 202, 1955). Understanding our bounded nature impacts organizational performance, he created the design sciences to train managers to move current conditions to a more desirable state (Simon, 1968; Barzelay, 2019).

The paper uses those principles of design sciences to create behavioural interventions that fit the social and political context of an individual (Moynihan, 2018; Sanders *et al.*, 2018; Bhanot & Linos, 2019; Feitsma & Whitehead, 2019; Ewert & Loer, 2020; Ewert *et al.*, 2021). By reflecting on the power of both individual and collective forces, we can help create practical insights to improve policy design and implementation (Grimmelikhuijsen *et al.*, 2017; Jilke *et al.*, 2019; Moseley & Thomann, 2021).

Method

From February 2019 to June 2020, I partnered with Minneapolis Public Housing Authority (MPHA) on a design-based process to reduce eviction actions. While ample design approaches exist, all seek to create innovation by iteratively moving between exploring a problem, generating alternatives and implementing solutions (Ansell & Torfing, 2014; van Buuren *et al.*, 2020; Romme & Meijer, 2020). To accomplish this design-based research uses conventional tools from social science, like interviews, observation and descriptive statistics (detailed description of methods and sources in Appendix A). Employing these multiple methods helps reveal the tacit knowledge and latent desires of system participants (Greene & Benjamin, 2001) and '[enhance] our beliefs that the results are valid and not a methodological artifact' (Bouchard, 1976: 278).

After the initial exploration, I brought this qualitative and quantitative data back to staff and residents to analyse together. These sessions developed hypotheses and related 'probes' – small, safe-to-fail actions that can 'create a pattern of activity that can be either stabilized and amplified if generating positive results or dampened if there are no positive consequences' (Sandfort, 2018: 479). In this way, the data collection was pragmatic, and used for 'purposive theorizing' – or a way of predicting so as to act (Barzelay, 2019).

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This logic differs from inductive reasoning to validate theoretical concept or from deductive reasoning to generalize empirical laws to new contexts. Instead, design uses abductive reasoning that starts with a desired outcome and questions how to arrange available elements (what) and pattern of relationships in the system (how) to arrive at that outcome – in this case, improving public housing outcomes (Cross, 2011; Hermus *et al.*, 2020). Design rejects the notion that scientific discovery is value-neutral, ahistorical, and that important scientific contributions are self-evident; instead, it follows pragmatism and interpretivism in embracing doubt, following hunches and chasing discovery alongside participants (Polanyi, 1966; Locke & Golden-Biddle, 1997; Locke *et al.*, 2008; Ansell, 2011).

While my broader project with MPHA looked to this abductive process to identify, implement and test interventions to reduce eviction actions, the process revealed a picture of structure and behaviour that this paper interrogates.

The case of Minneapolis Public Housing

MPHA is one of Minnesota's largest landlords, managing over 6,000 publicly run units and administrating 5,000 private-market vouchers. This project focused on the 10,500 residents living in MPHA's publicly run units. By design, residents are vulnerable, with a high proportion of individuals with disabilities and who are refugees and seniors. Residents also tend to be extremely poor, with 81% of household reporting incomes below $20,000 in 2018 (detailed demographics in Appendix B). Residents in publicly run units are far also more likely to be Black, Indigenous and people of colour than all Minneapolis residents, 83% to 40% (U.S. Census Bureau, 2018).

In public housing, rent is income dependent. Residents recertify their income annually and must report any interim changes. These potential fluctuations require that MPHA send a monthly rent statement to each household. Once received, most residents purchase and mail a money order. If residents are 45 days delinquent, MPHA refers the debt to court. The court issues a $350 fine and order to appear (collectively called an unlawful detainer). If residents fail to appear or pay, they are evicted. In 2018, the court issued 325 unlawful detainers to MPHA residents and evicted 98 residents. Given tight margins, the fear of going to court exacted high psychological costs on residents beyond the relatively small number of those summoned, with 40% of residents we surveyed worried about paying rent in at least one month over the last year.

In the days between statement and court action, there is an involved process for paying rent and getting help. To understand the formal and informal routes, I followed past literature (Datta & Mullainathan, 2014; Richburg-Hayes *et al.*, 2017) in mapping user behaviour to find critical points influencing outcomes (Appendix C). Initial scoping showed that three areas – automatic withdrawal, late payment reminders and emergency assistance (EA) – were fertile grounds to apply behavioural insights. In the examination of each, there arose a complex context that informed micro-level decision-making.

Automatic withdraw

Since 2015, MPHA has offered a program for its residents to pay rent by automatically withdrawing from a bank account. Despite the convenience, the majority of

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residents mail payment. In a resident survey, the most common reason for not signing up was lack of program knowledge. When confronted with this data, staff were surprised, holding a schema that the automatic withdrawal program was well known. The information opened staff to deploy resources to make a change. Here, behavioural science may prescribe a simple informational nudge (Fiske *et al.*, 1996; Bhargava & Manoli, 2015; Faulkner *et al.*, 2018).

While a low-cost notification may be beneficial, further resident interviews revealed salience alone does not explain low uptake. Many residents have a trusted payment routine. Any change in this *status quo*, in their mind, increases the chance an error puts their home at risk (Samuelson & Zeckhauser, 1988; Kahneman *et al.*, 1991). As one elderly tenant shared, she would love to not have to remember to pay every month but enjoyed the peace of mind of mailing a money order. 'I think as we get older, we don't trust the system. And we really didn't do much with computers. So, I don't know if the trust is there'. In other words, resident preferred a known risk to an unknown risk, often referred to as ambiguity aversion (Ellsberg, 1961; Thaler & Sunstein, 2008).

Her interview and others like it revealed a lack of understanding of how automatic withdrawal worked. In the face of this ambiguity, rumours of failings were common. Many interviewees heard stories that automatic withdrawal pulled money from an account too late or too early, leaving unpaid rent and a not sufficient funds (NSF) charge. MPHA's own payment system data showed NSF charges were rare, but rumours of riskiness would be an impediment to any salience-targeting nudge.

This was a common feature of potential changes to nudges. Efforts by MPHA – particularly those by central office 'pencil pushers' – were viewed with suspicion. Nudges are interpreted through previous interactions with the nudger. 'If decision makers distrust the benevolence and competence of a choice architect they will tend to be sceptical of the options the architect appears to endorse' (Krijnen *et al.*, 2017: 5). Trusted intermediaries often were necessary to overcome reticence of the faceless bureaucrat.

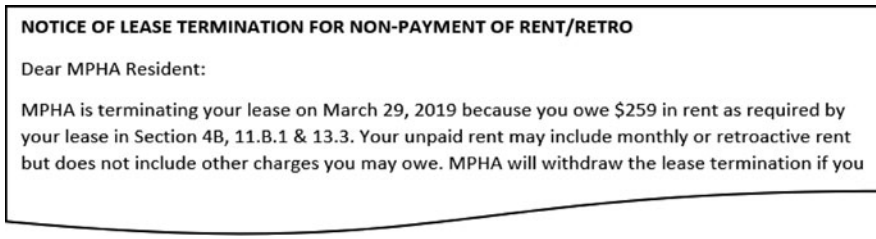
Those that signed up for automatic withdrawal loved it but tended to have routines that fostered trust in staff, such as participating in resident council or socializing in public areas. For instance, one Somali property manager with a large East African population used her strong bond, established through routines that placed her in contact with residents often, with residents to motivate sign-up. If an oft-late-paying resident brought a check book to her office, she would say, 'I don't want you to stress about MPHA getting [the rent]'. If they agreed to sign-up for automatic withdrawal, she'd complete the paperwork and append the needed voided check on the spot. This relationship shifted how residents categorized automatic withdrawal, better aligning their actions and self-defined, long-term goals.

To re-allocate resources toward making automatic withdrawal more widely used required updating staff schema. The design-based work revealed where and how to target cognitive errors, and spurred action by the organization.

Late payment reminders

If a resident has not paid rent by the middle of the month, MPHA sends a compliance-driven late payment reminder (Figure 1). Residents universally shared

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NOTICE OF LEASE TERMINATION FOR NON-PAYMENT OF RENT/RETRO

Dear MPHA Resident:

MPHA is terminating your lease on March 29, 2019 because you owe $259 in rent as required by your lease in Section 4B, 11.B.1 & 13.3. Your unpaid rent may include monthly or retroactive rent but does not include other charges you may owe. MPHA will withdraw the lease termination if you

Figure 1. Non-payment of rent letter.

a sense of dread upon receiving it for the first time. They were left to wonder, 'am I already too late? Is there anything I can still do?'

This fear produced different reactions. Some flew into a flurry, rushing to access trusted resources. Social workers, residents and property managers were instrumental in calming the fear and prompting action. One resident shared, 'I have one lady that was in a crisis. She was crying and came to my apartment. I said, "No, read it. It's telling you that you have to the end of the month to pay … They're giving you time. Don't worry, you have time."'

For other residents, their response was to freeze. As one elderly resident put it, 'I was in a panic because I didn't know what to do. I didn't know where to turn. And I just kind of ignored it. I just was that hoping it would go away'. In a system quick to punish non-payment, avoiding the problem is irrational, like an ostrich sticking its head in the sand (Mullainathan & Shafir, 2013; Haushofer & Fehr, 2014). By the time a resident receives the rent termination warning letter, they are 30 days or fewer away from a court hearing and fine, while it can take up to 30 days to get available cash assistance (for the full eviction process map, see Appendix C).

To help delinquent residents, staff had an established routine to call and knock on doors and, as court drew closer, reach out to their neighbours, family and caseworkers. This was the case for woman that hoped the threat of eviction would just 'go away' – an attentive property manager noticed she was behind and reached out to her caseworker. As she shared, 'I consider myself to be lucky because a lot of people don't have that safety net … If it wasn't for that that fact … ' before trailing off.

After repeatedly hearing about the negative outcomes associated with the letter, I convened a resident design lab to change it (Hanington & Martin, 2012). My initial theory was that we needed to emphasize that residents saving their home was within their own agency or locus of control (Rotter, 1966; Oreg *et al.*, 2011). As residents talked about their experience, however, it was clear they interpreted the letter's words through their impressions of the sender. Like automatic withdrawal, their past interactions with MPHA weighed heavily on their understanding of the message. For many, they believed fear was the point.

As noted in the introduction, the harshest response from residents was the use of a peer norming language in the nudge. They found the idea of being compared to neighbours 'demeaning', 'discriminatory', 'belittling' and 'bullying'. They immediately connected the facially neutral phrasing to past negative incidents with frontline staff. 'Who wrote this?' one resident asked; 'Terry', another immediately answered, without

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any knowledge of the drafting process (Terry, a rent collection agent, was not a participant). Benign words combined with previous experience to take on a hostile attribution, a bias heretofore missed (Nasby *et al.*, 1980).

Unlike the intent received by residents, MPHA's stated goal was not intimidation. Instead, the letter was a federal requirement mechanized by the bureaucracy and routinized over decades. When asked, staff believed the letter was, 'if not perfect, perfectly good enough'. And lack of payment was 'due to this pattern [residents] have established for themselves'; a frontline sentiment that reflects a combination of micro-, meso- and macro-forces. This creates a difficult-to-displace schema in staff, identified here as the availability heuristic, that inhibited an organizational change that could improve resident wellbeing (Peeters, 2019; Christensen *et al.*, 2020; Guul *et al.*, 2021; Moseley & Thomann, 2021).

Late payment reminders have two primary implications for policy entrepreneurs looking to improve communications to residents. First, behavioural interventions need to tread carefully to avoid resident schemas that produce reactance; in this case, the focus groups revealed recipients were much more amenable to notions of procedural fairness and tangible actions residents could take to pay. Second, implementation of behavioural interventions must be consistent with organizational behaviour. In this case, MPHA needed to alter staff schemas around the reasons for resident's behaviour to allow for a modest shift to late payment reminders.

Emergency assistance

In the first two examples, paying attention to social structure revealed new interpretations of and influences on cognitive errors, as well as identified implementation considerations. In those cases, it was MPHA's own organizational arrangements that hindered progress. In other places, the broader housing system created systems that harmed results. Therefore, MPHA organically developed efforts to reduce procedural frictions.

The state of Minnesota allocates a portion of its Temporary Assistance for Needy Families block grant to counties to help low-income residents in a housing emergency. This EA program, however, was underused. My process mapping suggested potential problems of program salience and inertia (Madrian & Shea, 2001; Thaler & Sunstein, 2008; Chetty *et al.*, 2009; Bhargava & Manoli, 2015); it also revealed there was a successful, small-scale effort already underway to address resident biases.

For EA, frontline staff identified that the requirement to provide Hennepin County staff with the documented 'proof' of an emergency was a burden. To lessen resident compliance cost, the agency used its institutional clout to push the county to accept the existing late payment reminder letter. This meant all residents behind on rent would have proof at the start of the process.

Process mapping also revealed few seek EA by themselves. EA requires residents – already facing conditions of scarcity – to complete invasive interviews and detailed paperwork on income and savings. As one resident shared, '[The frontline workers] were not nice … They threatened me. She told me you know we're going to take over your finances. I said "you're not touching my money."' In many cases, residents do not have the social and cognitive resources to complete the process or, having

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interacted with EA in the recent past, are unwilling to repeat it. This was the case for the above resident, who instead of getting this benefit for which she was eligible, got a loan from a member of her church congregation.

Taken in the context of this vulnerable population, failure to complete the process is unsurprising. Interviewees shared stories of residents with memory loss, mental illness or addiction that impeded timely payment. These periods of permanent or temporary diminished executive functioning[3] that humans exhibit under conditions of scarcity can make it difficult to engage in 'deliberate thought processes such as forming goals, planning ahead, carrying out a goal-directed plan, and performing effectively' (Dean *et al.*, 2016): 6). In that way, the factors that give rise to the need for help are the same that make it difficult to overcome administrative burdens (Mullainathan & Shafir, 2013; Herd & Moynihan, 2018). The conditions create self-reinforcing behavioural biases.

To support individuals overcoming more intensive barriers, MPHA and local governments and non-profits invested in resources to create a network of social workers to lower learning, compliance and psychological costs. As one social worker put it, 'We usually fill the form out. Most people aren't comfortable [completing it alone] … Any situation that they think they're going to have to battle with the bureaucracy, they're going to try to avoid it'. They also use their positionality to advance claims. If the process slows or stalls, MPHA social workers negotiate with the county staff on residents' behalf. For one resident on the verge of eviction, the social workers made the EA process feel 'pretty seamless'.

Here, actors employed their time and considerable skill navigating the system to ease the process (Fligstein, 1997, 2001; Sandfort & Moulton, 2020). The meso-level decision to invest in staff resources reduces administrative burdens, which changes the schemas and routines of individual residents. By residents' and staff's own account, this seemed to reduce the likelihood of irrational decisions and improved resident participation in EA. Accordingly, I initially looked to create a new behavioural intervention to assist residents, but found that a nudge was insufficient for the onerous barriers residents needed to overcome. Instead, the final report to MPHA recommended scaling locally developed efforts to apply for EA.

Discussion

The behavioural revolution created an extensive literature of biases and potential remedies. This is a boon for applied scholarship, but also a potential liability to would-be interveners. Our own cognitive shortcomings mean we risk extrapolating or overgeneralizing from our initial environmental scan. As Madrian (2014: 678) notes, 'individuals care not just about their own behaviour in isolation, but evaluate it in a social context, that is, in terms of what others around them are doing and the judgments others may pass on their behaviour'. It is, therefore, imperative to understand how individuals make choices in time and place (Sanders *et al.*, 2018; Ewert *et al.*, 2021). As demonstrated by the three MPHA cases, failing to take social structures

[3]Executive functioning is defined as the ability to 'engage in purposeful, goal-directed and future-oriented behaviour' (Suchy, 2009: 109).

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into sufficient account can lead to failed interventions. In my research, I saw failure fall into two categories: misinterpretation of the determinative error or implementing an intervention the structure may not support (Table 1). Each of these latent biases were produced by an individual's interaction with social structure over time.

Errors in interpretation stem from the would-be intervener's incomplete understanding of how individuals make decisions. As Sunstein (2019: 109–110), for his part, succinctly notes, 'Behavioural biases have to be demonstrated, not simply asserted'. This requires engaging with participants' inner world to surface subconscious heuristics they use and identify better ways to effectuate that intent (Simon, 1968; Schön, 1983). Like in the automatic withdrawal example, a brief scan of the environment led me to believe salience could sufficiently explain lack of sign-up. But additional investigation alongside participants' revealed *status quo* and ambiguity biases revealed potentially more significant cognitive impediments. While hunches are useful, they often are superficial and reflect the biases of the would-be intervener. Employing structuration theory and the varied methods of a design-based approach shows how every changing institutional context shapes individual decisions for residents and organizational staff. Using this information, it can identify more promising avenues of intervention, such as engaging trusted intermediaries to assist in sign-up for apprehensive residents.

The second – errors in implementation – result from failure to understand how alterations to choice architecture may interact with social structure (Davis *et al.*, 2015; Bertelli & Riccucci, 2020). This is a familiar problem for behavioural science and public policy and administration; simply assuming similar effects in a new setting misses important lessons from implementation and design science on how to intervene in complex social systems (Cartwright & Hardie, 2012; Fligstein & McAdam, 2012; Colander & Kupers, 2014; Sandfort, 2018). As Szaszi *et al.* (2017: 364) conclude after a systematic review of 422 nudges, 'the field is greatly limited in its ability to provide process level explanation of these interventions and to summarize their boundary conditions; therefore, the effectiveness of the different interventions across different domains of applications cannot be predicted'.

This was the case in EA where an initially theorized nudge that targeted salience and inertia would have been insufficient to overcome significant administrative burdens. Instead, a better approach would be for MPHA to resource and scale an existing

Table 1. System participant behavioural biases and relation to structure

Example	Desired Action	Initial bias theory	Latent bias	Diagnostic mistake
Automatic withdrawal	Sign-up	Lack of salience	*Status quo*/inertia	Interpretation
			Ambiguity aversion	Interpretation
Late payment reminder	Pay rent or seek help	Ostrich effect	Hostile attribution	Interpretation
		Locus of control	Availability heuristic	Implementation
Emergency assistance	Complete application	Lack of salience	Scarcity	Interpretation
		Status quo/inertia	Ease	Implementation

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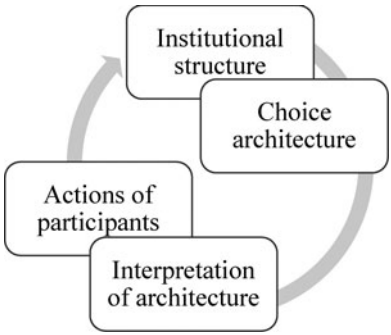


Figure 2. The cyclical nature of structure, architecture, interpretation and action.

network of frontline staff that used their positionality and knowledge to help residents navigate barriers to access. These errors in implementation were also true for the late payment reminder where staff schemas of residents as being lazy, instead of merely exhibiting a *status quo* bias, was a major impediment to changing the parts of the letter. The design-based approach revealed these resident biases. Once collected and presented, they changed frontline staff's understanding of the problem and created the collective willingness of the institution to change the letter. Absent this identification of inconsistent staff schemas, it would have been impossible to successfully implement the nudge.

Like a veneer, choice architecture modifies the appearance of a structure, but the underlying structure remains, exerting a powerful gravity on efforts to interpretate biases and implement changes (Figure 2). Residents' and staff's past experience, current context and future expectations create the conditions for the latent biases identified in Table 1. These same social forces make it viable (or inviable) to make change (Innes & Booher, 2010; Schein, 2010; Ansell, 2011; Moulton & Sandfort, 2017). Though meso-level institutional policies and practice appear durable, they reflect micro-level decisions, and are mutable through learning (Argyris & Schön, 1978; Giddens, 1984).

Since meaning is socially constructed, failing to understand these social structures leads to misunderstanding of the context. A design-based approach is helpful for behavioural science because it allows us to better understand system participant – and our own – latent biases (Schön, 1983; Cross, 2011). It does by using tools that make explicit individual's tacit interpretation of their own context. Through the three vignettes we see how Structuration Theory can be a useful sensitizing device to see the extant schemas, resources and routines that influence micro-level decision-making, and identify where and how an organization can actually implement changes.[4]

To successfully alter choice architecture, we need to understand the recursive conversation between structure and individual action (Perlow *et al.*, 2004). To do so requires getting close to the phenomenon to reveal (often tacit) individual behaviour (Polanyi, 1966; Schön, 1983; Giddens, 1984; John *et al.*, 2009; Cross, 2011). Where behavioural science may be less theoretically or methodologically prepared, design provides a natural complement. It takes seriously the existing social conditions and

[4]It's also important for would-be interveners to interrogate their own heuristics (i.e. initial bias theory; Table 1) that can result from a facile understanding of the social structure.

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the link between the different levels of social systems (Ansell & Torfing, 2014; Sandfort & Moulton, 2020). It recognizes that engaging system participants can facilitate the reflection necessary to improve current conditions (Hermus *et al.*, 2020; Romme & Meijer, 2020). After this identification, design and behavioural science then share the pragmatic instinct to rapidly test hypotheses to see if they produce the desired outcomes for system participants (Moynihan, 2018; Bertelli *et al.*, 2022).

Conclusion

This case drew programmatic frameworks and methods from public policy and administration to improve behaviourally informed efforts to reduce evictions in public housing. Through three cases, I highlight that when behavioural scientists fail to understand how social structures actually influence decision-making, they can make mistakes – both in interpretation of the determinative cognitive error or implementing an intervention the structure cannot support – that undermine effectiveness.

The work emphasizes the importance of coming alongside participants to reveal tacit behaviour and latent desires. Using theories of social structures and institutional arrangements and methods from design-based research, we can better reveal the complex, multi-level context that influences decision-making. This process also gives us a chance to test our behavioural hunches alongside system participants, providing information about how they'll react, in real life, to changes in choice architecture.

This work was influenced by BPP and BPA scholars' effort to integrate public administration and policy and behavioural science. After decades of these fields existing in separate academic traditions, their integration is a welcome endeavour. This paper, however, shares a growing concern that behavioural science's knowledge and methods takes precedence over those from public policy and administration (Battaglio *et al.*, 2019; Carboni *et al.*, 2019; Feitsma & Whitehead, 2019; Bertelli & Riccucci, 2020). This paper shows it's not an idle concern; failing to use all our collected scholarly wisdom can negatively impact residents' wellbeing. This article echoes arguments by Moynihan (2018), Bertelli and Riccucci (2020) and Ewert *et al.* (2021) that the goal for BPP and BPA is a full exchange of ideas between its parent fields, especially the consideration for the influence of institutional structures on individual decision-making.

And in doing so, our goal is to render these subfields irrelevant, leaving behind an integrative field of public policy and administration that has 'room for those who heed Waldo's call for big questions and for those who are inspired by Simon's focus on micro-level behaviours and meso-level consequences' (Carboni *et al.*, 2019: 268).

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References

Adams, P., B. Guttman-Kenney, L. Hayes, S. Hunt, D. Laibson and N. Stewart (2018), '*The Semblance of Success in Nudging Consumers to Pay Down Credit Card Debt*', Financial Conduct Authority Occasional Paper, **45**.

Ansell, C. (2011), 'Democratic Governance in a Pragmatist Key', in *Pragmatist Democracy: Evolutionary Learning as Public Philosophy*. Oxford: Oxford University Press.

Ansell, C. and J. Torfing (2014), *Public Innovation Through Collaboration and Design*. Abingdon Oxon: Routledge.

Argyris, C. and D. A. Schön (1978), *Organizational Learning: A Theory of Action Perspective*. Reading Mass: Addison-Wesley Pub.

Barzelay, M. (2019), *Public Management as a Design-Oriented Professional Discipline*. Northampton: Edward Elgar Publishing.

Battaglio, R. P. Jr., P. Belardinelli, N. Bellé and P. Cantarelli (2019), 'Behavioral public administration ad fontes: a synthesis of research on bounded rationality, cognitive biases, and nudging in public organizations', *Public Administration Review*, **79**(3): 304–320.

Bertelli, A. M. and N. M. Riccucci (2020), 'What is behavioral public administration good for?', *Public Administration Review*, **82**(1): 179–183.

Bertelli, A., N. Riccucci, P. Canterelli, M. Cucciniello, C. Grose, P. John, E. Linos, A. Thomas and M. Williams (2022), 'The (missing?) role of institutions in behavioral public administration', *Journal of Behavioral Public Administration*, **5**(1): 1–25.

Bhanot, S. P. and E. Linos (2019), 'Behavioral public administration: past, present, and future', *Public Administration Review*, **80**(1): 168–171.

Bhargava, S. and D. Manoli (2015), 'Psychological frictions and the incomplete take-up of social benefits: evidence from an IRS field experiment', *American Economic Review*, **105**(11): 3489–3529.

Bouchard, T. J. (1976), 'Unobtrusive measures: an inventory of uses', *Sociological Methods & Research*, **4**(3): 267–300.

Carboni, J. L., T. Dickey, S. Moulton, S. O'Keefe, R. O'Leary, S. J. Piotrowski and J. Sandfort (2019), 'Start with the problem: establishing research relevance with integrative public administration', *Perspectives on Public Management and Governance*, **2**(4): 267–274.

Cartwright, N. and J. Hardie (2012), *Evidence-Based Policy: A Practical Guide to Doing It Better*. Oxford: Oxford University Press.

Castro, L. and C. Scartascini (2015), 'Tax compliance and enforcement in the pampas evidence from a field experiment', *Journal of Economic Behavior & Organization*, **116**: 65–82.

Chetty, R., A. Looney and K. Kroft (2009), 'Salience and taxation: theory and evidence', *American Economic Review*, **99**(4): 1145–1177.

Chirico, M., R. Inman, C. Loeffler, J. MacDonald and H. Sieg (2019), 'Deterring property tax delinquency in Philadelphia: an experimental evaluation of nudge strategies', *National Tax Journal*, **72**(3): 479–506.

Christensen, J., L. Aarøe, M. Baekgaard, P. Herd and D. Moynihan (2020), 'Human capital and administrative burden: the role of cognitive resources in citizen-state interactions', *Public Administration Review*, **80**(1): 127–136.

Colander, D. and R. Kupers (2014), *Complexity and the Art of Public Policy: Solving Society's Problems from the Bottom Up*. Princeton, New Jersey: Princeton University Press.

Cross, N. (2011), *Design Thinking: Understanding How Designers Think and Work*. Oxford: Berg.

Currie, J. (2004), *The Take Up of Social Benefits*. Cambridge: National Bureau of Economic Research. Available at: http://papers.nber.org/papers/w10488.

Datta, S. and S. Mullainathan (2014), 'Behavioral design: a new approach to development policy', *Review of Income and Wealth*, **60**(1): 7–35.

Davis, R., R. Campbell, Z. Hildon, L. Hobbs and S. Michie (2015), 'Theories of behaviour and behaviour change across the social and behavioural sciences: a scoping review', *Health Psychology Review*, **9**(3): 323–344.

Dean, E., F. Schilbach and H. Schofield (2016), in *The Economics of Poverty Traps*.57–118.

Ellsberg, D. (1961), 'Risk, ambiguity, and the Savage axioms', *The Quarterly Journal of Economics*, **75**(5): 643–669.

Ewert, B. and K. Loer (2020), 'Advancing behavioural public policies: in pursuit of a more comprehensive concept', *Policy and Politics*, **49**(1): 25–47.

https://doi.org/10.1017/bpp.2022.36 Published online by Cambridge University Press

Ewert, B., K. Loer and E. Thomann (2021), 'Beyond nudge: advancing the state-of-the-art of behavioural public policy and administration', *Policy and Politics*, **49**(1): 3–23.

Faulkner, N., K. Borg, P. Bragge, J. Curtis, E. Ghafoori, D. Goodwin and B. S. Jorgensen (2018), 'The INSPIRE framework: how public administrators can increase compliance with written requests using behavioral techniques', *Public Administration Review*, **125**(135): 125–135.

Feitsma, J. and M. Whitehead (2019), '*Bounded Interdisciplinarity: Critical Interdisciplinary Perspectives on Context and Evidence in Behavioural Public Policies*', pp. 1–27.

Fiske, S. T., B. Morling and L. E. Stevens (1996), 'Controlling self and others: a theory of anxiety, mental control, and social control', *Personality and Social Psychology Bulletin*, **22**(2): 115–123.

Fitzhugh, T., D. Park and D. Nolan (2018) Reducing rent arrears at Metropolitan Housing Final project. Available at: https://www.bi.team/wp-content/uploads/2019/03/BIT-Applying-behavioural-insights-to-reduce-rent-arrears-final-report.pdf.

Fligstein, N. (1997), 'Social skill and institutional theory', *American Behavioral Scientist*, **40**(4): 397–405.

Fligstein, N. (2001), 'Social skill and the theory of fields', *Sociological Theory*, **19**(2): 105–125.

Fligstein, N. and D. McAdam (2012), *A Theory of Fields*. Oxford: Oxford University Press.

Giddens, A. (1984), *The Constitution of Society: Outline of the Theory of Structuration*. Berkeley: University of California Press.

Greene, J. C. and L. Benjamin (2001), 'The merits of mixing methods in evaluation', *Evaluation*, **7**(1): 25–44.

Grimmelikhuijsen, S., S. Jilke, A. L. Olsen and L. Tummers (2017), 'Behavioral public administration: combining insights from public administration and psychology', *Public Administration Review*, **77**(1): 45–56.

Guul, T. S., M. J. Pedersen and N. B. G. Petersen (2021), 'Creaming among caseworkers: effects of client competence and client motivation on caseworkers' willingness to help', *Public Administration Review*, **81**(1): 12–22.

Hallsworth, M. (2014), 'The use of field experiments to increase tax compliance', *Oxford Review of Economic Policy*, **30**(4): 658–679.

Hanington, B. and B. Martin (2012), *Universal Methods of Design: 100 Ways to Research Complex Problems, Develop Innovative Ideas, and Design Effective Solutions*. Beverly, MA: Rockport Publishers.

Haushofer, J. and E. Fehr (2014), 'On the psychology of poverty', *Science*, **344**(6186): 862–867.

Herd, P. and D. Moynihan (2018), *Administrative Burden: Policymaking by Other Means*. New York: Russell Sage Foundation.

Hermus, M., A. van Buuren and V. Bekkers (2020), 'Applying design in public administration: a literature review to explore the state of the art', *Policy and Politics*, **48**(1): 21–48.

Innes, J. E. and D. E. Booher (2010), *Planning with Complexity: An Introduction to Collaborative Rationality for Public Policy*. Abingdon, Oxon: Routledge.

Jilke, S., A. L. Olsen, W. Resh and S. Siddiki (2019), 'Microbrook, mesobrook, macrobrook', *Perspectives on Public Management and Governance*, pp. 245–253.

John, P. C. H. (2018), 'How best to nudge taxpayers?: the impact of message simplification and descriptive social norms on payment rates in a central London local authority', *Journal of Behavioral Public Administration*, **1**(1): 1–11.

John, P., G. Smith and G. Stoker (2009), 'Nudge nudge, think think: two strategies for changing civic behaviour', *Political Quarterly*, **80**(3): 361–370.

Kahneman, D., J. L. Knetsch and R. H. Thaler (1991), 'Anomalies: the endowment effect, loss aversion, and status quo bias', *Journal of Economic Perspectives*, **5**(1): 193–206.

Krijnen, J. M., D. Tannenbaum and C. R. Fox (2017), 'Behavioral policy as an implicit social interaction', *Behavioral Science & Policy Association*, **3**(2): 1–18.

Locke, K. and K. Golden-Biddle (1997), 'Constructing opportunities for contribution: structuring intertextual coherence and "problematizing" in organizational studies', *Academy of Management Journal*, **40**(5): 1023–1062.

Locke, K., K. Golden-Biddle and M. S. Feldman (2008), 'Perspective—Making doubt generative: rethinking the role of doubt in the research process', *Organization Science*, **19**(6): 907–918.

Madrian, B. C. (2014), 'Applying insights from behavioral economics to policy design', *Annual Review of Economics*, **6**(1): 663–688.

Madrian, B. C. and D. F. Shea (2001), 'The power of suggestion: inertia in 401 (k) participation and savings behavior', *The Quarterly Journal of Economics*, **116**(4): 1149–1187.

https://doi.org/10.1017/bpp.2022.36 Published online by Cambridge University Press

Medina, P. C. (2021), 'Side effects of nudging: evidence from a randomized intervention in the credit card market', *The Review of Financial Studies*, **34**(5): 2580–2607.
Moseley, A. and E. Thomann (2021), 'A behavioural model of heuristics and biases in frontline policy implementation', *Policy & Politics*, **49**(1): 49–67.
Moulton, S. and J. R. Sandfort (2017), 'The strategic action field framework for policy implementation research', *Policy Studies Journal*, **45**(1): 144–169.
Moynihan, D. (2018), 'A great schism approaching? Towards a micro and macro public administration', *Journal of Behavioral Public Administration*, **1**(1): 1–8.
Mullainathan, S. and E. Shafir (2013), *Scarcity: Why Having Too Little Means So Much*. New York: Macmillan.
Mullainathan, S. and R. H. Thaler (2000), *Behavioral Economics, National Bureau of Economic Research*. Cambridge, MA: National Bureau of Economic Research. Available at: http://papers.nber.org/papers/w7948.
Nasby, W., B. Hayden and B. M. DePaulo (1980), 'Attributional bias among aggressive boys to interpret unambiguous social stimuli as displays of hostility', *Journal of Abnormal Psychology*, **89**(3): 459.
North, D. C. (1990), *Institutions, Institutional Change, and Economic Performance*. Cambridge: Cambridge university press.
Oliver, A. (2013), 'From nudging to budging: using behavioural economics to inform public sector policy', *Journal of Social Policy*, **42**(4): 685–700.
Oliver, A. (2017), *Behavioural Public Policy*. Cambridge: Cambridge University Press.
Oreg, S., M. Vakola and A. Armenakis (2011), 'Change recipients' reactions to organizational change: a 60-year review of quantitative studies', *The Journal of Applied Behavioral Science*, **47**(4): 461–524.
Ostrom, E. (2011), 'Background on the institutional analysis and development framework', *Policy Studies Journal*, **39**(1): 7–27.
Peeters, R. (2019), 'The political economy of administrative burdens: a theoretical framework for analyzing the organizational origins of administrative burdens', *Administration & Society*, **52**(4): 1–27.
Perlow, L. A., J. H. Gittell and N. Katz (2004), 'Contextualizing patterns of work group interaction: toward a nested theory of structuration', *Organization Science*, **15**(5): 520–536.
Polanyi, M. (1966), *The Tacit Dimension*. Chicago: University of Chicago Press.
Richburg-Hayes, L., C. Anzelone and N. Dechausay (2017), *Nudging Change in Human Services: Final Report of the Behavioral Interventions to Advance Self-Sufficiency (BIAS) Project*. Washington, DC.
Roberts, A. (2019), 'Bridging levels of public administration: how macro shapes meso and micro', *Administration & Society*, **52**(4): 631–656.
Romme, A. G. L. and A. Meijer (2020), 'Applying design science in public policy and administration research', *Policy and Politics*, **48**(1): 149–165.
Rotter, J. B. (1966), 'Generalized expectancies for internal versus external control of reinforcement', *Psychological Monographs: General and Applied*, **80**(1): 1–28.
Samuelson, W. and R. Zeckhauser (1988), 'Status quo bias in decision making', *Journal of Risk and Uncertainty*, **1**(1): 7–59.
Sanders, M., V. Snijders and M. Hallsworth (2018), 'Behavioural science and policy: where are we now and where are we going?' *Behavioural Public Policy*, **2**(2): 144–167.
Sandfort, J. R. (2018), 'Theoretical Foundations and Design Principles to Improve Policy and Program Implementation', in E. C. Stazyk and H. G. Frederickson (eds), *Handbook of American Public Administration*, Cheltenham: Edward Elgar Publishing Limited, 475–496.
Sandfort, J. R. and S. Moulton (2020), *Perspectives in Public Management and Governance*, **3**(2):141–154
Schein, E. H. (2010), *Organizational Culture and Leadership*, 4th edn. Hoboken: John Wiley & Sons.
Schön, D. A. (1983), *The Reflective Practitioner: How Professionals Think in Action*. New York: Basic Books.
Sewell, W. H. (1992), 'A theory of structure: duality, agency, and transformation', *American Journal of Sociology*, **98**(1): 1–29.
Simon, H. A. (1947), *Administrative Behavior*. New York: Macmillan Co.
Simon, H. A. (1955), 'A behavioral model of rational choice', *The Quarterly Journal of Economics*, **69**(1): 99–118.
Simon, H. A. (1968), *The Sciences of the Artificial*. Cambridge, MA: MIT Press.
Soss, J. (2018), 'On casing a study versus studying a case', *Qualitative and Multi-Method Research*, **16**(1): 21–27.
Suchy, Y. (2009), 'Executive functioning: overview, assessment, and research issues for non-neuropsychologists', *Annals of Behavioral Medicine*, **37**(2): 106–116.

https://doi.org/10.1017/bpp.2022.36 Published online by Cambridge University Press

Sunstein, C. R. (2019), *On Freedom*. Princeton, New Jersey: Princeton University Press.
Szaszi, B., A. Palinkas, A. Szollosi, B. Palfi and B. Aczél (2017), 'A systematic scoping review of the choice architecture movement: towards understanding when and why nudges work', *Journal of Behavioral Decision Making*, **31**(3): 355–366.
Thaler, R. H. and C. R. Sunstein (2008), *Nudge: Improving Decisions about Health, Wealth, and Happiness*. New Haven: Yale University Press.
Turner, J. H. (1986), *The Theory of Structuration*. Chicago: University of Chicago Press.
U.S. Census Bureau (2018) 'American Community Survey 2018 1-Year Estimates'. Available at: https://www.census.gov/quickfacts
van Buuren, A., J. M. Lewis, B. G. Peters and W. Voorberg (2020), 'Improving public policy and administration: exploring the potential of design', *Policy and Politics*, **48**(1): 3–19.

Appendix A

Methods	Purpose	Source
Descriptive and statistical analysis	*Exploring current conditions.* Identify scale of population impacted and where in system residents are struggling. Find predictors of individuals receiving eviction actions.	MHPA administrative data and survey.
Interviews	*Exploring current conditions.* Collect data on values and logic of present organizational structure and residents' heuristics. Identify burdens in rent payment and ways the system can be improved. For residents, I will also gather information on their desired outcomes.	20 frontline staff and supervisors across the system; 12 resident interviews.
	Implementing and evaluating interventions. Summative staff interviews to understand how change unfolded over time and what factors were meaningful to changes.	Interview of 10 eviction team members.
Literature and document review	*Exploring current conditions & Generating alternatives.* Collect, code and synthesize the existing research on public housing, eviction actions, resident perceptions and potential interventions.	Various academic and local studies/ accounts.
Observation (passive and applied)	*Exploring current conditions & Generating alternatives.* Collection of baseline data of staff interactions, client experience and system workflow. Offers a chance to see how residents articulated desires differ from actions and how staff understand the problem and how to improve conditions.	20 hours of passive observation across sites (court, resident interactions with bureaucrats, etc.); 40 hours of applied meeting participation.
	Implementing and evaluating interventions. Review of contemporaneous notes and interviews to assess the impact on change.	
Survey	*Exploring current conditions.* Supplement administrative data to get client opinions on impediments to rent payment and what they do when they feel cannot pay.	500 randomly selected MPHA residents.

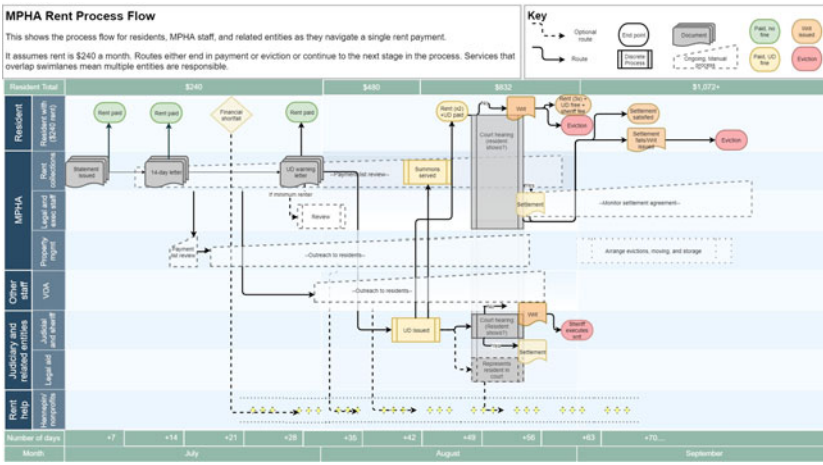
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Appendix B: Socioeconomic and demographic characteristics of residents in MPHA units

December 2018	Category	Percent of households
Household annual income	$0–$10,000	49
	$10,000–$20,000	32
	$20,000–$30,000	8
	$30,000–$40,000	10
Rent payment amount	Minimum ($75 or less)	9
	$75–$250	53
	$250–$450	22
	$450+	16
Elderly/disabled (by head of household)	Elderly only	19
	Disabled only	20
	Elderly and disabled	40

MPHA administrative data (2019).

Appendix C: MPHA process flow/user journey map



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