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The Terrapin Time Initiative: A Workshop to Enhance Alignment between Faculty Work Priorities and Time-Use

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Abstract
Faculty members experience a gap between how they would prefer to spend their work time and how they actually do so. In this article we report results from a four-week workshop called "The Terrapin Time Initiative." It was guided by theories of behavioral economics and behavioral design, which suggest that small changes to the context, or "choice architecture," in which individuals make choices can enhance decision-making. Results indicate that the workshop was effective in changing the "choice architecture" in which faculty made decisions about their time-use, thereby helping them to develop new strategies for managing their time.

Keywords Faculty careers · Time management · Behavioral economics

Vignette: A Common Dilemma

> *It is Tuesday morning; and Carol, an associate professor, arrives at her office and opens her email inbox. As she sifts through emails, she sees a request from a former doctoral student for a recommendation letter, an invitation to serve on a committee for her disciplinary association, an email from an undergraduate student to advise a group that meets weekly, a request to speak at a campus meeting on Thursday, and a request from her department chair to serve as chair for an upcoming faculty search. As she reads each request, Carol wants to say "yes" to each one but knows that she also has several important research and teaching projects due. Moreover, she is unsure how long each task will take and which tasks will be most rewarded as she considers going up for full professor next year. Carol begins to feel overwhelmed. She is unsure how she will get everything done.*

This vignette summarizes a common dilemma for faculty members and shows how time is one of the most valuable commodities they have as they move towards realization of their career goals (Winslow 2010). Carol's experience is not uncommon; and this vignette illustrates many of the typical, daily stressors that faculty members encounter in their work-lives: the struggle to manage time both effectively and strategically. There are multiple reasons why faculty members may say yes

or no to the new work requests they receive. Regardless of response, even taking time to decide can be stressful, as it pulls one away from other work activities. Furthermore, many faculty members experience a gap between how they actually spend their time and how they would prefer to spend their time (Winslow 2010). Often the gap arises because faculty members like Carol respond to work requests in contexts where they have to make quick decisions, have not identified their work priorities, and have few tools to help them organize their work. In other words, the context within which decisions are made, or what behavioral economists refer to as the "choice architecture" (Thaler and Sunstein 2008), surrounding faculty time-use may often not facilitate good decision-making.

Enhancing faculty members' ability to manage their time and say yes and no strategically to work requests is important for several reasons. First, the kinds of work faculty members take on are linked to career advancement, productivity, and satisfaction. Faculty members who are dissatisfied with their workloads or feel their workloads are unfair are less likely to be productive and more likely to leave an institution (Bozeman and Gaughan 2011; Daly and Dee 2006; Rosser 2004). Thus, helping faculty members reduce the gap between ideal and actual time-use can help retain them, which is important given the costs institutions must invest to recruit and hire new faculty members (Callister 2006).

Second, social biases shape who gets asked to do certain kinds of faculty work. Cross-sectional surveys, time diary studies, and annual faculty report studies show a pattern of women and underrepresented minority faculty members spending more time on service and teaching (Carrigan et al. 2011; Guarino and Borden 2017; O'Meara et al. 2017a; O'Meara et al. 2017b; Turner et al. 2008; Wood et al. 2015). Yet, teaching, mentoring, and service contributions are often undervalued in departmental and institutional evaluation processes (Babcock et al. 2017; Hanasono et al. 2019). In other words, helping reduce the gap between how faculty members actually spend their time and how they wish to is not just a strategic, individual issue, but also one related to equity within higher education institutions.

With this context and reality in mind, the purpose of this article is to share the implementation and results of a theory-driven, web-based time management workshop called "The Terrapin Time Initiative." (Terrapin is the university mascot of the first three authors.) Theories of behavioral economics and behavioral design (Kahneman 2011; Thaler and Sunstein 2008) informed the workshop. Such theories suggest that changes to the context within which individuals make time-use decisions can promote better decision-making. We applied these concepts to a faculty development workshop offered to faculty members at multiple institutions in order to help participants gain strategies for better aligning their time-use with their work priorities, and we believe that it will be of interest to others seeking to address similar issues related to faculty workload and work life.

Background on Faculty Workload and Time-Use

Many researchers have examined faculty workload and time-use. Such studies have used different methodologies, including time diaries (Ziker 2014), interviews (Hanasono et al. 2019; O'Meara 2016), surveys (Bellas and Toutkoushian 1999; Bozeman and Gaughan 2011; Carrigan et al. 2011; El-Alayli et al. 2018; Guarino and Borden 2017; Link et al. 2008; Winslow 2010), and analysis of faculty work activity reports (Guarino and Borden 2017; O'Meara et al. 2017a).

These and other studies suggest a few important patterns. Overall, workload appears to be increasing (Massey and Zemsky 1994; Milem et al. 2000), and faculty members are generally dissatisfied with their workloads (COACHE 2008; Hurtado et al. 2012; Jacobs and Winslow 2004).

Workload dissatisfaction is associated with a variety of departmental and institutional conditions outside of individual faculty members' control, including pay and resources (Bozeman and Gaughan 2011; Carrigan et al. 2011); work life climate (Archie et al. 2015; Callister 2006; Webber and Rogers 2018); and departmental leadership, policies, and practices (Heyliger 2014; O'Meara et al. 2019; Victorino et al. 2013). How faculty members spend their time can also contribute to workload dissatisfaction. For example, those who spend less time on research and more time on teaching and service often report lower satisfaction (Carrigan et al. 2011; Winslow 2010) because they experience lower research productivity (Bellas and Toutkoushian 1999; Mamiseishvili and Rosser 2011). Although departmental conditions play a role in determining teaching and service roles, such research points to the importance of facilitating individual faculty members' abilities to align their time-use with their priorities, particularly within the context of productivity and advancement.

Time-use and work allocation studies also consistently show that gender and race shape faculty workloads. Faculty members from underrepresented minority groups often report doing more diversity and inclusion-related work (Turner et al. 2008; Wood et al. 2015) and more mentoring and advising (Griffin et al. 2013; Hurtado and Figueroa 2013). Frequently, faculty members from such groups are asked to do these kinds of activities because they are perceived to be the "only" faculty members who are qualified to do so such work (Griffin et al. 2013) although such service is typically not rewarded (Hanasono et al., 2019; Social Sciences Feminist Network Research Interest Group 2017). Similarly, women have been found to spend more time on teaching (O'Meara et al. 2017a, b), service (Guarino and Borden 2017; O'Meara et al. 2017a, b; Link et al. 2008), and other tasks that are often undervalued for promotion and advancement (Babcock et al. 2017). Tenure and promotion processes in research institutions typically value research and teaching more highly than service tasks (Acker and Feuerverger 1996; Bird et al. 2004; Guarino and Borden 2017; Ward 2003), which leads to longer time to promotion (or no promotion) for faculty with heavier service loads (Misra et al. 2011; Stout et al. 2007). Said another way, although all faculty members face challenges in managing their time-use, the social norms and expectations imposed upon women and faculty members from underrepresented minority groups make them more vulnerable to experiencing gaps in how they actually spend their time, how they would like to spend it, and how they need to spend it in order to be advanced within prevalent academic reward processes.

With these challenges in mind, much attention has been paid to strategies faculty members can use to better manage their time. Opinion and advice columns on time-use abound in popular higher education outlets (e.g., Guo 2014; Misra and Lundquist 2016; Rockquemore 2010, 2013; Vaillancourt 2016). Several scholars have written books on how faculty members can manage teaching obligations by tapping into their values (Robertson 2003) or enhance their writing productivity through time-use strategies (Silvia 2018). Likewise, many faculty professional development programs, hosted by institutions and national faculty development organizations, emphasize faculty time-use strategies (e.g., the National Center for Faculty Diversity).

Despite the need for interventions proven to enhance time-use, we are not aware of any studies on theory-based, time-use professional development programs published in peer-reviewed outlets. A few journal articles (e.g., Chase et al. 2013; Stone and Treloar 2015) discuss evidence-based strategies for improving time-use, but do not examine the results of programs that have systematically taught faculty members to use such strategies. Likewise, some studies have considered resources that can be used to improve faculty research capacity (Huenneke et al. 2017) or research productivity (Santo et al. 2009). However, these studies typically focus on the institutional factors associated with productivity (e.g., institutional research centers, scholarly networks) rather than examining ways to increase faculty members' time-use such that they become more productive or

capable in these areas. This study therefore fills an important gap in the literature by describing the implementation of a faculty development workshop based upon a theoretical framework and focused on the pressing issue of faculty workload management and time-use.

Theoretical Framework

In designing The Terrapin Time Initiative, we drew from theories of behavioral economics and behavioral design (Kahneman 2011; Thaler and Sunstein 2008). These theories argue that in order to reduce irrational decision-making and poor outcomes, we need to better understand the context(s) within which decisions are made, or the "choice architecture" (Thaler and Sunstein 2008). For instance, research shows that when individuals make decisions in contexts where they are rushed, unsure of the consequences, or unclear on their priorities, they are more likely to make irrational decisions (Kahneman 2011).

However, small changes, or "nudges," to the choice architecture can improve the quality of decisions (Thaler and Sunstein 2008). Nudges are intended to change individual behavior and promote optimal outcomes while still allowing individuals to make their own choices (Thaler and Sunstein 2008). Nudges include slowing down the process individuals use to make decisions, providing data to give context, or putting in place decision-making structures (e.g., rubrics, templates) to guide choices (Thaler & Sunstein, 2008). Researchers have effectively used nudges in higher education settings. For instance, to increase college student completion and use of financial-aid, Castleman and Page (2016) provided text-message reminders, as a nudge, to students to increase their awareness of financial aid application due dates and other enrollment deadlines. Our purpose in developing and offering The Terrapin Time Initiative was to change the choice architecture surrounding how participants make decisions about their time-use by providing them with nudges that they could employ in their daily work routines.

The Workshop

In an effort to help faculty members manage their time strategically and effectively, we designed The Terrapin Time Initiative, a virtual, four-week, professional development workshop. The goal was that by the end of the workshop participants were exposed to several nudges to help them better manage their time, including the following:

- clarifying their work priorities,
- increasing their knowledge of actual time-use,
- gaining knowledge of common time saboteurs,
- gaining knowledge of time-use strategies and identification of ways to make time-use strategies part of long-term behavior change, and
- enhancing their ability to strategically say yes or no to work requests.

The workshop occurred as part of the Faculty Workload and Rewards Project, a National Science Foundation-funded action-research project intended to promote equity in how faculty work is assigned, taken up, and rewarded (O'Meara et al. 2018; O'Meara et al. 2019). As part of the project, we (the authors, who also led the Faculty Workload and Rewards Project) worked with 50 academic departments and academic units from colleges and universities across the country to diagnose

workload equity issues and put in place policies and practices that could improve faculty workload. Any full-time faculty member in a department or academic unit that participated in the project was eligible to participate in The Terrapin Time Initiative, which was implemented three times (spring 2017, fall 2017, and spring 2019[1]) and delivered entirely online. By agreeing to participate in The Terrapin Time Initiative, we asked faculty members to:

- participate in four, 90-min webinars (one per week),
- record their time-use via an online time diary for one week (via toggl.com),
- record new work requests for four weeks (via Qualtrics survey),
- implement at least one time-use strategy shared during Webinar 2, and
- complete a brief post-project survey (via Qualtrics survey).

The core curriculum was innovative in that it was based on theories of behavior change from behavioral economics. The curriculum emphasized time-use tools that participants could use on a daily basis, but also provided guidance on how to make the strategies, or nudges, part of long-term behavior change and decision-making. Furthermore, in contrast to most traditional faculty development programs delivered in-person, The Terrapin Time Initiative was presented entirely online via webinar during four, 90-min professional development webinars (see Table 1) delivered over the course of four weeks. As compared, for example, to a one-day seminar, the four-week delivery period allowed participants to experiment with time-use strategies, make strategies part of their daily routines, and evaluate which strategies would work for them in practice and which would not. Participants could engage in the webinars live or access and watch the webinar recordings online on their own schedule. We additionally gave participants access to an online, shared folder that contained readings, workshop exercises, and PowerPoints for each session.

In the first two sessions, participants became acclimated to the project goals and tools they would use to track time-use; and they developed strategies for managing time-use. In week one we provided an overview of the project. We asked participants to record work tasks via an online time diary for the first week of the project. We utilized a time dairy because research shows they can be an effective tool for measuring and evaluating time-use (Juster et al. 2003; Robinson et al. 2011). At week two we discussed time saboteurs and specific time-use strategies. Participants identified their own time saboteurs, learned time management strategies, and established one time-use strategy they would use over the following two weeks.

The last two sessions focused on developing participants' ability to make strategic, long-term changes to how they managed their workload. Week three gave them tools and best practices in deciding which work requests to take on or turn down ("saying yes and no strategically"). Content emphasized not just the skills for saying yes or no, but also the academic contexts (advancement, retention, satisfaction, productivity, organizational commitment) in which being strategic about workload are important, particularly for women, faculty members from underrepresented minority groups, and assistant and associate professors seeking to advance their careers. In week four, participants shared their experiences with implementing time-use strategies and learned approaches for making such strategies part of their long-term, daily routines. They learned about common reasons why behavior change often does not "stick" and also learned evidence-based strategies for making changes more permanent. For instance, we discussed how participants could use *temptation bundling* (Milkman et al. 2013), whereby they can tie together an activity that they like to do but is

[1] The workshop was not offered in 2018 because at that point of the larger Faculty Workload and Rewards Project, we were enrolling the next cohort of departments and academic units.

Table 1 The Terrapin Time Initiative curriculum

Webinar title	Topics and exercises
Webinar 1: The Terrapin Time Initiative: You Can Do It!	(a) Participants become familiar with time diary (via Toggl) and tracking new work requests (via Qualtrics). (b) Participants identify 2–3 work priorities on which they would like to focus over the next four weeks.
Webinar 2: Time Saboteurs and Time-use Strategies	(a) Participants reflect on tracking time-use and lessons learned from time diary. (b) Participants identify common ways that their time can become sabotaged. (c) Participants learn 12 evidence-based time-use strategies. (d) Participants choose one time-use strategy to employ over the next week.
Webinar 3: Saying Yes or No Strategically	(a) Participants receive a summary of the work requests they logged over the last three weeks. (b) Participants learn how saying yes and no strategically becomes important within the contexts of advancement, satisfaction, productivity, retention, and organizational commitment. (c) Participants consider strategies for saying no to request requests. (d) Participants identify requests to which they will always say yes (or no).
Webinar 4: Time-use Strategies Put in Place	(a) Participants reflect on successes and failures in managing time-use over course of the webinar. (b) Participants consider strategies for making new time-use strategies "stick" in their daily behavior.

not necessarily productive (e.g., listening to a new album by a favorite band) with an activity that they should do but may avoid (e.g., writing a recommendation letter). In all, each part of The Terrapin Time Initiative curriculum was intended to change the contexts within which faculty would be making time-use decisions, specifically by providing them with more information on their actual time-use, bringing priorities into view, reducing distractions, focusing attention, and making it generally easier for faculty participants to make good decisions.

The Study

Methods and Data Collection

The Terrapin Time Initiative was available to three cohorts of faculty participants. We combined results from the three iterations of the workshop and present the aggregate data from across cohorts in this article. The Institutional Review Board (IRB) at the first three authors' institution approved the study as part of the larger, NSF-funded Faculty Workload and Rewards Project. We derive our results from two data sources: a work request survey and a participant post-survey. We requested participants record any new work requests they received over the course of the four-week project via a Qualtrics survey. We asked them to record the types of work requests they received, who made the work request, their response to the request, their primary reason for saying yes or no to the request, and their stress level in deciding their answer.

Participants also completed a post-survey after the workshop to gauge the effectiveness of the intervention. We derived the majority of our findings from this post-survey. In it, we asked

participants to name the most useful skills or strategies they gained to align their time and priorities, identify the strategies or tools that they would use in the future, and give feedback on how the workshop might be improved.

Participants

In total, 44 faculty members participated in The Terrapin Time Initiative (Table 2). As explained, any faculty member in a department or academic unit that participated in the larger Faculty Workload and Rewards Project was eligible to participate; and faculty members received information about the workshop via email. The vast majority of participants came from doctoral institutions (though institutions represented a variety of research activity per Carnegie classifications). A majority (89%) of the participants were women ($N = 39$), and 11% were men ($N = 5$). About a third (34%) of participants were assistant professors ($N = 15$), while 30% were associate professors ($N = 13$), 18% were full professors ($N = 8$), and 18% were non-tenure track faculty members ($N = 8$). More than half of the participants (64%) were STEM faculty ($N = 28$), while 36% came from the Social Sciences and Humanities and Professional fields ($N = 16$).

Data Analysis

Our results are derived primarily from thematic analysis of participants' qualitative feedback. Data were collected from a post-survey participants completed after the workshop. We conducted thematic analysis in multiple steps using an inductive method (Kvale and Brinkmann 2009; Saldaña 2016), wherein the major themes about how The Terrapin Time Initiative influenced participants' time-use emerged from the data. First, we read through the data and coded passages where participants indicated specific aspects of the workshop that gave them new understanding about how they used their time (e.g., tracking new work requests) or how their time-use changed as a result of the workshop (e.g., blocking off time on their calendars). Next, based on the initial coding, we grouped together passages that indicated the same idea and developed major themes about how it changed participants' specific time-use contexts. We additionally conducted some limited, descriptive quantitative analysis of post-survey results and the new work requests survey.

Table 2 Participant demographics

	N	%
Sex		
Men	5	11%
Women	39	89%
Rank		
Assistant	15	34%
Associate	13	30%
Full	8	18%
Non-Tenure Track	8	18%
Discipline		
STEM	28	64%
Social Sciences/Humanities/Professional (SS/HP)	16	36%
Total	44	100

Results

Faculty Experiences with the Terrapin Time Initiative

Upon completing the workshop, we asked participants to complete a brief post- survey. Of the 44 total participants, 23 participants completed the post-survey (52% of all workshop participants). Almost all (95%) of participants who completed the post-survey reported that The Terrapin Time Initiative helped them learn new skills or strategies to better align time and priorities and that they would use the strategies or tools identified through workshop in the future. Turning to the qualitative results, four major themes emerged related to how the experience changed the contexts in which participants made decisions about their time use.

Awareness of Time-Use and Kinds of Work Requests and Responses Qualitative comments suggested that, by tracking new work requests and using a time diary, participants increased their awareness of how they were spending time and how they were responding to new work requests. One participant said:

> The Toggl feature was a great way of comparing the perceived amount of time having been spent versus the actual time having been spent. I underestimated the amount of time I spent on research administrative tasks and research-related preparation significantly.

Another participant likewise commented, "Tracking my time was really eye-opening. I realized I did a lot of teaching, but I didn't realize how much time was devoted to service and mentoring." Overall, such comments showed that tracking time-use provided participants with an information nudge that allowed them to understand the gap between how they thought (or wished) they spent their time and their actual time-use. Such data provided a critical context for spurring action to implement more effective time-use strategies.

Keeping Priorities Front and Center Participants also reported that the workshop nudged them to consider their work priorities as they encountered new work requests. One participant simply stated that she would "continue saying no to things that don't align with my priorities." Other participants noted that posting their priorities in a prominent place and pausing to gauge how a new work request would fit with their current workload were strategies emphasized by the workshop that they would continue to use in the future. One participant said:

> I stuck a post-it note on my computer with three priorities for March on it. Numerous times, when I sat down at my desk, having that [note] there was really helpful in reminding me not to let those slip. I was surprised at how much of a difference simply having it there meant, even though it's not like these three things were ever completely out of my mind.

Another participant reported that the greatest benefits of The Terrapin Time Initiative were "taking the time to think about what my priorities are, what I want to spend most of my time doing, and then how to say no to tasks/activities that don't pull me in the right direction." Such

comments reflected that, prior to workshop, participants were often making time-use decisions without considering their priorities. The workshop nudged them to move their priorities "front and center" when making time-use decisions.

Awareness of Time Saboteurs and Organizational Strategies Another way The Terrapin Time Initiative helped participants better manage their time-use was by bringing greater awareness to time saboteurs. One participant commented on the ways in which she realized she was ineffectively using her time. She said, "Using Toggl made me realize how I was jumping from task to task and being interrupted very often either by students or colleagues or myself checking email. As they say, knowing is half the battle." Other participants likewise indicated that the workshop made them realize "how much I was inclined to switch between tasks" or other common ways that they tended to mismanage their time. In other words, tools like the work request survey and Toggl provided them with data on how they spent their time, which was often not in alignment with their work goals and priorities.

In addition to discussing activities and actions that commonly sabotaged participants' time, The Terrapin Time Initiative also taught participants concrete strategies for being more organized in their time-use. Almost all participants reported that they had found success in implementing a new organizational strategy over the course of four weeks. Participants mentioned that strategies such as blocking off time on the calendar for important tasks, creating a list of work activities to which they would always respond yes or no, limiting email to certain times of the day, creating templates for responses to routine requests, and pausing before responding to new requests were strategies that helped them better manage their time. Such strategies created a new structure for how they made decisions about their time-use, thereby changing the context surrounding their time management.

Strategically Saying Yes and no Finally, participants reported that the workshop helped them to see why saying "yes" or "no" in a strategic manner would help them achieve their goals. One participant explained that she learned how to say no to requests by participating in the workshop: "Thinking about saying no was the most interesting part of the project. I have said no more often and felt less guilty about it since." She went on to explain:

> The point [is] that many of the requests come from women/peers/students – and people you actually want to help! It all adds up, but it was useful to point out that it's not all departmental/university service requests and that many of the requests are for things I actually want to do.

Said another way, by tracking new work requests, this participant was better able to see *why* she often felt as though she needed to say "yes" to work requests. These findings show that by tracking and analyzing time-use and work requests, the faculty members attained greater context for their work requests. This context allowed them to take more strategic actions (e.g., saying no) when considering how best to respond to work requests.

Work Requests

While the purpose of this study was not to examine the number of work requests, we collected this data as part of a nudge to show participants how they were spending their time (See

Tables 3 and 4). We asked them to record their new work requests over a four-week period, and they recorded a total of 301 new work requests over all three cohorts. On average, participants received seven work new requests over four weeks (Table 4). Furthermore, data revealed predictable gender differences in terms of the number of requests and responses to requests, with women faculty receiving a higher average number of requests ($M = 7.13$) compared to men ($M = 4.60$) (Table 4). Participants also recorded what their response to each request was (Table 3). Overall, men said yes to 48% of new requests, compared to women, who said yes to 72% of new work requests.

Limitations

We acknowledge that this study involved a relatively small number of faculty members ($N = 44$) who participated in a faculty development workshop, with a predominant number of White and women participants. The small number of participants who completed the post-survey limits our study and its results. The fact that participation was voluntary and was offered to departments and academic units that had already shown some interest in workload equity further constrains generalizability. Likewise, we relied upon self-reported time-use data in analyzing work requests; and we do not have longitudinal data on whether participants continued to use the strategies acquired after participating in the workshop. We acknowledge that good habits can take some time to develop, which limits our ability to conclude that the workshop was effective in the long-term. Despite these limitations, the analysis we provide here is not meant to be generalizable. Rather, we attempt a rich description of a particular workshop that we hope is of interest to others who want to support faculty members and understand faculty workload. Finally, we note that although nudges have been proven effective in some areas of higher education (e.g., Castleman and Page 2016), other studies show that they do not always work (Bird et al. 2019). Only a few interventions (e.g., O'Meara et al. 2018) have specifically applied nudges to faculty members. The success of nudges will therefore be highly dependent on the complexity of the context in which they are deployed and the strength of social norms, biases, and preferences, which may make faculty members resistant to nudges (Tagg 2012).

Table 3 Response to the request

	Yes		No		Delayed Response		Total	
	N	%	*N*	%	*N*	%	*N*	%
Sex								
Men	11	48%	9	39%	3	13%	23	100%
Women	201	72%	40	14%	37	13%	278	100%
Rank								
Assistant	53	79%	11	16%	3	4%	67	100%
Associate	62	61%	21	21%	18	18%	101	100%
Full	69	72%	11	11%	16	17%	96	100%
NTT	28	76%	6	16%	3	8%	37	100%
Discipline								
STEM	139	72%	33	17%	20	10%	192	100%
SS/HP	73	67%	16	15%	20	18%	109	100%
Total	212	70%	49	16%	40	13%	301	100%

Table 4 Average workload request by category

	Research	Teaching	Student Advising	Faculty Advising	Department Service	Campus Service	Professional Service	Total
	M	*M*	*M*	*M*	*M*	*M*	*M*	*M*
Sex								
Men	0.40	0.20	1.00	0.20	0.20	0.80	1.80	4.60
Women	0.97	0.46	1.64	0.36	1.51	1.05	1.13	7.13
Rank								
Assistant	0.93	0.60	1.27	0.00	0.53	0.73	0.40	4.47
Associate	1.08	0.31	1.85	0.15	1.00	0.92	2.46	7.77
Full	1.25	0.13	2.13	0.25	4.25	2.50	1.50	12.00
Non-Tenure Track	0.25	0.63	1.13	0.50	1.25	0.38	0.50	4.63
Discipline								
STEM	0.89	0.54	1.57	0.11	1.57	1.39	0.79	6.86
SS/HP	0.94	0.25	1.56	0.31	1.31	0.44	2.00	6.81
Total	0.91	0.43	1.57	0.18	1.48	1.05	1.23	6.84

Discussion and Implications

Even the most highly educated individuals tend to overestimate their ability to manage their time and underestimate the amount of time it will take to complete tasks (Kahneman 2011). Certain conditions exacerbate these miscalculations. When individuals lack clarity around their priorities, do not understand the consequences of pursuing one option versus the other, or feel rushed or stressed when making choices, they may be swept into an unclear or foggy choice environment that can produce suboptimal decision-making (Kahneman 2011). For instance, studies show that "fog" around promotion and tenure requirements can often lead faculty members to be unsure of the actions they should take to advance their careers (Beddoes et al. 2014). In other words, the choice architecture (Thaler and Sunstein 2008), or context within which decisions are made, surrounding faculty decision-making in areas such as time management is not engineered to produce optimal results.

Our results suggest that The Terrapin Time Initiative changed the choice architecture around participant time-use, thereby reducing some of the fog that typically clouds decisions around how faculty members manage their time. Prior to the workshop, faculty participants had little awareness of how they were actually spending their time, a vague sense of their priorities as related to their short and long-term career goals, and few tools to organize their decision-making. Through the workshop, participants completed exercises and gained strategies that brought clarity and data to bear on these decisions. For instance, by using a time diary and tracking new workload requests, The Terrapin Time Initiative equipped them with data that allowed them to understand if their time-use was aligned to their priorities and to diagnose the kinds of work requests that frequently took them off course. This data therefore served as an information nudge, designed to give participants clarity around how their past time-use decisions may have hindered their ability to complete their work priorities.

Likewise, by putting in place concrete strategies for managing time and identifying the most common ways time could become sabotaged, participants added structure to their time management routine. Participants also gained strategies for saying no, such as delaying a response or getting feedback from mentors on the pros and cons of saying yes, which slowed down their decision-making process. Last, by participating in the project and reporting back

their successes and failures to project leaders, they were held accountable to changing their time management approach. Said another way, activities within The Terrapin Time Initiative "nudged" participants into a new choice environment, where priorities and data, rather than instinctual reactions, guided decisions about how to spend their time.

Returning to our opening vignette, there are several implications of this workshop for departments, units, and institutions considering how to contribute to professional development for faculty members like Carol. First, our results reiterate past work (Juster et al. 2003; Robinson et al. 2011) that shows tracking time-use through time diaries and work request surveys can be an effective mechanism for faculty members to become more aware of the gaps between how they think they spend their time and the kinds of work that they actually do. However, our results also suggest that time tracking can be particularly effective when combined with a discussion of the concrete strategies faculty members can use to manage their time more effectively and say yes and no strategically to new work requests. The delivery of the workshop over a four-week time period allowed participants to experiment with time-use strategies and identify the ones that made the most sense for managing their personal workloads and based on their own management preferences. Second, although all participants in The Terrapin Time Initiative appeared to benefit from learning about time-use strategies, the self-selection of women faculty members into the workshop and the rates at which women were saying yes to new requests suggests such topics may be particularly useful for programs that target women faculty members' leadership and professional development (Misra and Lundquist 2016; Misra et al. 2011; O'Meara et al. 2017a).

Conclusion

In this article we reported the results from The Terrapin Time Initiative, a web-based faculty development workshop that was guided by theories of behavioral economics and behavioral design (Kahneman 2011; Thaler and Sunstein 2008). Our results showed that, through the workshop, participants were "nudged" into making better, more optimal decisions about their time-use. Our results also suggest that such theory-based time management programs can help faculty members move from feeling overwhelmed and inundated by work requests to strategically delineating which tasks are in alignment with their career priorities and which are not. Such decisions can improve productivity and also advancement and professional satisfaction.

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