

Research Article

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Different Shades of Gray: A Priming Experimental Study on How Institutional Logics Influence Organizational Actor Judgment

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Abstract: *This article examines whether and how judgments made by individual organizational actors may be influenced by institutional logics—the historical patterns of cultural symbols and material practices, including assumptions, values, and beliefs, by which individuals and organizations provide meaning to their daily activity, organize time and space, and reproduce their lives and experiences. Using an experimental design, the authors prime three institutional logics in three independent groups of managers (n = 98) and assess the influence of the primes on individual-level judgment preferences. The results show that such priming affects participants’ judgments in an ambiguous judgmental task, with each prime influencing judgment in a discernibly unique pattern. Consequently, a more nuanced account of larger patterns of behavior can be constructed. The findings highlight the potential of text as priming stimuli within institutionally complex work settings such as those in the public sector, an important yet underexamined issue.*

Evidence for Practice

- Managers should recognize that their perceptions and judgments may be influenced by institutional logics, which, in turn, may be primed by incidental features in their decision environments.
- The work environment may perpetuate certain approaches in the public sector based on the type of stimuli that decision makers are (continually) exposed to. These effects, though subtle and nonconscious, may explain the pervasiveness of certain logics.
- Text, and how it is used in organizational communication, may by design or otherwise influence organizational actor perception or receptivity to the object of the communication.

Many authors (e.g., Coule and Patmore 2013; Currie and Spyridonidis 2016) suggest that difficulties and unanticipated outcomes in organizational action could be due to differences in the cognitive structures that are used by individuals and groups within the organization. Specifically, these cognitive structures, as “built-up repertoires of assumptions, tacit knowledge and expectations” are used by individuals to “impose structure upon, and impart meaning to, otherwise ambiguous social and situational information to facilitate understanding” (Gioia 1986, 56). They influence both collective action as well as individual projects (Swan and Clark 2008).

Institutional logics, as one such cognitive structure, provide actors with the context from which they think, feel, view or otherwise experience the world (Ford and Ford 1994; Thornton and Ocasio 1999, 2008). They consequently influence actors’ interpretations of the ambiguous world and what reactional options are to be considered appropriate (Friedland and Alford 1991; Suddaby and Greenwood 2005). Thus, they affect the judgments made by

individual and organizational actors (Besharov and Smith 2014; Thornton, Ocasio, and Lounsbury 2012) and the perception of such judgments’ appropriateness and legitimacy within a given setting (Thornton and Ocasio 2008).

Additionally, Besharov and Smith (2014) emphasize the multiplicity of these institutional logics that may arise from the state, the professions, the corporations, the market, the religions, and the family (see also Thornton and Ocasio 2008). These logics and their various instantiations have been analyzed at various levels, from the societal to the field and the organization, where individuals and organizations encounter their multiplicity (Greenwood et al. 2011; Smets and Jarzabkowski 2013; Thornton, Ocasio, and Lounsbury 2012). However, not much is known about how individuals experience these multiple institutional logics, as the major focus of the literature has been at the level of the field and the organization rather than the individual (Bévort and Suddaby 2016; Greenwood et al. 2011; Marti and Mair 2009; Smets and Jarzabkowski 2013). Consequently, this literature

does not fully explain whether and how institutional logics influence individual interpretations and whether there are differences between individual interpretations and behavior and cumulative organizational action (Besharov and Smith 2014).

Exceptions that present conceptual and empirical efforts to bring the individual back into institutional theory include the sense-making literature (Hallett and Ventresca 2006) and the literature on institutional entrepreneurship (Greenwood and Suddaby 2006). Much of this literature, however, implicitly assumes a significant degree of autonomy on the part of organizational actors (Martin et al. 2017), with little or no appreciation of the possibility of heteronomy despite compelling research in cognitive and social psychology that suggests nonconscious processes operating alongside conscious thinking and reasoning (Kahneman 2012; Loersch and Payne 2011).

In this article, we examine whether institutional logics can influence individual organizational actors. Our argument is that the perception, interpretation, and judgment of individuals could be nuanced by institutional logics as a decision frame, in such a way that when presented with an ambiguous scenario, individuals will make judgments congruent with their referent institutional logic. We further argue that these institutional logics can be nonconsciously primed and made accessible as cognitive frames of reference by innocuous cues such as text. Thus, our first hypothesis tests whether institutional logics can be primed with text as cues; the second tests whether this priming biases individual judgment when confronted by a judgment situation.

To empirically examine these hypotheses, we develop an experimental design based on priming and memory-based information processing. Following Newell and Shanks (2014, 91), we define priming as the influence on “later behavior (including attitudes, perspectives, choices, impressions, judgment or any other overt and observable act) of prior stimuli without deliberate intent to be influenced by them.” Our sample consists of 98 managers from the public and private sector, enrolled in two executive education programs—a master of business administration in health care management program (MBA) and a master of public policy and management program (MPPM). Three groups from the sample are primed on different institutional logics, and a fourth is primed for none as a control group. After a distraction exercise, the four groups are presented with a judgment exercise to test whether the prior priming biases their individual judgments.

In the sections that follow, we provide the conceptual background. We then present the methodology and results. Next, we discuss the findings and limitations. We then conclude the article by introducing the implications for research and practice.

Institutional Logics as Frames of Reference, Priming, and Information Processing

Whereas institutional logics were originally conceptualized at the societal level (Friedland and Alford 1991), their iterations and influence have been identified at the industry and organizational levels (Thornton, Ocasio, and Lounsbury 2012) and at the departmental and unit levels within organizations (Besharov and Smith 2014). Organizational actors are exposed to these multiple

logics through the processes of learning and socialization (Thornton and Ocasio 2008). As each logic provides “a set of organizing principles for a realm of social life” (Besharov and Smith 2014, 366)—so-called cognitive or decision frames (Gioia 1986; Weick 1979a, 1979b)—organizational actors have alternative ways of making sense of what they experience (Weick 1979a; Ford and Ford 1994; Martin et al. 2017).

Based on the premise that individuals act based on their interpretations of the world, Weick conceptualizes frames as implicit guidelines that shape interpretations, endowing them and related events and phenomena with meaning (Weick 1979a, 1979b). Here, Weick uses the term “implicit” in the literal sense to refer to guidelines that shape interpretations, without necessarily being revealed or expressed. Gioia (1986, 56) expands this definition, conceptualizing an individual’s frame of reference as “a built-up repertoire of tacit knowledge that is used to impose structure upon, and impart meaning to, otherwise ambiguous social and situational information to facilitate understanding.” Similarly, Thornton and Ocasio (2008) posit institutional logics as frames of reference that provide organizational actors with rules and conventions for deciding which solutions get considered and which solutions get linked to which problems (see also Ford and Ford 1994; Reay and Hinings 2009; Thornton, Ocasio, and Lounsbury 2012).

However, in order to be used as a frame of reference, an institutional logic must be accessible in the individual’s cognition (Scheufele 2000). Accessibility is conceptualized here as the ease with which relevant cognitive material is recalled or made available and retrievable from memory (Scheufele 2000; Tversky and Kahneman 1973). Priming, the use of external stimuli, is one mechanism through which cognitive frames of reference can be made accessible (Bargh 2006; Vohs, Mead, and Goode 2006). Indeed, research in psychology has demonstrated that concepts such as goals and motives (Bargh et al. 2001), decisions and judgments (Bargh, Chen, and Burrows 1996), and behaviors (Vohs, Mead, and Goode 2006) can be primed by external stimuli.

The organizational behavior and management literature (Salancik and Pfeffer 1978; Thomas and Griffin 1983) acknowledges the social environment as a provider of cues that “focuses an individual’s attention on certain information, making that information more salient, and providing expectations concerning individual behavior” (Salancik and Pfeffer 1978, 227). Thus, priming can be viewed as a precursor event that leads to the activation of a specific cognitive or decision frame, giving it preeminence over other frames. Consequently, when a new concept is presented, it is interpreted from within the activated frame (Scheufele 2000).

There have been few, if any, attempts to apply the theoretical and practical concepts of priming and information processing in the understanding of how institutional logics may influence the perception and judgment of organizational actors. Building on prior literature, our foundational hypothesis is that the priming of specific logics makes the knowledge, expectations, and assumptions of the primed logic more accessible for the organizational actor to retrieve from memory, in comparison with those that have not been primed. This now accessible logic will subsequently be used by the organizational actor to answer questions afforded by

the circumstance confronting them. This notion of affordances draws from Gibson (1977), and we conceptualize it to mean the possibilities for action provided by the environment (see also Loersch and Payne 2011).

Specifically, we hypothesize that specific texts, as environmental cues, can nonconsciously prime institutional logics. Following Loersch and Payne (2011), we consider nonconscious activation in the context of priming as situations in which the individual is unaware that he or she is being primed and/or is unaware of the prime's effect on his or her behavior (see Bargh, Chen, and Burrows 1996). We further hypothesize that these institutional logics, once primed, will influence the organizational actor's subsequent perception and judgment when presented with an ambiguous judgment scenario.

Research Design

The main research question that this article addresses is: do institutional logics nonconsciously influence organizational actors? Accordingly, the research objective is twofold: to nonconsciously prime select institutional logics and to assess whether institutional logics affect the perception, interpretation, and judgment of organizational actors. Our hypotheses are as follows: (1) specific texts will nonconsciously prime institutional logics, and (2) these institutional logics, once primed, will influence the organizational actor's subsequent perception and judgment. Testing these linked hypotheses requires that we differentially prime the institutional logics of interest and then check for their influence on organizational actor perception and judgment. Thus, in operationalizing the study, and following Goodrick and Reay (2011), we assume that mental representations in the form of institutional logics exist and that it is possible to use keyword descriptors of the different institutional logic constructs as primes.

To ensure construct validity, we use vocabularies and abstractions previously identified in the literature (e.g., Hyndman et al. 2014; Thornton et al. 2012). This approach to identifying key vocabularies associated with unique institutional logics and using them as descriptors for comparison has been used by, for example, Goodrick and Reay (2011). While we acknowledge the imperfect nature of these descriptors, we align ourselves with other authors (e.g., Dunn and Jones 2010; Meyer et al. 2014) who consider institutional logics as possessing signature elements or descriptors that help tie the observable with their abstract conceptualizations. These descriptors therefore present us with a stable starting point for systematic empirical comparison.

The setting of this study is the health sector. We focus on three logics previously identified in the literature (e.g., Smets et al. 2015; Thornton, Ocasio, and Lounsbury 2012): the public administration logic, the market-managerial logic, and the professional logic. There are several reasons for this choice. First, these logics are among the most diffuse in the sector, and it is reasonable to expect that the population of interest and the sample drawn from it have been exposed to them. Second, these three institutional logics are among the most researched. Thus, they and their instantiations are reasonably well defined in the literature. Third, whereas the study setting of interest straddles many other sectors and has been the subject of multiple reforms, these three institutional logics

have maintained their salience, distinctiveness, and occasional antagonism (Reay and Hinings 2005; Scott et al. 2000). In this study, the most stylized concepts, definitions, and descriptors of these three institutional logics are used.

In the logic of public administration, government is perceived as the legitimate provider of services (Pollitt and Bouckaert 2011). Elected officials make decisions that public officials are then expected to implement (Denhardt and Denhardt 2000). Emphasis is placed on regulations, legislation, and administrative procedures (Hayes, Introna, and Petrakaki 2014) to ensure that principles such as equality, equity, and transparency to the public (Meyer et al. 2014) through accountability, hierarchy, jurisdictional demarcation, stability, and bureaucracy (Hayes, Introna, and Petrakaki 2014). The focus on rules and procedure, however, may detract from discretionary action that could yield better results (Hyndman et al. 2014), efficiency, and effectiveness (Hayes, Introna, and Petrakaki 2014; Van de Walle and Hammerschmid 2011).

The market-managerial logic (Thornton, Ocasio, and Lounsbury 2012) comprises a mixture of ideas drawn from corporate management and from institutional economics or public choice (Aucoin 1990). These focus on the centrality of citizens, greater discretion for managers (Olsen 2009), accountability for performance, and efficiency in resource use (Van de Walle and Hammerschmid 2011) and include the introduction of decentralized service delivery models, competition, and quasi-markets (Hayes, Introna, and Petrakaki 2014). Key themes are thus financial control, value for money, efficiency, and performance (Barzelay 2001; Ferlie 1996; Hood 1991).

The third institutional logic of interest is that of the professions. Professions are key carriers of institutional logics (Thornton, Jones, and Kury 2005). Their legitimacy is strongly tied to the professional's specific knowledge and expertise, usually acquired over a long period of time (Thornton, Ocasio, and Lounsbury 2012). Members of these professions usually form bodies that admit members, and structure and regulate professional practice (Noordegraaf 2007). Service quality is thus strongly reliant on peer opinion (Reay and Hinings 2005). A high premium is placed on the autonomy of the professional (Reay and Hinings 2005), and the scope of practice often reflects the desires of the professional association rather than that of their employer (Goodrick and Reay 2011; Noordegraaf 2007).

Whereas a more detailed listing of the elements that characterize these three institutional logics is given in appendix A, their discussion here and in the appendix is more illustrative than exhaustive. More substantive treatments can be found in, for example, Thornton, Ocasio, and Lounsbury (2012) and Hyndman et al. (2014).

Methodology

We designed this study as a between-subjects randomized post-test-only experimental study in which different groups from the same population are differentially primed and compared. Following similar studies in psychology (e.g., Vohs, Mead, and Goode 2006), the priming tool was formulated as a 30-item scrambled sentence test that was presented to the participants disguised as a

test of English language ability. Each item on the “test” contained a scrambled set of five words from which the participants were expected to construct a grammatically correct four-word sentence as quickly as possible. For example, *was, not, there, he, in* could be rewritten as *he was not in* or *he was not there*. Four versions of this test were developed (see sample in appendix B), with three intended to prime a unique institutional logic and the fourth intended to prime none (control group).

For the test conditions, half the items contained an adjective or verb semantically related to the institutional logic in question. For example, for the public administration logic, the critical priming stimuli included *government, authority, compliance, administration* and *regulation*. The rest of the items in the test conditions, as well as all the items in the control conditions, were ordinary-use neutral words not intended to prime any condition but rather to disguise the test objectives. A list of the priming stimuli incorporated in the scrambled sentence tests for the test conditions is provided in appendix A.

These priming tools were tested and refined on a small pool of individuals with profiles similar to the intended study participants. First, the priming tools were pre-tested on a small pool of PhD students ($n=7$) to determine clarity, comprehension, and ease of doing the priming tasks and to get a rough idea of the level of time effort. Second, the material was pre-tested on a representative pool of 26 managers who at the time of pre-test were undertaking other executive education courses related to health leadership and management at the host university. Based on the pre-tests, minor changes were made to the tools. For example, regarding the scrambled sentence test sheets, the time allocated was increased, and compound words (e.g., *service delivery*) and repetitive phrases were replaced. Regarding the scenario sheet, we changed from reporting each recommendation against a five-point Likert scale to a 1–10 ranking of the entire pool of recommendations.

The study participants comprised 105 public and private sector managers who were concurrently attending an executive education master’s degree program at a private university in Nairobi, Kenya. Once enrolled into the study, the participants gave signed consent and completed a form designed to capture age, gender, and work experience. Their participation in the study was voluntary and no compensation was offered to the participants. In this sense, participation relied solely on the goodwill of the participants.

We narrowed the final sample to 98 individuals, dropping seven for not completing the experimental process, not fully completing the treatment tool, or not ranking the recommendations in the prescribed manner. Of these 98 practitioners, 56 were enrolled in the MBA in health care management, while 42 were in the MPPM program. Regarding gender, 65 (66.3 percent) were women and 32 (32.7 percent) were men. The participants age range was 23–53 (mean = 33.82, SD = 8.87), while work experience in the private sector was a mean of 4.57 years (SD = 4.57) and 3.91 years (SD = 4.93) in the public sector.

The participants were then randomly assigned to one of the three treatment conditions— public administration logic (PUB prime, $n=25$), market-managerial logic (MKT prime, $n=24$), or

professional logic (PROF prime, $n=24$)—or to a control group (CONTROL, $n=25$). In terms of distribution across the treatment and control groups, parametric and nonparametric mean tests revealed no differences between groups based on the master’s degree program attended ($\chi^2_3 = 0.20, p = .98$), based on age ($F = 1.35, p = .26$), years in private sector ($F = 1.70, p = .17$), or years in the public sector ($F = 0.44, p = .72$). However, we noted an imbalance in the gender distribution between the groups ($\chi^2_3 = 13.38, p = .004$). This is not altogether unexpected given the two-thirds female majority. As the samples are balanced in all other aspects, we do not consider this gender imbalance inimical to the internal validity of the experiment and the testing of the hypothesis. We nonetheless assess its effect on the study findings.

Following random assignment, the first task—a scrambled sentence test masked as a test of English proficiency—was administered. Participants independently completed their own test, and neither the experimenter nor the participant knew in advance which group each participant would be assigned to. Moreover, the room environment was controlled by making it as plain as possible to ensure that no extraneous environmental variables would attract the participants’ attention. This eliminated possible confounding by other text or visual variables in the environment while leaving the priming task as the only manipulated and distinguishing variable among the participants.

Upon completion of the scrambled sentence task, participants completed a Positive and Negative Affect Schedule (PANAS) questionnaire that was originally designed to categorize feelings and emotions (Watson, Clark, and Tellegen 1988). Following Vohs et al. (2006), we applied this scale as a distractor to separate and make it difficult to link the first phase of the experiment (the priming treatment) to the subsequent phase in which the effect of the treatment was to be tested. Additionally, given its original design, the PANAS questionnaire had a supplementary role in checking for potential mood changes after treatment. In this regard, there were no unforeseen emotional consequences of the priming treatment.

Next, the participants were presented with an ambiguous scenario that read as follows:

X has just come from a national health stakeholders meeting. She begins to think of recommendations that she could give to the stakeholders group to improve the current health situation in the country. Which recommendation do you think would be most appropriate?

We chose to present an ambiguous scenario for two reasons. First, much of the information transmitted between individuals in social contexts is ambiguous (Kahneman 2012). Second, ambiguity provides an opportunity for individuals to freely interpret the scenario based on their individual (in this case, primed) cognitive processes, thus allowing differences, if any, to emerge (Kahneman 2012; Zemleni et al. 2007).

Together with this scenario, the participants were presented with a list of 10 recommendations and asked to rank them in order—from their most to least preferred. This was the core of the experiment, aimed at checking the influence, if any, of the priming intervention

Table 1 Recommendation Categories and Codes

Recommendation	Consolidated Indicative Logic	Code
Recommend to enhance compliance to the rules and regulations	Recommendations aligned with public administration logic	PUBLIC LOGIC
Recommend to clarify hierarchy and flow of information upward from the frontline health worker to the health facility managers all the way up		
Recommend increasing government oversight		
Recommend greater focus on results	Recommendations aligned with market-managerial logic	MARKET LOGIC
Recommend enhancing competition in service provision		
Recommend focus on public as client/customer		
Recommend improving management	Recommendations aligned with professional logic	PROFESSIONAL LOGIC
Recommend greater involvement of medical professionals in management		
Recommend greater autonomy for doctors and nurses		
Recommend greater participation of other stakeholders in health service provision		

on the choices made by the study participants. Moreover, the ranking was presented as a forced rank, meaning that each recommendation had to be assigned a unique value ranging from 1 to 10. The recommendations themselves were structured in such a way that they were concordant with either a public administration logic, a market-managerial logic, or a professional logic (see table 1).

Finally, the participants were asked to complete an evaluation questionnaire and debriefed to check on any overlooked factors in the environment or any suspicions about the intent of the experiment that could have influenced their recommendation choices. More specifically, we sought to determine whether the participants attached any theme to the phrases in the descrambling task or whether they connected the descrambling task to the subsequent tasks that they were given. The post-experiment evaluation questionnaires revealed that the few who reported that the descrambling task made them “think in a particular way” gave vague reports that were tenuously related to the experimental hypothesis. Thus, we report results across all 98 participants.

Results

Prior to commencing the analysis, the three recommendations that were aligned with a public logic were grouped together and the ranks assigned by the participants consolidated to create a dummy variable PUB. Similarly, four recommendations that were aligned with a market-managerial logic, and three that were aligned with a professional logic, were grouped together and the ranks assigned by the participants consolidated to create dummy variables MKT and PROF, respectively (see table 1).

We then applied the nonparametric Kruskal-Wallis one-way ANOVA to test for experimental effects. The appropriateness of the Kruskal-Wallis arose from the fact that (1) the dependent variable was ordinal, (2) the independent variable comprised three categorical and independent groups, and (3) the observations were independent with no relationships between observations in each

Table 2 Post Hoc ANOVA Comparisons between Treatment Groups

	Group 1 (PUB Prime) vs. Group 2 (MKT Prime)		Group 1 (PUB Prime) vs. Group 3 (PROF Prime)		Group 2 (MKT Prime) vs. Group 3 (PROF Prime)	
	PUB	MKT	PUB	PROF	MKT	PROF
χ^2_i	8.973	6.722	6.008	4.115	.754	1.752
Asymp. Sig.	.003***	.010***	.014**	.042**	.385 n.s.	.186 n.s.
ES ^{a,b}	.195	.146	.13	.089	.016	.037

Note: Grouping variable: priming code.

* $p < .10$; ** $p < .05$; *** $p < .01$; n.s. = not significant.

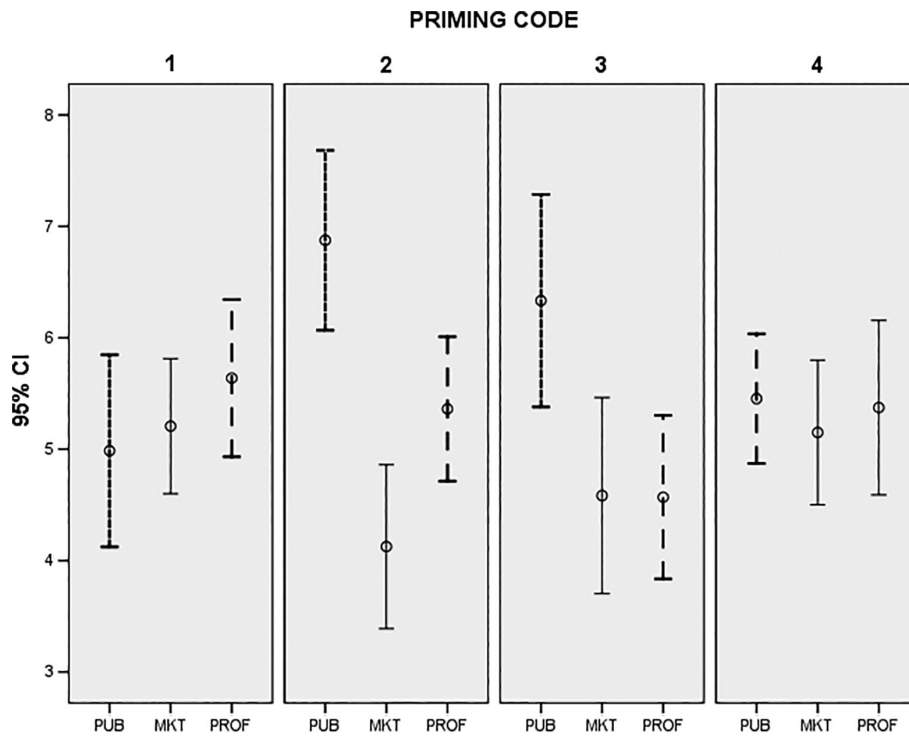
^aEta-squared as a measure of effect size in ANOVA.

^bES 0.02 small, 0.13 medium, 0.26 large (Cohen, 1973, 1988).

group and between groups. In this first-level analysis, the results show a statistically significant difference between the experimental conditions regarding the choice of recommendations aligned with a public logic ($\chi^2_2 = 10.59, p = .005$) and a market-managerial logic ($\chi^2_2 = 6.76, p = .034$). For the professional logic, the results were not statistically significant ($\chi^2_2 = 4.32, p = .116$).

As the Kruskal-Wallis is an omnibus test for differences between k -independent samples, multiple-comparison post hoc analysis between treatment groups was applied. Examination of the results displayed in table 2 reveals statistically significant differences at $p < .05$ between group 1 (primed for public logic) and group 2 (primed for market-managerial logic) and between group 1 and group 3 (primed for professional logic) in how they ranked recommendations aligned with the public and market-managerial and the public and professional logics, respectively. Conversely, the differences between group 2 (primed market-managerial logic) and group 3 (primed professional logic) in how they ranked recommendations aligned with the market-managerial and professional logics are not statistically significant. The effect sizes, however, reveal small to medium effects (Cohen 1973, 1988). This points to an important effect considering Kühberger's (1998) meta-analytic findings that suggest such effects to be small to moderate in size.

To further assess the preferences of the variously primed groups, we analyzed the pattern of recommendations between the groups. Analysis of the patterns shown in figure 1 reveals that participants in the public prime condition most preferred recommendations are congruent with their primed logic (recommendations relating to increased government oversight and adherence to rules and regulations). Their least preferred recommendations are aligned with the market-managerial logic. On the other hand, participants in the market-managerial prime condition give preference to recommendations congruent with a market-managerial logic. They assign lower ranks to recommendations that are better aligned with the public administration (ranked third) and professional logics (ranked second). The analysis shows that participants in the professional prime condition most preferred recommendations are congruent with professional logic. They least preferred recommendations are the ones aligned with the public administration logic. Finally, the control group has no differences in preferences, with an almost even ranking for the three recommendation clusters linked to the public, market-managerial, and professional logics.



* 1=group primed for public logic; 2=group primed for market-managerial logic; 3=group primed for professional logic; 4=control group.

Figure 1 Confidence Intervals and Pattern of Recommendations

Figure 1 captures the means and confidence intervals by treatment group as well as the control group. The figure shows clustering about a mean of 5 for the control group, while the treatment groups generally had means 0.5 to 2 units above or below the control. The overlap of confidence intervals, however, implies that while the mean ranks between the treatment groups and the control are numerically different, this difference is not statistically significant for the professional prime group ($\chi^2_1 = 2.117, p = .146$) and the public prime group ($\chi^2_1 = 0.526, p = .468$). It is, however, significant at $p < .05$ for the market prime group ($\chi^2_1 = 6.128, p = .013$).

Finally, we tested the results to rule out the possibility of influences or confounds (see table 3). The results show no differences between gender or organizational experience in terms of the pattern of recommendations. These results thus lend credence to the claim that the observed differences are likely due to the experimental treatment—the priming of the different institutional logics—and not to differences in gender or organizational experience.

Discussion

Our results provide empirical evidence for, and partially explain how institutional logics, as frames of reference, condition how individuals make sense of their environment and react to it (Barr, Stimpert, and Huff 1992; Thornton, Ocasio, and Lounsbury 2012). For each of these experimental conditions, we find empirical evidence of judgment regarding the ambiguous scenario presented to be congruent with the primed logic. Moreover, we observe important differences between the ranking done by the differentially primed participants and that done by participants in the control condition. These findings support the hypothesis that institutional logics, once primed, will influence the organizational actor's

Table 3 ANOVA for Gender and Public/Private Sector Experience

Variable	Test statistics	PUB	MKT	PROF
Gender ^a	χ^2_1	3.707	.005	2.007
	Asymp. Sig.	.054(n.s.)	.942(n.s.)	.157(n.s.)
Organization experience ^b	χ^2_2	3.384	1.968	3.109
	Asymp. Sig.	.184(n.s.)	.374(n.s.)	.211(n.s.)

^aGender (female = 1, male = 0).

^bOrganization experience (public only = 1, private only = 2, both public and private = 3).

n.s. = not significant.

subsequent judgment when confronted with a situation requiring judgment. Second, because the priming process was not apparent to the individual, and the link between the priming content and institutional logics subtly hidden, the study suggests nonconscious activation of these institutional logics by the text prime. This finding supports the hypothesis that specific texts as environmental cues can nonconsciously prime institutional logics.

To illustrate, if an individual is primed for public administration, when faced with an ambiguous set of circumstances to which he or she must make a recommendation, the individual's perception and interpretation of the situation, and consequent judgment on the questions afforded by it, will be inadvertently colored by the primed public administration logic. This nonconscious influence of institutional logics on default perception and judgment may thus partially explain the routine reenactment and, accordingly, the constraining effect, persistence, and stability (at least sufficient in time to answer with a specific recommendation after distraction) of institutional logics. The fact that this was a controlled experiment with random assignment supports this causal claim.

Third, in this experiment, we use a simple form of priming—text, which is one of the numerous cues in everyday organizational environments. We obtain significant measurable impacts on perception and judgment. Our findings therefore support Barr, Stimpert, and Huff's (1992) proposition that environmental stimuli can prompt changes in cognitive models. These results thus bring to the fore the role of text, material objects, artifacts, and their representations as potential priming stimuli for institutional logics—an important yet underexamined issue (Lawrence, Leca, and Zilber 2013).

Regarding the issue that for the professional logic, the results were not statistically significant ($\chi^2 = 4.315, p = .116$), there are several possibilities. First, it is possible that the hypothesis, at least insofar as it relates to the professional logic, is unsupported (possibility 1) or that the tool applied in priming the professional logic was weak and unable to raise the desired effect (possibility 2). It is also possible that as the professional logic straddles both the public and the market-managerial logic, activating a professional logic could co-activate either of the other two logics (possibility 3). Furthermore, it is possible that ongoing training within the MBA and MPPM academic programs could have influenced the participants' conceptualization of what being a professional is or means (possibility 4). And it is possible that the recommendations following the scenario may have had a negating effect by making the participants feel threatened by the involvement of other stakeholders with other professional identities (possibility 5).

If possibility 1 or 5 holds, then we would expect no difference between the responses given by those primed for the professional logic and the controls, and an analysis of the effect sizes should return a small to zero effect. If possibilities 2–4 hold, then we expect to observe small to moderate differences in rankings, as well as in the pattern of responses. So, we turn to an assessment of the attendant effect sizes, a between-treatments analysis, and an analysis of the pattern of responses. Analysis of the effect size (see table 2) reveals small to medium effects (between PROF and PUB and between PROF and MKT); an analysis of the patterns show differences between all treatment and control conditions; and an analysis of the confidence intervals show differences as well as areas of overlap. Thus, there is greater probability for possibilities 2 (a weak tool not eliciting a strong-enough effect) or 3 and 4 (a complex professional logic that accommodates elements of both a public as well as a market-managerial elements).

Regarding possibility 4, we analyzed the content of the programs where the managers of the sample are enrolled in. Just to recall, the two programs (MBA and MPPM) are based in a business school, and they are geared toward increasing the capabilities of managers in public policy and health care management. In those programs, as with similar ones globally, the focus is how to help practitioners manage better in complex organizations, mainly departing from (or confronting with) progressive public administration, and focusing on public management skills. And possibility 4's interpretation in relation to the results is that probably, the contents of the programs may have influenced the participant's current conception of a (health) professional logic.

All these possibilities can be addressed in future studies with larger samples.

Implications

These findings have important theoretical implications. If weak, nonconscious cues such as the text we used in this experiment can strongly influence perception and judgment, then it is plausible that the initial stance taken by individuals on issues that confront them is an indirect result of subtle, and possibly not so subtle, cues from the environment. Our findings thus draw attention to the importance of text, vocabularies, and language in triggering institutional logics. Indeed, they support Weick's (1995) claim that words "approximate the territory" in the sense that they may be representative or evocative of a bigger concept; and further that such words may be used by individual actors to "convert ongoing cues into meaning" (see also Powell and Colyvas 2008).

Do these findings mean that organizational actors are "cultural dopes" (Garfinkel 1967) routinely reenacting institutionalized scripts? We think not. Rather, we align with Seo and Creed (2002), Weber and Morris (2010), Kahneman (2012), and others, who point to the possibility of both active and passive influences on organizational actor judgment and consequent action. In this conception, actors "may participate in an automatic, unreflective way, and in other periods they may become very purposeful in trying to reach beyond the limits of their present situation in accordance with alternative conceptions of its purposes, structures, technologies, and other features" (Seo and Creed 2002, quoting Benson 1977, 7).

This conceptualization of a nonconscious cognitive process operating alongside a conscious cognitive one has been observed in social and cognitive psychology (e.g., Bargh 2006; Kahneman 2012), but it has yet to be fully and more empirically examined in the management literature. We however consider this two-pronged conscious and nonconscious influence of institutional logics an apt model for explaining the theoretical paradox on how actors' perceptions and judgment are conditioned by the very institutions that they consciously engage with and, at times, seek to change (see Seo and Creed 2002).

These findings also have important practical implications for public managers. First, public managers should recognize the fact that their perceptions and judgments, as well as those of their supervisees, may be clouded by their cognitive frames-in-use, which, in turn, are primed by incidental features in their decision environments. Put differently, these findings suggest that complicated work environments may perpetuate certain approaches in the public sector based upon the type of stimuli that decision makers are exposed to. These effects, though subtle and nonconscious, may explain the pervasiveness of some logic or frameworks. Second, the findings foreground the importance of text in organizational communication. Public managers need to be aware that text, and how it is used in organizational communication, may by design or otherwise influence organizational actor perception or receptivity to the object of the communication.

Limitations of the Study

Despite the interesting results presented here, we aver that they be viewed with caution given the study's limitations. The findings are based on a moderately sized sample and therefore are subject to all the limitations of such sample sizes, even though consistent

with sample sizes used in similar studies (see the meta-analysis by Weingarten et al. 2016). While such small samples can be sufficient to detect medium to large effects (Matthews 2011; Prentice and Miller 1992), we would recommend a replication study with a larger sample. Second, the study participants, as a convenience sample, may have a unique profile that could limit the applicability of the results to other settings. Nonetheless, the study opens up the possibility for further exploration using similar or more refined experimental designs or other appropriate methods and with larger samples.

The complexities and limitations described earlier also bring to the fore, several issues that must be considered by future research. For example, what is the nature of interaction between the nonconscious influence of institutional logics and conscious cognitive processes? Likewise, future research could explore moderation and mediation effects including the following questions: What is the effect of the degree of abstractness of the constructs? What is the effect of temporal distance between the priming effect and the consideration of the issue of concern? Does organizational context matter?

Besides, there is need to examine the role played by conscious processes in interaction with nonconscious processes, and how both these processes interact in the real world where organizational action often relies on collaboration with others (Loersch and Payne 2011). This is even more important in complex institutional settings such as the public sector that is inhabited by actors with varied experiences and expertise and whose perspectives must be considered for any collaborative activity to be possible (Grimmelikhuisen et al. 2017; Loersch and Payne 2011). For example, in such stimulus-rich environments, if conflicting perspectives are activated, which one wins? Why? Finally, based on our findings in this study, and in line with the work of other scholars (e.g., Ocasio, Loewenstein, and Nigam 2015; Savani et al. 2015), we suggest that an analysis of the use of language—words, sentences, and speech—in getting things done at the organizational level may be a promising start.

Conclusion

The main focus of this article was to assess whether institutional logics nonconsciously influence organizational actors. The methodological approach pursued was driven by an experimental design and builds on the priming and information-processing literatures. The theoretical part builds on institutional logics, particularly as frames of reference, and logic multiplicity.

The study consequently makes several contributions to institutional theory, and especially to its micro-foundations. First, by focusing on the organizational actor, it advances the growing body of micro-level research on institutional logics that examines the lived experiences of actors in the world of work as they navigate, interpret, and translate institutional complexity. Second, much research on institutional logics has focused on the examination of two seemingly contrarian logics while ignoring other logics that inhabit the same space and that may influence the interactions between the two under study (Scott 2008). This article moves away from this dualistic bias and responds to calls for research that more adequately accounts for institutional complexity without any presumptions of dominance, compatibility, or contradiction (Greenwood et al.

2011; Thornton, Ocasio, and Lounsbury 2012; Waldorff, Reay, and Goodrick 2013). In this sense, the article addresses the linkages between organizational actors and the wider institutional context within which work is embedded.

Third, we introduce a novel methodological approach that may be useful for the exploration of multiple logics as experienced by individual actors. Much earlier research was biased toward the use of comparative longitudinal analysis as a mechanism for understanding how actors experienced institutional logics (e.g., Goodrick and Reay 2011; Martin et al. 2017; Waldorff, Reay, and Goodrick 2013). While these approaches have been extremely useful in helping us understand collective responses to institutional complexity, their utility for micro-level analysis has been limited. The use of priming techniques, as we have experimented with in this study, opens new avenues for research that may better explicate actor experiences under conditions of institutional complexity, including constraints to and enablers of their agency.

This article also makes several contributions to the organizational behavior and human decision processes literature, and to public management as an institutionally complex arena. First, the role of institutional logics as a cognitive frame is yet untested in these literatures. This article thus extends the work done by for example Ganegoda and Folger (2015) in empirically assessing cognitive biases in decision making as opposed to decision making based on fixed criteria, and Swan and Clark (1992) on cognitive dimensions and organizational decision making. It also extends the work done by Weber and Morris (2010) and Savani et al. (2015) on culture and judgment and decision making. Additionally, by presenting the study participants with an ambiguous scenario, the study opens the space for assessing the influence of these cognitive frames under conditions allowing for the consideration of alternative solutions to the issue confronting them—which considerations could arise from conscious and deliberate, or nonconscious and automatic processing of information (Kahneman 1995).

Moreover, the rigor of the experiment and subsequent statistical analysis allows us to draw causal inference regarding the role of text—an integral part of the diverse genres of organizational communication which organizational actors encounter every day (Jablin and Putnam 2001; Yates and Orlikowski 1992). Such organizational communication is used internally to give instruction, seek input, express or clarify a position, to seek consensus or even dissensus, and to manage other organizational issues as well as organizational identity (Jablin and Putnam 2001). Practitioners may therefore want to consider how they frame and communicate issues of strategic import, if the organization is to secure broad-based support toward their implementation.

The findings also suggest that underlying attitudes and motivations that draw from one's referent logics probably have a greater influence on perception and judgment than previously envisaged. Furthermore, though the experiment did not test the tenacity of the hold that these institutional logics have on organizational actor perception, the demonstration of their nonconscious influence is an indicator of their taken-for-grantedness and, accordingly, their influence on the actors' position. It is therefore plausible that environmental cues may be strong or sustained long enough to activate contesting institutional

logics that override explicit instructions given to the actor, thus creating disharmony and increasing the likelihood for inefficiencies in organizational action. Indeed, authors such as Isabella (1990), Paarlberg and Perry (2007), and Yang and Modell (2012) have demonstrated that organizational action may be distorted where there is misalignment between organizational instruction and one's referent logics or individual values.

In conclusion, the article findings suggest that institutional logics play a role in organizational actor perception and judgment, that they can be primed by inconsequential cues such as text, and that this influence can at times be nonconscious.

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Supporting Information

Supplementary material may be found in the online version of this article at <http://onlinelibrary.wiley.com/doi/10.1111/puar.13006/full>.

Appendix A Institutional Logic Definitions

Logic	Public Logic (PUB Prime)	Market-Managerial Logic (MKT Prime)	Professional Logic (PROF Prime)
Essential characteristics	Organization based on administrative rationality (Hayes, Introna, and Petrakaki 2014); highly centralized bureaucracy based on laws, rules, and directives (Meyer et al., 2014; Pollitt and Bouckaert 2011); strict accountability to the state (Meyer et al. 2014); services provided directly and uniformly to public by government (Gruening 2001)	Corporatized structure, flexible management (Gruening 2001); focus on economic/cost control, efficiency, and effectiveness (Coule and Patmore 2013); focus on achieving results (Meyer et al. 2014); internal and external competition for service provision (Hayes et al. 2014)	Embodies guild power and status differences—these select and reject members, regulate through codes and through supervision (Goodrick and Reay 2011; Hyndman et al. 2014; Noordegraaf 2007); premium on professional qualifications and abstract knowledge (Goodrick and Reay 2011)
Accountability and control	Hierarchical/top-down command and bureaucratic control (Hayes et al. 2014; Hyndman et al. 2014; Olsen 2009; Rhodes 2007); logic of appropriateness (Meyer et al. 2014)	Strategic plans, performance auditing (Gruening 2001; Hayes et al. 2014; Hyndman et al. 2014); market parameters utilized to allocate scarce resources and achieve desired economies and efficiencies (Coule and Patmore 2013)	Autonomy cherished (Goodrick and Reay 2011); quality of services assessed through strong reliance on professional opinion (Reay and Hinings 2005); code of conduct, code of ethics, institutionalized disciplinary control through the professional associations (Noordegraaf 2007)
Keywords	Authority, government, compliance, hierarchy, order/orderly, rules, public, procedure, guide, administration, bureaucracy, regulations, legal statutes, servant	Competence, accountability, benchmark, value-for-money, privatization, corporatization, contracting out, results, performance, efficiency, tender/tendering, managerial/management, focus, competition	Profession/professional, association, medical, health, hospital, expertise, autonomy, doctors, physicians, standards, noble, independence, patient, clinical

Appendix B Priming Tool Sample

English proficiency test scrambled sentence code: 1A.

INSTRUCTIONS: Create a sensible phrase using only 4 words (or word pair combinations), as separated by commas, in each of the following 5-word (or word pair combination) sets.

For example: *cold, so, it, outside, was* may be rewritten as *it was so cold or it was cold outside*.

Take as much time as you need but please try not to exceed 10 minutes.

delegated authority, enhances, government, service delivery, then
 compliance, very, important, is, not
 hierarchy, management, orderly, scrambled, ensures
 ensures, fair, is, government, distribution
 rules, followed, must, binding, be
 We, public interest, work, must, for
 procedure, must, public servants, follow, light
 authority, is, government, final, important
 legal statutes, public, servants, guide, others
 public opinion, government, to, matters, us
 public good, governments, valued, provide, always
 public administration, delivery, public goods, supports, the
 neutral, he, be, must, public servants
 bureaucracy, orderly, communication, work, ensures
 regulations, help, always, order, create
 was, not, there, he, in
 hot, it, outside, was, so
 never, the, she, cooking, does
 weekly, tennis, play, you, do
 going, to, I'm, him, see
 calls, she, ever, remembers, hardly
 you, see, me, can, now
 never, I, breakfast, eat, daily
 go, now, home, will, I
 speaks, she, learn, English, does
 you, don't, coffee, do, like
 the, up, I, balloon, blew
 raining, is, outside, hard, it
 heavy, this, table, too, is
 bus, the, here, comes, is

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