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To cite this article: NICOLA BELLÉ, PAOLO BELARDINELLI, PAOLA CANTARELLI & VALENTINA MELE (2018): ON IRON CAGES AND SUBOPTIMAL CHOICES: AN EXPERIMENTAL TEST OF THE MICRO-FOUNDATIONS OF ISOMORPHISM IN THE PUBLIC SECTOR, International Public Management Journal, DOI: [10.1080/10967494.2018.1494066](https://doi.org/10.1080/10967494.2018.1494066)

To link to this article: <https://doi.org/10.1080/10967494.2018.1494066>



Published online: 27 Sep 2018.



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ON IRON CAGES AND SUBOPTIMAL CHOICES: AN EXPERIMENTAL TEST OF THE MICRO-FOUNDATIONS OF ISOMORPHISM IN THE PUBLIC SECTOR

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ABSTRACT: *This study integrates experimental and qualitative data from a sample of public employees to investigate the micro-foundations of the isomorphic pressures that may lead to suboptimal decision making in the context of public administration. When asked to choose between two equally performing systems, subjects in our sample were inclined to favor the alternative that was encouraged by either a coercive, a mimetic, or a normative pressure. Participants tended to give in to isomorphic pressures, even when informed that the encouraged option was inferior. However, letting subjects autonomously infer the inferiority of the encouraged option from numerical data—rather than through an explicit textual prompt—proved effective in neutralizing the risk of sub-optimal decisions under isomorphic pressures. A consequent qualitative inquiry revealed that trust in the recommending institution or group, speculation about alternative performance dimensions, and compatibility with existing standards were the main drivers of sub-optimal decision making.*

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Understanding how and why organizational arrangements converge and practices spread has attracted sustained scholarly attention over the last decades. One stream of research, called neo-institutionalism, has focused on investigating the dynamics of such homogenization or isomorphism—from the Greek “*isos*” [identical] and “*morphe*” [form]—in a variety of empirical settings. In particular, public organizations have been investigated both as a source of and a context where institutional pressures unfold (Frumkin and Galaskiewicz 2004). On the one hand, scholarship on isomorphism has portrayed public organizations as the originators of formal and informal norms that would ultimately influence private organizations, resulting in a progressive standardization of the arrangements under analysis (Meyer and Rowan 1977; Fligstein 1990, 1991; Orru, Biggart, and Hamilton 1991; Vasudeva 2013). On the other hand, scholars have recognized that public organizations are extremely susceptible to institutional pressures (Frumkin and Galaskiewicz 2004).

The scope of the studies that adopt this perspective in the public administration literature is broad. It ranges, for example, from the spread of privatization in the telecommunication industry among the member countries of the Organization for Economic Cooperation and Development (Fink 2011) to policy transfer in the European Union (Radaelli 2000), and from branding initiatives among universities in the United States (Fay and Zavattaro 2016) to the wide acceptance of extravagant position-related consumption in local governments in China (Gong and Xiao 2017). These studies are not only disparate in terms of the geographical coverage, jurisdiction, and policy domain, but more importantly, they exemplify a notion of homogenization that spans from institutional arrangements to policy issues, and from managerial practices to inappropriate behaviors of civil servants.

Notwithstanding differences in their unit and level of analysis, these studies have a common denominator: their analytical reliance on one or more of three archetypes of isomorphic pressures that lead to homogenization (Meyer and Rowan 1977; DiMaggio and Powell 1983); i.e., influence from higher-level agencies (i.e., *coercive* isomorphism), mimicry of successful peers as a strategy to cope with environmental uncertainty (i.e., *mimetic* isomorphism), and strong ties with professionalization (i.e., *normative* isomorphism).

Disentangling the three types of isomorphism is unanimously considered a difficult task, since they often overlap and co-occur (Lodge and Wegrich 2005; Villadsen 2011; Teodoro 2014). A review by Mizruchi and Fein (1999) found that out of 26 articles attempting to operationalize and empirically test the definitions of isomorphic pressures developed by DiMaggio and Powell (1983), only two succeeded in operationalizing all three.

Irrespective of whether one or more types of isomorphic pressures is at work, homogenization displays a mixed record in public administration literature when it comes to societal outcomes. Some studies suggest skepticism about the likelihood that isomorphic pressures—and the bandwagoning behaviors and ritual constraints associated with them—will systematically lead to positive solutions for society (Pollitt 2001; Frumkin and Galaskiewicz 2004; Ashworth, Boyne, and Delbridge

2007; Pina, Torres, and Royo 2010; Kallio and Kuoppakangas 2013; Ammons and Roenigk 2015; Gong and Xiao 2017). This seems to be in line with earlier literature suggesting that isomorphism may be harmful when presented as a perverse alternative to market pressures and maximizing behavior (DiMaggio and Powell 1983; Abrahamson 1991; Dacin 1997). Others seem to point to the spread of arrangements or practices that are intrinsically positive, such as the fulfillment of public record requests (ben-Aaron et al. 2017), the deployment of diversity management procedures (Pitts et al. 2010), or the compliance with safety standards (Teodoro 2014). Even in these instances, however, scholars suggest that the positive outcome of isomorphism may result more from a search for legitimacy than from a purposeful intervention to improve public performance (Laegreid, Roness, and Rubecksen 2007).

In sum, isomorphism unleashes its explanatory potential, especially when we try to understand the spread of arrangements and practices that do not necessarily display technical superiority. However, few studies have done other than infer the micro level at which isomorphic forces kick in and influence individuals' decisions. This gap, identified and discussed by PA scholars (Grimmelikhuijsen et al. 2017:50), resonates with a broader debate in organization theory arguing that "despite early scholars' attention to micro level psychological and sociocognitive aspects of institutions [...], the organizational research of the last two decades has focused primarily on organizations and field-level units of analysis" (Bitektine and Haack 2015:49). In a similar vein, it has been contended that while "for almost two decades scholars have stressed the need to make the micro-foundations of institutional theory more explicit [...], curiously there has been limited progress in this effort" (Powell and Colyvas 2008:276). Therefore, adopting a micro-foundations perspective to investigate central constructs in neo-institutional theory like isomorphism remains a significant research opportunity (Felin, Foss, and Ployhart 2015).

The current study seeks to contribute to address this knowledge gap by locating isomorphic pressures at the individual level and by testing whether public sector workers make managerial decisions on the grounds of technical superiority or as the result of exposure to such pressures. In turn, isomorphic pressures are exerted by collective actors, such as governments or professional organizations, who act upon some collective and socialized legitimacy judgments (Bitektine and Haack 2015). In so doing, we embrace a micro-foundations perspective that is focused on bringing individuals back in without attributing explanatory exclusivity to the micro level where their agency is enacted. In other words, we adopt a "softer approach where micro-foundations are embedded in a larger conversation related to multilevel theorizing and empirics" (Felin et al. 2015:586).

Specifically, we conducted eight randomized controlled trials with 764 public employees to test whether and to what extent isomorphic pressures affect public workers' decision making at the individual level. In addition, in order to gain a more refined understanding of the causal mechanisms driving our experimental results, we supplemented the analysis of quantitative data from our randomized

controlled trials with the qualitative inquiry of interview data collected from a subsample of participants.

THEORETICAL BACKGROUND AND HYPOTHESES

Having noted that our study looks at the independent effects that *coercive*, *mimetic*, and *normative* isomorphic pressures (DiMaggio and Powell 1983, 1991) have on public employees' managerial decisions, we now turn to the definition and discussion of those pressures offered by the literature, which has substantially maintained and extended, more than challenged, the taxonomy proposed in the work of DiMaggio and Powell (e.g., Deephouse 1996; Glynn and Abzug 2002; Williamson and Cable 2003; Frumkin and Galaskiewicz 2004; Lodge and Wegrich 2005; Belle 2010; Fay and Zavattaro 2016; Gong and Xiao 2017).

Coercive isomorphism suggests that homogenization occurs through the formal and informal pressures that a superordinate organization exerts on a subordinate organization. The resource-based view articulates dependency as the material dependence of certain organizations that will conform to the expectations of others in order to secure inputs (Bovaird and Downe 2006). Dependency may also be conceptualized as power, especially of a political nature, which determines the course of action of the more vulnerable organizations (Radaelli 2000; Fink 2011; Gong and Xiao 2017). The enactment of such pressure ranges from very formal, such as legal requirements or health and safety regulations (Dacin 1997), to contractual obligations with other actors (Ashworth et al. 2007), to more subtle forms of imposing an organizational model on a dependent organization, originating in the exchange relationship (Currie and Suhomlinova 2006). One of these forms is the symbolic effect of regulation (Deephouse 1996), so that the pressures at work may be moderately binding and actually signal to participants the legitimacy of the prescribed behavior, consistent with the notion that "many myths also have legitimacy based on legal mandates" (Meyer and Rowan 1977:148). As such, coercive isomorphism has been expected to play an important role in public organizations (Frumkin and Galaskiewicz 2004), even more so in centralized public sectors (Meyer, Scott, and Strang 1987); i.e., those in which all local organizations across a nation depend on a central authority, and regional autonomy is scarce or not allowed (Lodge and Wegrich 2005).

A promising theoretical development is to look at the interplay between bureaucratization and coercive pressures. Following bureaucratic theory, with its strong technocratic twist, we may expect public organizations to follow and therefore converge towards one best solution. And yet, "the role of coercive forces in institutional theory highlights the impact of political rather than technical influences on organizational change" (Ashworth et al. 2007:167). Moreover, coercive pressure towards standardization is not the only available option. The literature has shown that formalization and centralization, two key attributes of bureaucratization, result from isomorphic pressures; for example, when public organizations become

subject to oversight by higher jurisdictions. Building on these premises, we formulated and tested Hypothesis 1.

H1: Given options A and B, a coercive isomorphic pressure towards A increases the probability that public employees will choose A, even if A is inferior to B.

We next turn to mimetic isomorphism, which refers to the process through which organizations emulate the arrangements or practices of others (Tolbert and Zucker 1983; Haunschild and Miner 1997). They do so typically in contexts of uncertainty that include doubts about the environmental conditions, goal ambiguity, and poorly understood organizational technologies (DiMaggio and Powell 1991; Deephouse 1996; Bovaird and Downe 2006; Currie and Suhomlinova 2006). Mimetic learning may occur directly, when exposure to and contacts with organizations introduce new ideas, and indirectly, when personnel hired from those organizations bring in fresh ideas (Ammons and Roenigk 2015) and reproduce the procedures developed in the previous organizational setting (Compagni, Mele, and Ravasi 2015). It may also be the result of an intentional search for solutions by an organization that turns to peers, especially well-performing ones (Haveman 1993; Gimeno et al. 2005), for ideas or suggestions on how to handle a policy decision or other concern (Fink 2011; Fay and Zavattaro 2016; ben-Aaron et al. 2017). In this case, it operates as a pull factor, encouraging and motivating organizations to learn from each other (Gong and Xiao 2017). Mimetic isomorphism poses serious challenges to the conventional notion of public action as the pursuit of actual performance improvements.

In stylized terms, we would expect public organizations to emulate and apply the successful arrangements or practices of other organizations to their own context. For example, initiatives designed to facilitate the spread of best practices, such as benchmarking and awarding schemes (Borins 2000; Hartley and Downe 2007; Ammons and Roenigk 2015), are among the institutional devices that facilitate mimetic pressures. Trying to learn from peers may be a rule of thumb developed by individuals to cope with uncertainty and imperfect information (Gigerenzer et al. 1999; Artinger et al. 2015). Like all of the heuristics, in some situations this may lead to good decisions, especially when the peers are well-performing. However, wide evidence exists that heuristics may lead to cognitive biases and systematic departures from rational decisions (Tversky and Kahneman 1974; Kahneman 2000). More precisely, at least three main problems arise in reality when organizations try to learn from others. One is that organizations often import best practices without exerting due diligence on the applicability of such solutions to their context. Without adjustment and recalibration, it might be that what has proven effective in one specific setting may not be as successful when exported. Second, organizations facing severe institutional stress may not even look for best practices, but simply rely on cognitive shortcuts (Fink 2011) by turning to those they perceive as the most successful organizations and embracing their practices.

Third and more importantly, a successful practice often is imbued with perceived legitimacy or appropriateness without any full evaluation of all options and their potential impact (Lodge and Wegrich 2005). In this vein, a caveat has been offered by several scholars that mimetic forces are behind the widespread adoption of management practices, driven more by fads and fashions than by empirical evidence of performance benefits (Abrahamson 1991; Kieser 1997; Ashworth et al. 2007; Fay and Zavattaro 2016). Therefore, based on these previous works, we formulated and tested Hypothesis 2.

H2: Given options A and B, a mimetic isomorphic pressure towards A increases the probability that public employees will choose A, even if A is inferior to B.

In our opinion, however, the strong symbolic valence attached to the devices mentioned earlier, together with the active role of professional communities in processing information and in designating the best solutions based on codified standards, puts them at the junction between mimetic pressures and the last type of isomorphism we will present next. Normative isomorphism relies heavily on the notion of professionalization (DiMaggio and Powell 1991). This can be conceived as a centripetal force, resulting from a shared curriculum (Palmer, Jennings, and Zhou 1993) and certification processes often required to access specific government positions (Lodge and Wegrich 2005). It has also been studied as the explicit outcome of the agentic role of professional associations that lend their legitimacy and cognitive support to maintain stability or trigger change of specific professional standards (Greenwood, Suddaby, and Hinings 2002) and communities. Once established, tied professional networks may both span and constrain jurisdictional boundaries, as often is the case in professional bureaucracies (Hood 2000) or epistemic communities (Haas 1992). Whether or not such professional rules are formalized, they are prescriptive in nature (Scott 1995).

Professional norms abound in contexts and processes dominated by expertise and technocratic reasoning (Fink 2011) where, if successful, they get a cognitive upgrade and assume the taken-for-granted character that secures them a smooth enforcement. In other words, education, socialization, and filtering bolster convergence in individual orientations, which in turn bolster behavioral convergence among members of the same profession and occupants of similar positions across public organizations (Bovaird and Downe 2006; Currie and Suhomlinova 2006; Pitts et al. 2010; Teodoro 2014). Professional socialization may affect public managers' perception of what is a good policy (Vasudeva 2013), drawing on the experience of exemplary organizations, distilling and codifying expert knowledge, and channeling it through conferences and publications (Ammons and Roenigk 2015). A more ambiguous normative pressure exerted by professions is linked with career opportunities. In order to pursue career advancement, public managers may end up making decisions consistent with professional norms but not based on their technical superiority, even when they conflict with the directives attached to their

organizational roles (Teodoro 2014). Building on extant research and theory, we formulated and tested Hypothesis 3.

H3: Given options A and B, a normative isomorphic pressure towards A increases the probability that public employees will choose A, even if A is inferior to B.

Focusing more specifically on the rich stream of studies on isomorphism in public organizations, which mirrors the broader discussions in general management literature, we found that it has been concerned predominantly with organizational convergence and has focused on the organizational characteristics that are conducive to homogenization (D'Aunno, Sutton, and Price 1991; Frumkin and Galaskiewicz 2004; Bovaird and Downe 2006; Ashworth et al. 2007; Andrews 2011; Fink 2011; Fay and Zavattaro 2016). Along similar lines, when scholars have looked at individuals within public organizations, they have typically done so by identifying and testing their specific attributes, such as the structural embeddedness of top political officials (Villadsen 2011) or their professional socialization (Teodoro 2014).

Moreover, this rich stream of research also often warns us that isomorphic pressures may not necessarily be conducive to solutions that are technically superior. The intellectual endeavor of our study is to nail down empirically whether and how this is the case and, consistently with the micro-foundations perspective, to do so by focusing on the level of individual decisions rather than on the individual attributes of civil servants. Our research design allowed us to embrace this challenge and, in what follows, we explain the rationale behind the choice to conduct eight survey experiments and the qualitative inquiry, and describe the stages of this research journey.

METHODS

Participants, Design, and Procedures

To test our hypotheses, we conducted eight randomized controlled trials on three independent samples of Italian public sector workers recruited through *Qualtrics*. Sample sizes were 204 (Experiment 1), 396 (Experiment 2), and 164 (Experiments 3a, 3b, 4a, 4b, 5a and 5b). Randomized experiments have been described as “the most efficient tool that researchers and program evaluators have at their disposal to obtain an unbiased estimate of the average effect caused by an intervention of some kind” (Belle and Cantarelli 2017:3). The experimental part of the study was supplemented by the analysis of interview data collected from participants in the third sample. Indeed, although randomized controlled trials are well-suited for testing causal relations between two variables (i.e., molar causation), they do not necessarily help illuminate the chain reaction linking causes to their effects (i.e., molecular causation) (Shadish, Cook, and Campbell 2002). In light of this inherent limitation, we supplemented the experimental phase of our project

with a qualitative enquiry in an attempt to gain a deeper understanding of the motives driving subjects' decisions (Appendix C reports the English translation of the experimental scenarios).

The Experiments

The eight randomized control trials shared a common design. In each experiment, subjects were randomly assigned to one of four scenarios (control, coercive isomorphism, mimetic isomorphism, and normative isomorphism) and asked to decide between two options. The control scenario provided only information about differences in performance between the two options. In addition to this information, the three isomorphic scenarios prompted participants that one of the two options was preferred by either a higher authority (coercive), their best-performing peers (mimetic), or their professional networks (normative).

Experiment 1

Subjects were asked to imagine themselves as the superintendent of a school district who had to choose between two management software packages. Subjects in the control were informed that both software packages had been approved by the Italian Ministry of Education, had the same price, and that there was no evidence of one being better than the other. In other words, we primed subjects to think that the two software packages were equivalent. In addition to the same information provided to the control group, subjects in the three isomorphic conditions were informed that one of the two options was: suggested by the guidelines issued by the Ministry of Education (*coercive*), going to be adopted by the school districts with the highest reputation nationwide (*mimetic*), or recommended by the professional association of superintendents to which they belonged (*normative*).

Experiment 2

Experiment 2 replicated Experiment 1 with only one variation: whereas subjects in Experiment 1 were primed to believe that the two software packages were equivalent in all respects, subjects in Experiment 2 were informed that one's performance was slightly worse than the other's performance. We held constant across the two experiments all other features and procedures described earlier.

Experiments 3a and 3b

Experiments 3a and 3b were variations of Experiment 2 on a different sample and in different decision settings. In particular, subjects in Experiment 3a were not prompted to imagine themselves as superintendents, but instead were asked to suggest that their own institutions adopt one of two managerial software packages. Everything else in Experiment 3a was the same as in Experiment 2. Participants in Experiment 3b had to choose between two training programs. Subjects in the control condition of Experiment 3b read that (1) the two training programs provided the same number of credits, had the same schedule of classes, and required the same effort; and (2) the performance assessments issued by a reliable independent agency indicated that one training program was slightly worse than the other. In

addition to the same information provided to respondents in the control group, subjects in the three isomorphic conditions read that the inferior training program was suggested by their Human Resources Director (coercive), their best colleagues (mimetic), and their former colleagues/classmates (normative).

Experiments 4a and 4b

Experiments 4a and 4b replicated Experiments 3a and 3b, respectively, with the only exception that we specified the performance dimensions along which one option was slightly worse than the other. We listed such dimensions in the text. More precisely, in addition to the same information that respondents read in Experiment 3a, subjects in Experiment 4a were informed that one software package was inferior to the other in terms of ease of use, speed, accuracy, and technical support. Respondents in Experiment 4b were told that the inferior training program performed slightly worse in terms of practical usefulness, quality of the instructors, quality of the content, and efficacy of the teaching methodologies.

Experiments 5a and 5b

Unlike in the other experiments, in Experiments 5a and 5b participants were not explicitly informed about differences in performance between the two options. Instead, subjects were presented with a table reporting performance scores for each of the two options along the same dimensions indicated in Experiment 4. Therefore, whereas public workers who participated in the previous experiments were primed about performance differences, subjects in Experiment 5 had to infer this information themselves, based on numeric data reported in a table format.

We situated Experiments 1 and 2 in the context of school district management because this setting lends itself to an investigation of all three isomorphic pressures. First, superintendents have an asymmetric relationship with a centralized organization—i.e., the Ministry of Education—which exerts power upon and provides resources to the schools, and the Ministry typically provides recommendations in the form of guidelines to school districts in Italy (coercive). Second, school district superintendents are the target of high-powered performance management and benchmarking practices (e.g., league tables), which have the potential to trigger reputation concerns and imitative behaviors (mimetic). Third, superintendents are characterized by a high degree of executive professionalism as they are routinely engaged in professional associations (normative). Furthermore, investigating how isomorphic pressures play out in the context of a school district may be relevant on its own, given that education is the largest industry within the Italian public sector and certainly a prominent one in most countries. In Experiment 1, the two software packages were described as performing equally well; the target software was portrayed as inferior in Experiment 2. Therefore, Experiment 2 complements Experiment 1 by providing a more robust test of isomorphism. Experiments 3 through 5 were designed to test the external validity of our findings for different decision settings (i.e., choice between two managerial software packages and two training programs) and different ways of presenting information about the

inferiority of the target option (i.e., generic statement, performance dimensions listed in a textual format, performance scores shown in a table). Overall, the rationale behind our manipulation of sub-optimality was twofold. First, we opted for a low-intensity treatment to ensure greater contextual realism. Given the features of our scenarios, a wider performance gap between the superior and inferior options would have been quite unrealistic. The second reason for choosing a low-intensity treatment was to induce variation in decisions across subjects, which is a prerequisite to conduct meaningful statistical tests.

The Qualitative Inquiry

The experimental part of Experiments 3 through 5 was followed by a set of open-ended questions. These allowed exploring how participants interpret the role and features of the institutions or benchmark groups to operationalize the different isomorphic pressures in the experiment, as well as to provide a more in-depth and nuanced account of isomorphic pressures at work. In particular, questions invited respondents to describe how they conceived, both in general and with specific reference to decision making, the roles of ministerial guidelines and professional associations as well as that of their best-performing peers or the public organizations with the highest reputation nationwide. Second and relatedly, questions invited respondents to describe whether and why they would follow the advice of these same institutions or groups (i.e., ministerial guidelines, colleagues or agencies with the best reputation and professional associations) in case they recommended the inferior solution between two alternatives, either software packages or training programs.

The transcripts' analysis combined deductive a priori broad themes emerging from the experimental phase, such as the types of isomorphism, with data-driven inductive coding from our questions (Krippendorff 2004). Coding was not geared towards measuring rates of responses or frequency of specific constructs, but rather at allowing original themes to emerge directly from the transcripts (Fereday and Muir-Cochrane 2006). It was performed with the support of the software program ATLAS.ti. The final data structure is provided in Figures 1 and 2, while additional illustrative quotations are provided in the Appendices A and B.

RESULTS

Experiments

Table 1 lists the demographic characteristics for the three samples of public workers who participated in the study. Within sample one and sample two, participants in the four experimental conditions (i.e., control, coercive, mimetic, and normative) did not differ in terms of average age, proportion of females, proportion of managers (i.e., subjects who managed at least one subordinate), distribution by public sector industry, and distribution by type of degree. Within sample three, a series of chi-square tests and t-tests unveiled some significant differences across

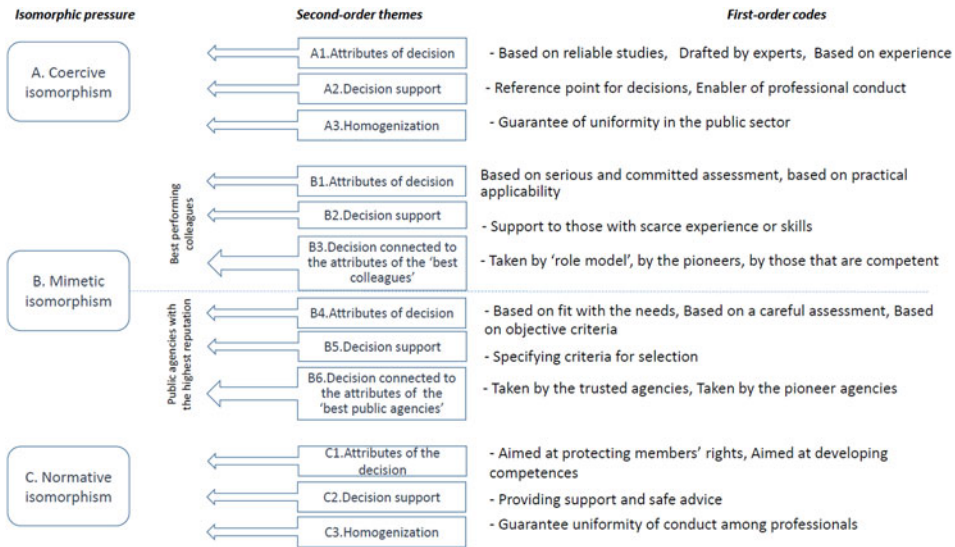


Figure 1. First-order and second-order codes emerging from open-ended questions.

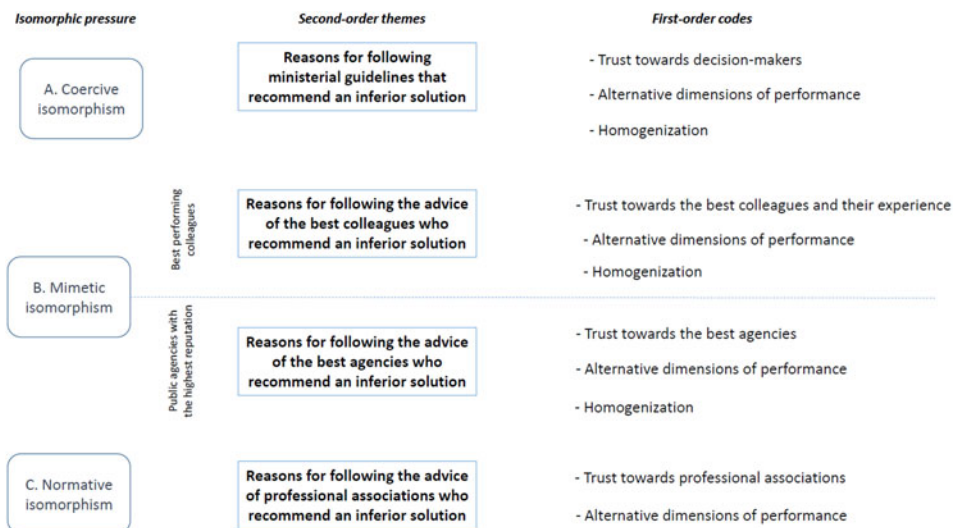


Figure 2. First-order and second-order codes emerging from open-ended questions about ex-post accounts of the reasons for following a specific pressure.

experimental arms in terms of managerial status, industry of employment, and age. In particular, the proportion of managers in the mimetic arm of Experiment 4a was 34 percentage points lower than in the coercive arm ($p = .001$) and 33 percentage points lower than in the normative arm ($p = .002$). Also, the distribution of

TABLE 1
Demographic Characteristics of Respondents, by Sample

	Sample One: Experiment 1	Sample Two: Experiment 2	Sample Three: Experiments 3a, 3b, 4a, 4b, 5a, 5b
<i>N</i>	204	396	164
Age: μ (σ) in years	45.9 (10.0)	43.4 (10.2)	49.0 (9.98)
Female %	68.6	48.7	50
Manager %	43.1	74.8	50.6
Public sector industry			
Healthcare %	16.3	16.4	17.1
Education %	67.5	39.1	43.9
General administration %	7.4	28.3	25.6
Other %	8.9	16.2	13.4
Degree %	79.4	73.7	60.3
Scientific %	38.2	37.1	26.8
Humanities %	41.2	36.6	33.5

subjects by industry of employment varied among conditions in Experiment 4a (Pearson $\chi^2(9) = 19.57$, $p = 0.021$). Lastly, the average age of respondents in the coercive arm of Experiment 4b was 5.07 years lower than in the mimetic arm ($p = .024$) and 4.51 years lower than in the normative arm ($p = .044$).

Figure 3 displays the percentage of subjects choosing the software package that was encouraged for the three treated groups, but not for the control group, in Experiment 1. The percentages of public workers opting for the option were as follows: 43.6% in the control group (i.e., in the absence of any isomorphic pressures); 85.7% in the coercive condition (i.e., when the encouraged software was suggested by guidelines from the Ministry of Education); 85.0% in the mimetic condition (i.e., when the software was adopted by the school district with the highest reputation); and 80.9% in the normative condition (i.e., when the software was recommended by the superintendents' association).

The results of a logistic regression showed that each of the three isomorphic pressures that we manipulated significantly increased the odds that a public employee would choose the encouraged software package. Compared to the control group, the odds of choosing the encouraged option increased by 7.75 times ($p < .001$) under a coercive pressure, by 7.32 times ($p < .001$) under a mimetic pressure, and by 5.45 times ($p < .001$) under a normative pressure (Table 2). The effects of all three experimentally induced isomorphic pressures on the probability of choosing the encouraged software were significantly different from zero and statistically indistinguishable from one another in size.

Figure 4 shows the results of Experiment 2, where participants had to choose between two software packages, one of which was slightly inferior to the other. The percentages of subjects choosing the inferior software package for each of the

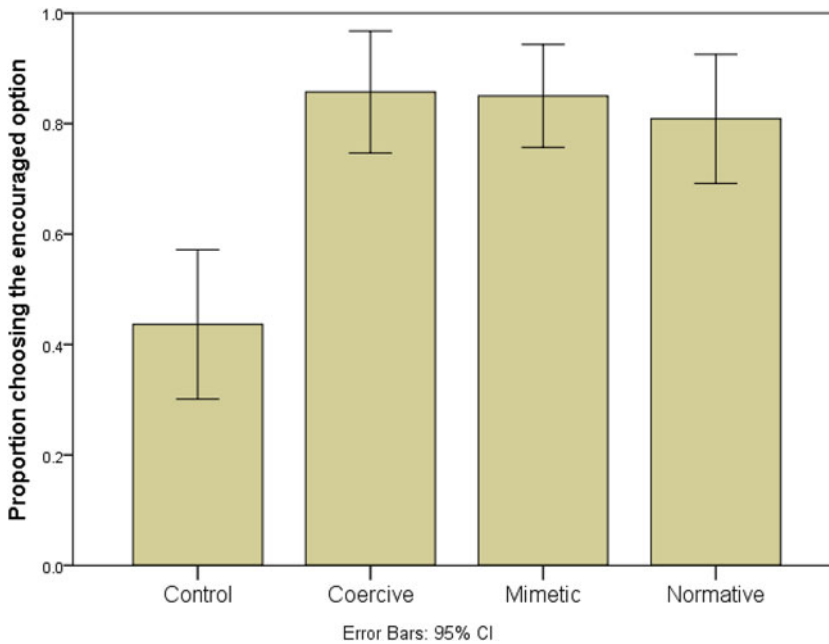


Figure 3. Proportion of subjects choosing the encouraged software, by isomorphic pressure (Experiment 1). *Note:* The two software packages are equivalent.

four experimental groups were as follows: 11.9% in the control group, 41.3% in the coercive condition, 33.3% in the mimetic condition, and 24.0% in the normative condition.

The results of a logistic regression showed that each of the three isomorphic manipulations significantly increased the odds that a public employee would choose the slightly inferior software. Compared to the control group, the odds of choosing the worse option increased by 5.21 times ($p < .001$) under a coercive pressure, by 3.71 times ($p < .001$) under a mimetic pressure, and by 2.35 times ($p < .05$) under a normative pressure (Table 2). A series of Wald tests indicated that the probability of choosing the inferior option was higher under a coercive rather than a normative pressure ($p < .05$). We did not find any other significant differences among the three types of pressures.

The left column of Figure 5 shows the results of Experiment 3a. A logistic regression showed that, relative to the control condition, the odds that participants would suggest that their own organizations adopt the inferior software package were 5.06 times higher under a coercive pressure ($p = .003$), 8.32 times higher under a mimetic pressure ($p < .001$), and 4.58 times higher under a normative pressure ($p = .006$) (Table 2).

The right column of Figure 5 plots the findings from Experiment 3b, in which subjects had to indicate which one of two training programs they would attend, by isomorphic condition. The pattern of results for Experiment 3b is consistent with

TABLE 2
Changes in the Odds (w.r.t. Control) of Choosing the Encouraged Inferior Option, by
Type of Isomorphic Pressure and by Experiment (2 through 5)

		OR	<i>z</i>	<i>p</i>
Coercive	Experiment 2	5.21	4.32	0.000
	Experiment 3a	5.06	2.99	0.003
	Experiment 4a	3.85	2.36	0.018
	Experiment 5a	1.94	1.24	0.217
	Experiment 3b	6.26	2.89	0.004
	Experiment 4b	3.76	2.22	0.026
	Experiment 5b	0.99	-0.02	0.985
	<i>Coercive Overall</i>	3.64	6.40	0.000
Mimetic	Experiment 2	3.71	3.57	0.000
	Experiment 3a	8.32	3.94	0.000
	Experiment 4a	3.12	1.94	0.053
	Experiment 5a	2.16	1.42	0.155
	Experiment 3b	3.40	1.99	0.047
	Experiment 4b	3.88	2.33	0.020
	Experiment 5b	0.99	-0.02	0.985
	<i>Mimetic Overall</i>	3.33	6.01	0.000
Normative	Experiment 2	2.35	2.22	0.025
	Experiment 3a	4.58	2.74	0.006
	Experiment 4a	2.05	1.22	0.223
	Experiment 5a	1.72	1.00	0.317
	Experiment 3b	1.89	0.98	0.333
	Experiment 4b	2.14	1.29	0.196
	Experiment 5b	2.56	1.64	0.100
	<i>Normative Overall</i>	2.37	4.28	0.000
	<i>Isomorphism Overall</i>	3.06	9.63	0.000

Note: Odd ratios (OR) estimated using fixed effects.

what we observed in the previous studies, with the only exception being the normative condition. More precisely, as in the previous randomized trials, the coercive and mimetic isomorphic pressures had the expected effects of increasing the likelihood that respondents would select the inferior option as compared to the control condition. Participants in the normative condition were no more likely to choose the worse training program than their counterparts in the control condition ($p = .333$). The results of a logistic regression revealed that, relative to the control group, the odds of choosing the inferior training program were 6.26 times higher for participants who were told that their Human Resources directors had suggested the inferior option (coercive) ($p = .004$) and 3.40 times higher for subjects informed that their best colleagues had decided to attend the inferior program (mimetic) ($p = .047$) (Table 2).

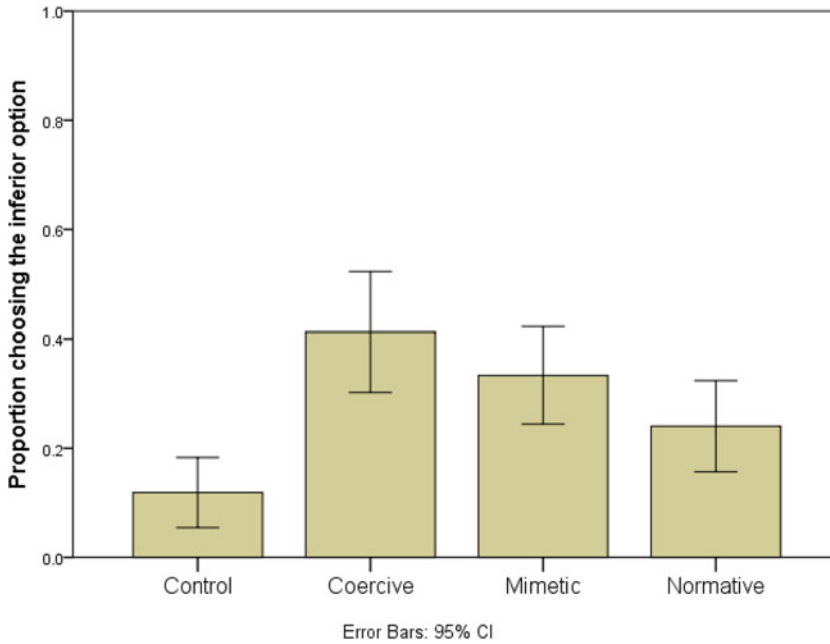


Figure 4. Proportion of subjects choosing the inferior software, by isomorphic pressure (Experiment 2). *Note:* One software is inferior to the other—generic statement.

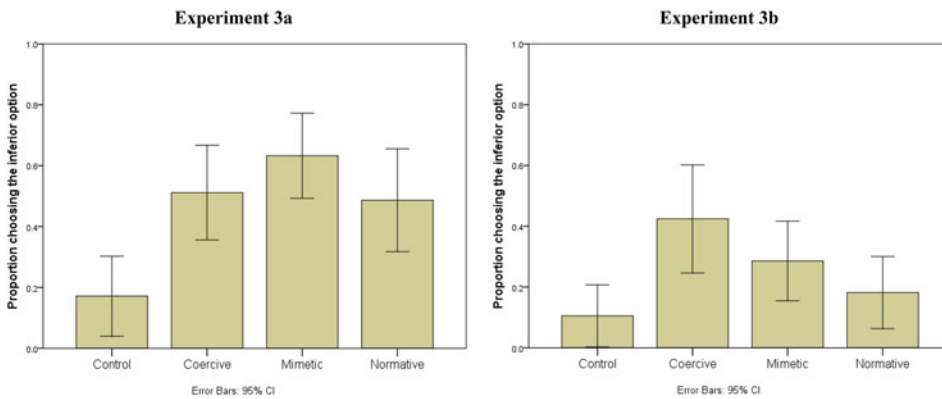


Figure 5. Proportion of subjects choosing the inferior option, by isomorphic pressure.

Figure 6 reports the proportions of subjects who selected the inferior software package for each of the four manipulations in Experiment 4a. Unlike in Experiment 3a, where participants were told that the performance of one software was slightly worse than the performance of the other software, in Experiment 4a subjects were informed that one software package was inferior to the other in terms of ease of use, speed, accuracy, and technical support.

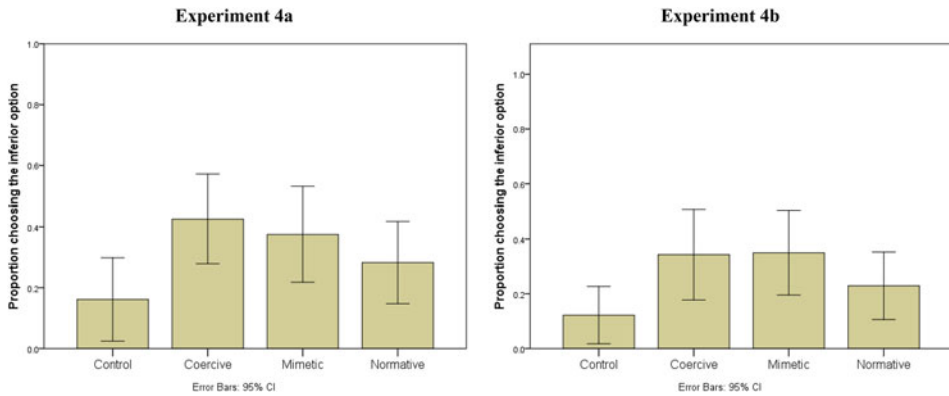


Figure 6. Proportion of subjects choosing the inferior software, by isomorphic pressure.

Estimated coefficients from a logistic regression indicated that, compared to the control group, the odds of opting for the inferior software were 3.85 higher for public employees assigned to the coercive scenario ($p = .018$) and 3.12 higher for subjects in the mimetic pressure ($p = .053$). The sign of the coefficient for the normative group was positive but the associated p -value was .223 (Table 2). Therefore, unlike in Experiment 3a, we did not find support for Hypothesis 3.

Figure 6 also shows the findings from Experiment 4b in which public employees were told that an independent agency had rated one training program as slightly worse than the other along four performance dimensions (i.e., practical usefulness, quality of the instructors, quality of the content, and efficacy of the teaching methodologies). The pattern of results in Experiment 4b was the same as in Experiments 3b and 4a. The coercive manipulation increased the odds that subjects would prefer the inferior training program by 3.76 ($p = .026$). The odds of choosing the inferior option were 3.88 times higher for participants exposed to the mimetic scenario relative to their peers in the control condition ($p = .020$). Again, the coefficient associated with the normative pressure had the expected sign but did not reach significance at the conventional level ($p = .196$) (Table 2).

Whereas in all of the previous experiments subjects were presented with textual information about the relative performance of the options, participants in Experiment 5 were shown a table reporting numerical scores of the two alternatives for the same performance dimensions listed in Experiment 4. Figure 7 suggests that none of the isomorphic manipulations had a significant impact on the odds of choosing the inferior software package (Table 2).

The lack of any significant impact from the isomorphic pressures is even clearer in the right column of Figure 7, which displays the percentages of subjects opting for the inferior training program by condition. Results of the logistic regression underlying Experiment 5b are reported in Table 2.

Table 2 reports the findings of a series of meta-analyses that we conducted to synthesize results across our randomized trials 2–5. Separately, for each of the three isomorphic pressures, we meta-analyzed the effect sizes from our eight

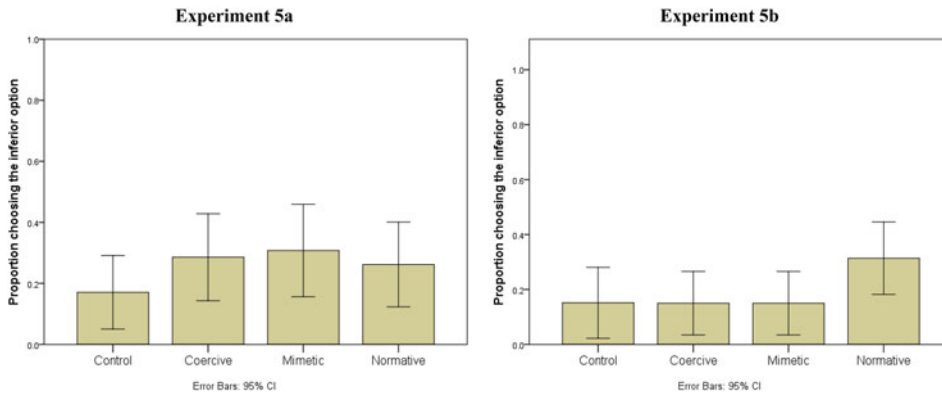


Figure 7. Proportion of subjects choosing the inferior option, by isomorphic pressure.

experiments. Overall, the odds of choosing the target option went up by 3.64 times under a coercive pressure, relative to the control condition ($p < .001$). We observed similar meta-analytic results for mimetic isomorphism ($OR = 3.33$, $p < .001$) and normative isomorphism ($OR = 2.37$, $p < .001$). The results of a meta-analysis that combined effects across the three isomorphic pressures indicated that the overall impact of isomorphism was 3.06 ($p < .001$).

Qualitative Inquiry

Transcript analysis of the answers that our informants provided to the open questions allowed us to identify recurring themes that helped explain how individual expectations about ministerial guidelines, the advice of highly rated colleagues or agencies, as well as the advice of professional associations lead to isomorphic responses. Recurring themes included individual expectations about the rigor and usefulness of decisions enacted as authoritative guidelines, expectations about the support for decision making, expectations about intrinsic qualities of the benchmark groups (best colleagues or best agencies) and, last, the perception that homogenization was important for civil servants.

The presentation of our most significant findings is organized by type of isomorphic pressures (Figure 1), while also offering a systematic collection of additional evidence supporting the coding in Appendix A.

Coercive Isomorphism

Respondents' opinions of ministerial guidelines, with specific reference to decision making, revolve around three main elements. First, guidelines are trusted for their expected intrinsic qualities that represent the *attributes of decision*. They are *based on reliable studies* "carried out in depth and that no single public agency could afford." The second source of legitimacy for ministerial guidelines lies in the expertise of their authors. Guidelines are in fact *drafted by experts*, by personnel

“with technical know-how.” Moreover, they are *based on practical experience* and, in particular, they “perform the function of identifying services and standards that have been tested already and that can be therefore considered reliable.” It may be argued that, for some of our respondents, ministerial guidelines are received uncritically and considered legitimate, even when in contrast with objective inputs to decision making, such as those presented in our experimental scenarios.

Second, guidelines offer *support for the decision-making process*. They are a *reference point*, by providing certainty and by presenting useful terms of reference that can easily be retrieved and consulted. The decision process is facilitated. In the words of one of our informants: “Guidelines are important because they make life easier for whoever is called to make a decision.” Respondents also pointed to the importance of guidelines as an *enabler of professional conduct*, following which civil servants are kept on track, are safe in terms of “avoiding being sued for nothing,” and have their professional profile delimited thanks to the “boundaries into what may otherwise be too vague as the behavioral expectations towards civil servants.”

Third, our analysis revealed that the *homogenization* of practice enabled by the guidelines is seen as a value per se. In particular, they *guarantee uniformity in the public sector*. According to our informants, guidelines are meant to harmonize the activities of the public sector and “are crucial to avoid each agency operating according to its own way and to avoid useless duplication in looking for the same information.”

Mimetic Isomorphism

Consistent with the way in which we operationalized mimetic isomorphism in our experiment, in the open-ended questions we explored the expectations for the recommendations from the best colleagues and the best agencies, especially as far as decisions were concerned. The two sets of findings are substantially coherent and revolve around three main elements.

First, respondents seem to trust the intrinsic attributes of decisions made by the best colleagues or the by highly rated agencies. Their expectations are that the “best colleagues,” who are taught to invest time and effort into their choices, will make decisions *based on serious and committed assessment*: “Typically best performing colleagues display high levels of effort in choosing,” and their decisions are “based on sound evaluation criteria and perform well in their decisions (...) result(ing) from a serious and thoughtful evaluation.” Again, this seems to silence the critical thinking of some respondents. Similarly, respondents trust the *recommendations of the agencies with the highest reputation*, as they invest time and effort to produce a *careful assessment* of costs, benefits and the reliability of the provider. Moreover, their decisions are *based on objective criteria*, such as “efficiency and merit, and you can always trust these principles,” which can somehow “be considered universal criteria.” A variation on this theme is related to the expectation that, albeit technically inferior, the solutions adopted by the best colleagues are based *also on practical applicability*; i.e., they “choose based on the utility of a specific option, such as a training program or a software.” In a similar vein, the

recommendations of the best agencies are expected to be based on a *fit with the needs*: “They choose on the basis of the needs of personnel and on the updates that are needed to keep up with progress and changes.”

Second, the recommendations of the best-performing colleagues and of the public agencies with the best reputation *support the decision-making process*. The best-performing colleagues do so by giving advice to *those with scarce experience or skills*. The agencies with the highest reputations do so by *specifying the criteria for selection*: “If you look at the best agencies and follow them, you can’t be wrong. At the end of the day they have built their reputation with commitment and sacrifice and they select on the basis of their know-how that is then shared.”

Third, our analysis shows that respondents align their decisions with those of the best colleagues and agencies based on their consideration for the intrinsic qualities of these peers and institutions. Therefore, they are willing to follow the *decisions made by the “role models,” by those who are capable*. The best colleagues are also *the pioneers*, those able to anticipate trends and, as reported by one of our respondents, “I always think that the best colleagues understand earlier and better the validity of a specific training program or a specific software, and I am therefore inclined to follow them.” Moving from the best colleagues to the best agencies, *decisions made by pioneering agencies* offer valuable guidance because “the best agencies are those that implement innovation first and reform processes and that display efficiency.” In a similar vein, “the best agencies are those you can *trust*. On the basis of trust, you follow what they do.”

Normative Isomorphism

Respondents conform to the recommendations of professional associations, for they promote *decisions aimed at developing the competences* of their members: “Professional associations inform, train, guarantee and offer guidelines to their members, and they provide suggestions that are in line with this purpose.” Interestingly, our informants repeatedly pointed to the importance of following *decisions aimed at protecting members’ rights*, which is in line with what is considered perhaps the most important mandate of a professional association. In the vivid words of one of our respondents, “The main role of professional associations is to defend, yes, I mean defend, the interests of their members. I don’t know if they always choose or recommend the best in absolute terms, but certainly they choose based on the protection of their members.” Informants highlighted the importance of professional associations for offering support to decision making, again mentioning that this is based on technical expertise and referring to the fact that “the decisions and recommendations of professional associations are safe” for their members. Last, professional associations guarantee a homogenization among civil servants with effects that are relevant within and outside the category: “Following the recommendations of professional associations helps maintaining a certain internal conduct within the category and this will also be recognized outside.”

Isomorphic Pressures Leading to the Choice of an Inferior Solution

We now turn to the analysis of the answers offered by our respondents to the questions of whether and why they would follow ministerial guidelines, colleagues or agencies with the best reputation, and professional associations, even when they recommended the inferior solution between two alternatives (i.e., software packages or training programs). We posit that the responses to these explicit questions enrich our analysis of isomorphic pressures by illustrating, in the respondents' own words, their ex-post account of the reasons for following a specific pressure. While the data structure (Figure 2) and a systematic collection of evidence supporting the coding (Appendix B) present the ex-post justification per each type of isomorphic pressure, we summarize in the following the three themes that emerged from the analysis.

One theme is *trust towards the institution or group recommending the solution*. The type of explanations included in this theme appears quite tautological, as effectively illustrated by this answer: "I trust what the ministry recommends, no matter what." Explanations along this line rest on the claim that confidence and belief towards the ministry issuing guidelines, colleagues and agencies, or professional associations automatically result in the acceptance of their advice. We have identified as a second emerging theme the *alternative dimensions of performance* elicited by our respondents. Examples of this theme point to the possibility that the apparent inferiority of the solution covers advantages for the public agency or the civil servants: "Perhaps they recommend an inferior training or software because, while being slightly inferior, it better meets the needs of the agency." As put by one of our informants: "An example shall clarify my view on why these recommendations should be followed, irrespectively of the performance of a specific product. If I need a motorcycle and, at the same price, they offer me a scooter or a big motorbike, the latter may certainly be better and enable me to do more things, but if at the end of the day I only need to travel around in the city center, I will end up choosing the scooter (...)." The third emerging theme is *compatibility with existing standards*, whereby the choice of the best solution may lead to a misalignment with "the great majority of colleagues (and) would end up being useless or even counterproductive."

DISCUSSION AND CONCLUSIONS

By adopting a micro-foundations perspective (Powell and Colyvas 2008; Bitektine and Haack 2015; Felin et al. 2015; Grimmelikhuijsen et al. 2017), the current study has brought individuals, their choices, and their interaction with collective actors into an analysis of isomorphic pressures. In so doing, it complements previous findings predominantly focused on the characteristics of organizations (D'Aunno et al. 1991; Frumkin and Galaskiewicz 2004; Ashworth et al. 2007; Fink 2011; Fay and Zavattaro 2016) and on the dynamics or mechanisms through which isomorphic pressures unfold (Radaelli 2000; Lodge and Wegrich 2005; Currie and Suhomlinova 2006; Gong and Xiao 2017). It also shows what individuals actually

do, rather than inferring which of their characteristics are more conducive to isomorphism (Villadsen 2011; Teodoro 2014).

Our research design, which patterned these premises, enabled the appreciation of the interplay between individuals and collective actors, such as government agencies and professional organizations acting upon some socialized legitimacy judgments (Bitektine and Haack 2015). In particular, the study has revealed that mechanisms connecting individual judgments to those collective actors, such as trust in the recommending institution or group, speculation about alternative performance dimensions, and compatibility with existing standards, are the main drivers of suboptimal decision making.

Scholars have expressed doubt that isomorphism will lead to performance improvements in public organizations (Radaelli 2000; Pollitt 2001; Frumkin and Galaskiewicz 2004; Ashworth et al. 2007; Kallio and Kuoppakangas 2013; Ammons and Roenigk 2015). Our findings provide empirical ammunition to substantiate this claim unequivocally. In fact, studies on the convergence of phenomena that ranged from arrangements such as privatization to practices such as university branding suffered from the lack of a clear baseline and had a more general difficulty in measuring outcomes. In contrast, the simplified scenario of our randomized trial allowed us to determine, less contentiously, that isomorphic pressures may lead to inferior solutions.

As previously mentioned, it has been recognized that the three isomorphic pressures are not easy to disentangle empirically since, although each of them involves a separate mechanism, they may be working together and have simultaneous effects (Mizruchi and Fein 1999). Very recently, for example, a qualitative study by Gong and Xiao (2017), set in local governments in China, identified empirically the three different isomorphic pressures. Our survey experiments allowed us to make an incremental step in the direction of isolating the three effects, because subjects in each of the treated groups were exposed to just one type of isomorphic pressure. Consistent with the majority of experiments of this type, the choice of operations requires judgment calls and a certain degree of discretion (e.g., Harrison and List 2004). With specific regard to isomorphic pressures, operations can be formulated in different ways depending on the context, the organizations, and the actors involved. Even inside the same context, more than one valid operation is often available.

Our research design seems to be well-equipped to meet internal validity requirements and, therefore, to establish a causal link between our isomorphic pressures' constructs and the propensity to make suboptimal decisions. However, our results should be interpreted in light of some limitations that pave the way for future research. First, our experimental manipulations of the three types of pressure are inherently incomparable because there is no single scale against which the dosages of our interventions can be measured (Shadish et al. 2002). As a consequence, the observed effects cannot be univocally attributed to either the type of pressure or the magnitude of the manipulation. We were partially able to overcome this limitation by supplementing our randomized controlled trials with qualitative work.

Second, our design is prone to external validity threats that are common to most experimental work (Baekgaard et al. 2015). For instance, the use of an abstract framing, an imposed set of rules, and a pool of participants who self-selected themselves for the study detracts from the generalizability of the findings beyond the study setting to more naturally occurring environments. External validity threats may be mitigated by the fact that subjects are real public sector workers. Furthermore, our design allowed exploiting variation in participants' industry of employment within government.

The qualitative findings help to refine our analysis by accounting for the reasons why public employees follow a specific pressure. Cross-cutting themes among the three types of isomorphism include, first, the attributes of decisions; i.e., the intrinsic qualities that our respondents assign to ministerial guidelines as well as to the recommendations of the peers or agencies with the highest reputation. Not only is their reliance on "objective studies" considered a plus, but also their fit with organizational needs. In a similar vein, a second theme is the support for the decision process, which highlights the importance that respondents attribute to the availability of devices, such as guidelines and recommendations, which identify criteria for their choice and may compensate for any lack of skills or experience. Qualities of and support for the decision also characterize the role of recommendations provided by professional associations, which we employed to operationalize normative isomorphism. Interestingly, however, these specific recommendations are conceived more as a shield for public employees, as an instrument that may guarantee their rights, rather than uniquely increase their performance or enable their professional development. Our findings also point to the importance of what we have called "homogenization," which has emerged as a theme of both coercive and normative isomorphism. This peculiar theme, confirmed in the ex-post account of the reasons for following a specific pressure, refers to the awareness of public employees that both behavioral convergence and compatibility among technical solutions in government are positive results per se, even if they come at the price of selecting an inferior solution. We posit that such awareness could be further investigated, as it casts the choice of an inferior solution as the result of thorough considerations rather than of contingent impulses.

To conclude, in line with previous research, our results suggest that isomorphic pressures may overpower evidence-based arguments indicating unambiguously superior solutions. However, it also provides a nuanced account of the underlying reasons. This should not be taken as an invitation to surrender decisions in public organizations to uncertainty and vagaries (Fischer 1990; Sanderson 2002). Instead, a major implication we can draw is the importance of employing institutional devices that trigger isomorphic pressures to channel and reinforce evidence-based content. In other words, we should not assume that evidence will speak for itself (Majone 1989; Mele, Compagni, and Cavazza 2014). Our results highlight the importance of relying on devices such as professional associations, epistemic communities, and orchestrated benchmarking exercises to reinforce the likelihood of adopting technically superior decisions, as well as to foresee and handle preconceptions that may derail such adoptions.

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APPENDIX A

Additional Evidence Supporting the Coding

Isomorphic pressures and second-order themes	First-order codes
COERCIVE ISOMORPHISM	
Attributes of decisions	<p><i>Based on reliable studies</i></p> <p>“Guidelines are based on reliable studies that are carried out in depth and that no single public agency could afford”</p> <p>“Guidelines are created starting from a well-known casuistry”</p> <p><i>Drafted by experts</i></p> <p>“Civil servants should stick as much as possible to ministerial guidelines as these are drafted by experts in the sector”</p> <p>“Guidelines are drafted on the basis of the opinion of experts in the sector and civil servants should pay serious attention to them”</p> <p>“Guidelines should be followed by civil servants considering that guidelines are written by highly qualified public personnel”</p> <p>“Guidelines are written by experts with technical know-how and, as such, civil servants should make good use of them”</p> <p><i>Based on practical experience</i></p> <p>“Guidelines are drafted based on previous experience and therefore should be followed, or at least should accompany the civil servants when making decisions”</p> <p>“Guidelines perform the function of orienting towards services and standards that have been tested already and that can be therefore considered reliable”</p>
Decision support (process)	<p><i>Reference point for decisions</i></p> <p>“In general, guidelines represent a certainty”</p> <p>“Guidelines represent a useful tool of reference and consultation, thanks to which you can retrieve the information you need easily and behave accordingly”</p>

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Isomorphic pressures and second-order themes	First-order codes
Homogenization	<p>“Guidelines are important because they make life easier for whoever is called to make a decision”</p> <p><i>Enabler of professional conduct</i></p> <p>“Certainly, guidelines aim at preventing someone from going off the beaten track and this should be seen as a support, as an advice not to lose sight of the goal”</p> <p>“Guidelines are useful to define some constraints and it is always useful to set boundaries into what may otherwise be too vague as the behavioral expectations towards civil servants”</p> <p>“Guidelines enable the civil servant to be advised on her/his professional decisions”</p> <p>“Thanks to the guidelines, one can work without problems and even avoid being suited for nothing, as is sometimes the case in the public sector”</p> <p><i>Guarantee of uniformity in the public sector</i></p> <p>“Ministerial guidelines tend to channel the action of the public sector in a common route of efficiency. This is why they should be considered and we should base our action upon them”</p> <p>“Guidelines should, in principle, harmonize the activities of the public sector”</p> <p>“I believe they are crucial to avoid that each agency operates according to its own way and to avoid useless duplications in looking for the same information”</p>
MIMETIC ISOMORPHISM (BEST-PERFORMING COLLEAGUES) Attributes of decisions	<p><i>Based on serious and committed assessment by the “best colleagues”</i></p> <p>“The choices of the best colleagues are based on a cost-benefit analysis”</p> <p>“The best colleagues decide based on criteria that keep in high consideration quality, and in this respect one should follow their choice”</p> <p>“Typically, best-performing colleagues display high levels of effort in choosing”</p> <p>“The best colleagues decide on the basis of evaluations resulting from the analysis of the content of, for example, training programs and of the professional level of the instructors and of the school”</p>

Continued

Isomorphic pressures and second-order themes	First-order codes
	<p>“The best colleagues choose based on sound evaluation criteria and perform well in their decisions—their advice should certainly be followed because it results from a serious and thoughtful evaluation”</p>
	<p><i>Based on practical applicability</i></p>
	<p>“The colleagues recognized by all as the best select on the basis of the practical utility of a specific option, such as a training program or of a software and yes, I believe one should follow their choice”</p>
	<p>“I think the best colleagues assess carefully a series of criteria when choosing, including the practical utility for the agency, and I believe it is useful to base the choice upon what the best say and do”</p>
Decision support (process)	<p><i>Support for those with scarce experience or skills</i></p>
	<p>“The best colleagues are trusted based on objective observation of their competency, professional approach, and commitment. Their advice can be especially useful for those who are not particularly experienced”</p>
	<p>“I believe the best can provide a useful decisional support to those who do not have the same experience and ability”</p>
Decision connected to the qualities of the “best colleagues”	<p><i>Decisions made by the “role models”</i></p>
	<p>“Their decisions are typically aimed at improving their professional profile and their agency, and this could serve as a role model for their colleagues”</p>
	<p>“The esteem and high considerations towards the best colleagues are great reasons to reflect upon what they choose and possibly do the same”</p>
	<p><i>Decisions made by the pioneers</i></p>
	<p>“I always think that the best colleagues understand earlier and better the validity of a specific training program or software, and I am therefore inclined to follow them”</p>
	<p><i>Decisions made by those who are capable</i></p>
	<p>“The best colleagues choose a training program or a software based on their experience and yes, I always listen to these colleagues”</p>
	<p>“Certainly, the best colleagues select based on their experience and capability. I would follow their choice”</p>

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Continued

 Isomorphic pressures and
second-order themes

First-order codes

**MIMETIC ISOMORPHISM (PUBLIC AGENCIES WITH THE
HIGHEST REPUTATION)**

Attributes of decisions

Based on the fit with the needs

“The agencies with a good reputation spend time assessing the needs of employees and then select courses which should be followed or else each agency should go through the same assessment”

“They choose on the basis of the needs of personnel and on the updates that are needed to keep up with progress and changes”

“For the agencies that actually have a good reputation, I believe training is chosen based on a serious analysis of the real needs of the organization and of the personnel”

Based on objective criteria

“They choose based on the efficiency and the merit and you can always trust these principles”

“They choose based on what can be considered universal criteria”

“Certainly the primary criteria include costs, speed, reliability, and reputation”

“Criteria of efficiency and effectiveness”

“Based on criteria of efficiency and effectiveness, which are objective”

Based on a careful assessment

“They choose based on cost-benefit analysis”

“They normally analyze precisely the relation between costs and benefits”

“The criteria employed correspond to a careful assessment of the provider”

“The agencies with the best reputation are overall those that are virtuous in spending public money, therefore they will choose maximizing quality vs cost”

Decision support (process)

Specifying criteria for selection

“Criteria for selection are qualitative and quantitative, these are like standards for the rest of us”

“If you look at the best agencies and follow them you can't be wrong. At the end of the day, they have built their reputation with commitment and sacrifice and they select on the basis of their know-how that is then shared”

Continued

Isomorphic pressures and second-order themes	First-order codes
Decision connected to the qualities of the “best public agencies”	<p><i>Decisions made by the pioneering agencies</i></p> <p>“The best public agencies are those that implement first innovation and reform processes and that display efficiency. I believe their decisions should be trusted because they are based on experience and on serious motivations”</p> <p>“They select based on their needs but also on the basis of the scientific, technological, and organizational progresses”</p> <p><i>Decisions made by the trusted agencies</i></p> <p>“Certain agencies have a great reputation and deliver great services—they choose on the basis of what keeps their employees always updated and therefore should be followed”</p> <p>The best agencies are those you can trust. On the basis of trust, you follow what they do”</p>
NORMATIVE ISOMORPHISM	
Attributes of decisions	<p><i>Decisions aimed at developing competences</i></p> <p>“Professional associations inform, train, guarantee, and offer guidelines to their members, and they provide suggestions that are in line with this purpose”</p> <p>“I believe their role is to offer services useful for the development of the profession, such as training, updates, legal counseling, and when they recommend something all these criteria should have been included in their decision”</p> <p><i>Decisions aimed at protecting members’ rights</i></p> <p>“The role of a professional association is to protect its members and their rights, suggesting solutions that are in line with this purpose”</p> <p>“The main role of professional associations is to defend, yes I mean defend, the interests of their members. I don’t know if they always choose or recommend the best in absolute terms, but certainly they choose based on the protection of their members”</p> <p>“If you follow the guidelines of professional associations, you know they will guarantee you from a legal point of view. There can’t be disputes, and even if there are disputes, the choice of the association will give protection from any legal procedure”</p>
Decision support	<p><i>Providing support and safe advice</i></p> <p>“The primary role of professional associations is to support and to advise. I follow them because their decisions and recommendations are safe”</p>

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Continued

 Isomorphic pressures and
 second-order themes

First-order codes

Homogenization

“This is the place where professional advise is given, but also training and what allows to improve civil service from a professional point of view”

Guarantee uniformity of conduct among professionals

“Professional associations unite people doing the same job”

“In my view, the role of professional associations is to homogenize and to blend the associates around a certain subject or project. Therefore, I expect associatesto conform to what in a sense they have decided together”

“The role of professional associations, their actions and their choices, is to guarantee seriousness and professionalism to a category of professionals”

“Following the recommendations of professional associations helps maintain a certain internal conduct within the category and this will also be recognized outside”

“Their main role is to offer a specialized reference point for professionals and this includes guarantees but also guidelines”

APPENDIX B

Additional Evidence Supporting the Coding: Ex-Post Explanations

Isomorphic pressures and second-order themes	First-order codes
COERCIVE ISOMORPHISM	
Reasons for following ministerial guidelines that recommend an inferior solution	<p data-bbox="474 552 823 581"><i>Trust towards the decision makers</i></p> <p data-bbox="498 585 1089 614">“I trust what the ministry recommends, no matter what”</p> <p data-bbox="498 618 1089 672">“I guess if you trust an agency and its experts, you don’t question much”</p> <p data-bbox="474 681 864 710"><i>Alternative dimensions of performance</i></p> <p data-bbox="498 714 1110 807">“Guidelines may recommend a training program or a software with inferior performance in case of cost cuts if the worse is cheaper”</p> <p data-bbox="498 811 1089 962">“I would like to understand why the ministry is recommending a worse solution but, in general, if something is recommended by the ministry I tend to follow it. It may be, for example, that the solution is tailored to the workload”</p> <p data-bbox="498 966 1110 1058">“Perhaps they recommend an inferior training or software because, while being slightly inferior, it better meets the needs of the agency”</p> <p data-bbox="498 1062 1116 1193">“One should consider that the best product is not always the winning one—history is packed with examples of products qualitatively inferior that then have become standard and therefore have won”</p> <p data-bbox="474 1197 642 1226"><i>Homogenization</i></p> <p data-bbox="498 1230 1110 1323">“It may be that there are constraints of homogeneity with the existing solutions—then I would follow the ministerial guidelines”</p> <p data-bbox="498 1327 1110 1516">“I think I would follow the advice of a worse-performing solution, also because otherwise I may run the risk of misalignment with the great majority of the colleagues. Therefore, the supposed ‘best performance’ of a certain solution would end up being useless or even counter-productive”</p> <p data-bbox="498 1520 1110 1640">“I don’t have a clue about the reason why the ministerial guidelines may recommend a worse product. I would follow them in any case to feel safer and more guaranteed”</p>

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 Isomorphic pressures and
 second-order themes

First-order codes

MIMETIC ISOMORPHISM (BEST-PERFORMING COLLEAGUES)

 Reasons for following
 the advice of the best
 colleagues who recom-
 mend an infer-
 ior solution

Trust towards the best colleagues and their experience

“Yes, I would trust their recommendation if I trust them”

 “I would follow their advice to attend the training pro-
 gram or buy the software with inferior performance,
 because I start from the assumption that the best col-
 leagues are more knowledgeable than me. I trust them”

Alternative dimensions of performance

 “Sure, I would follow their advice because the fact that
 the performance is inferior doesn’t mean these solutions
 are not useful”

 “These colleagues may have tried the program or software
 they recommend and therefore may have realized it works
 well, even better than the one which is in principle the
 best”

 “I would follow their advice because I expect it to be
 derived from their direct experience, which may have
 showed some elements that escape the general criteria of
 performance”

Homogenization

 “In order to have an homogeneous training or IT pro-
 gram, I would follow their advice”

**MIMETIC ISOMORPHISM (PUBLIC AGENCIES WITH THE
 HIGHEST REPUTATION)**

 Reasons for following
 the advice of the agen-
 cies with the best repu-
 tation that recommend
 an inferior solution

Trust towards the best agencies

 “The agencies with the best reputation are normally those
 you can trust. If they choose something, there must be
 a reason”

Alternative dimensions of performance

 “I would follow their advice. Probably, they have chosen
 the worse-performing one to prevent problems in the
 future, if they know the provider is not doing great and
 investing in innovation. Today it may be the best solution
 right now, but not in a year or so.”

 “Their advice could still be a good one even if it doesn’t
 look like. For example, they may have chosen a software
 with inferior performance but only because all the staff
 knows how to use another; investing in the best would

Continued

 Isomorphic pressures and
 second-order themes

First-order codes

imply having less productive employees for more time and moreover invest in ad hoc training”

Homogenization

“I would follow their advice because the solution they opt for may be likely to be the most common among all agencies”

NORMATIVE ISOMORPHISM

Reasons for following
 the advice of the agen-
 cies with the best repu-
 tation that recommend
 an inferior solution

Trust towards the professional associations

“I would follow the professional association. I trust them, they protect my interests, and I will do what they tell me to do”

“Probably they have their good reasons and I would stick to their advice”

“They can recommend the worse one if they have the right know-how and I would trust the recommendation they communicate to their members”

Alternative dimensions of performance

“There may be many reasons to choose an inferior product, not the least the fact that it is more adaptable to the needs of a specific professional category”

“An example shall clarify my view on why these recommendations should be followed, irrespective of the performance of a specific product. If I need a motorcycle and, at the same price, they offer me a scooter or a big motorbike, the latter may be certainly better and enable me to do more things, but if at the end of the day I only need to travel around the city center, I will end up choosing the scooter. This is how I believe a professional association decides”

“Yes, a professional association has all the skills to choose and advice, it is not up to me to decide whether it is inferior or not. The most important thing is the outcome and a better knowledge of the problems may allow them to choose the solution that apparently performs worse but that achieves better results”

APPENDIX C

Experimental Scenarios (Translated from the Italian Version that was Presented to Subjects)

Experiment 1, by condition

Control	Coercive	Mimetic	Normative
Imagine you are the superintendent of a school district. You have to choose between two management software packages of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software packages have been approved by the Ministry. However, there is no evidence of one being better than the other.	Imagine you are the superintendent of a school district. You have to choose between two management software packages of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software packages have been approved by the Ministry. However, there is no evidence of one being better than the other.	Imagine you are the superintendent of a school district. You have to choose between two management software packages of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software packages have been approved by the Ministry. However, there is no evidence of one being better than the other.	Imagine you are the superintendent of a school district. You have to choose between two management software packages of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software packages have been approved by the Ministry. However, there is no evidence of one being better than the other.
	The ministerial guidelines suggest the adoption of <i>Orion</i> .	You heard that all of the school districts with the best national reputation will adopt <i>Orion</i> .	The professional association of superintendents to which you belong suggests that you adopt <i>Orion</i> .
Which software would you buy?	Which software would you buy?	Which software would you buy?	Which software would you buy?

Experiment 2, by condition

Control	Coercive	Mimetic	Normative
Imagine you are the superintendent of a school district. You have to choose between two management software packages of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software programs have been approved by the Ministry. <i>Orion</i> 's performance is slightly worse than the other.	Imagine you are the superintendent of a school district. You have to choose between two management software packages of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software programs have been approved by the Ministry. <i>Orion</i> 's performance is slightly worse than the other.	Imagine you are the superintendent of a school district. You have to choose between two management software packages of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software programs have been approved by the Ministry. <i>Orion</i> 's performance is slightly worse than the other.	Imagine you are the superintendent of a school district. You have to choose between two management software packages of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software programs have been approved by the Ministry. <i>Orion</i> 's performance is slightly worse than the other.

Continued

Control	Coercive	Mimetic	Normative
	However, ministerial guidelines suggest the adoption of <i>Orion</i> .	However, all organizations with the best national reputation will adopt <i>Orion</i> .	However, the professional association to which you belong suggests that you adopt <i>Orion</i> .
Which software would you buy?	Which software would you buy?	Which software would you buy?	Which software would you buy?

Experiment 3a, by condition

Control	Coercive	Mimetic	Normative
Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software packages have been approved by the Ministry. <i>Orion</i> 's performance is slightly worse than the other.	Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software packages have been approved by the Ministry. <i>Orion</i> 's performance is slightly worse than the other.	Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software packages have been approved by the Ministry. <i>Orion</i> 's performance is slightly worse than the other.	Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i> . Both software packages have been approved by the Ministry. <i>Orion</i> 's performance is slightly worse than the other.
	However, ministerial guidelines suggest the adoption of <i>Orion</i> .	However, all organizations with the best national reputation will adopt <i>Orion</i> .	However, the professional association to which you belong suggests that you adopt <i>Orion</i> .
Which software do you choose to adopt?	Which software do you choose to adopt?	Which software do you choose to adopt?	Which software do you choose to adopt?

Experiment 3b, by condition

Control	Coercive	Mimetic	Normative
<p>You must decide which training program to attend between the following two: either <i>Delta</i> or <i>Gamma</i>. The two programs provide the same number of credits, have the same schedule of classes, and require exactly the same effort. The performance assessment issued by an entirely reliable independent agency indicated that <i>Gamma</i> is slightly worse than the other.</p>	<p>You must decide which training program to attend between the following two: either <i>Delta</i> or <i>Gamma</i>. The two programs provide the same number of credits, have the same schedule of classes, and require exactly the same effort. The performance assessment issued by an entirely reliable independent agency indicated that <i>Gamma</i> is slightly worse than the other.</p> <p>However, the HR director of your organization suggests attending <i>Gamma</i>.</p>	<p>You must decide which training program to attend between the following two: either <i>Delta</i> or <i>Gamma</i>. The two programs provide the same number of credits, have the same schedule of classes, and require exactly the same effort. The performance assessment issued by an entirely reliable independent agency indicated that <i>Gamma</i> is slightly worse than the other.</p> <p>However, your colleagues who all recognize as the best will attend <i>Gamma</i>.</p>	<p>You must decide which training program to attend between the following two: either <i>Delta</i> or <i>Gamma</i>. The two programs provide the same number of credits, have the same schedule of classes, and require exactly the same effort. The performance assessment issued by an entirely reliable independent agency indicated that <i>Gamma</i> is slightly worse than the other.</p> <p>However, the people with whom you have shared your studies or your career path—people very similar to you—will attend <i>Gamma</i>.</p>
<p>Which course will you attend?</p>	<p>Which course will you attend?</p>	<p>Which course will you attend?</p>	<p>Which course will you attend?</p>

Experiment 4a, by condition

Control	Coercive	Mimetic	Normative
<p>Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i>. Both software packages have been approved by the Ministry and are completely identical except for the features described as follows. In particular, the performance assessment issued by an entirely reliable independent agency indicated that <i>Orion</i> is slightly inferior to <i>Sigma</i> in terms of ease of use, speed, accuracy, and technical support.</p>	<p>Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i>. Both software packages have been approved by the Ministry and are completely identical except for the features described as follows. In particular, the performance assessment issued by an entirely reliable independent agency indicated that <i>Orion</i> is slightly inferior to <i>Sigma</i> in terms of ease of use, speed, accuracy, and technical support.</p> <p>However, ministerial guidelines suggest the adoption of <i>Orion</i>.</p>	<p>Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i>. Both software packages have been approved by the Ministry and are completely identical except for the features described as follows. In particular, the performance assessment issued by an entirely reliable independent agency indicated that <i>Orion</i> is slightly inferior to <i>Sigma</i> in terms of ease of use, speed, accuracy, and technical support.</p> <p>However, all organizations with the best national reputation will adopt <i>Orion</i>.</p>	<p>Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i>. Both software packages have been approved by the Ministry and are completely identical except for the features described as follows. In particular, the performance assessment issued by an entirely reliable independent agency indicated that <i>Orion</i> is slightly inferior to <i>Sigma</i> in terms of ease of use, speed, accuracy, and technical support.</p> <p>However, the professional association to which you belong suggests that you adopt <i>Orion</i>.</p>
<p>Which software do you choose to adopt?</p>	<p>Which software do you choose to adopt?</p>	<p>Which software do you choose to adopt?</p>	<p>Which software do you choose to adopt?</p>

Experiment 4b, by condition

Control	Coercive	Mimetic	Normative
<p>You must decide which training program to attend between the following two: either <i>Delta</i> or <i>Gamma</i>. The two programs provide the same number of credits, have the same schedule of classes, and require exactly the same effort. The performance assessment issued by an entirely reliable independent agency indicated that <i>Gamma</i> is slightly worse than <i>Delta</i> for practical usefulness, quality of the instructors, quality of the content, and efficacy of the teaching methodologies.</p>	<p>You must decide which training program to attend between the following two: either <i>Delta</i> or <i>Gamma</i>. The two programs provide the same number of credits, have the same schedule of classes, and require exactly the same effort. The performance assessment issued by an entirely reliable independent agency indicated that <i>Gamma</i> is slightly worse than <i>Delta</i> for practical usefulness, quality of the instructors, quality of the content, and efficacy of the teaching methodologies.</p> <p>However, the HR director of your organization suggests attending <i>Gamma</i>.</p>	<p>You must decide which training program to attend between the following two: either <i>Delta</i> or <i>Gamma</i>. The two programs provide the same number of credits, have the same schedule of classes, and require exactly the same effort. The performance assessment issued by an entirely reliable independent agency indicated that <i>Gamma</i> is slightly worse than <i>Delta</i> for practical usefulness, quality of the instructors, quality of the content, and efficacy of the teaching methodologies.</p> <p>However, your colleagues who all recognize as the best ones will attend <i>Gamma</i>.</p>	<p>You must decide which training program to attend between the following two: either <i>Delta</i> or <i>Gamma</i>. The two programs provide the same number of credits, have the same schedule of classes, and require exactly the same effort. The performance assessment issued by an entirely reliable independent agency indicated that <i>Gamma</i> is slightly worse than <i>Delta</i> for practical usefulness, quality of the instructors, quality of the content, and efficacy of the teaching methodologies.</p> <p>However, the people with whom you have shared your studies or your career path—people very similar to you—will attend <i>Gamma</i>.</p>
Which course will you attend?	Which course will you attend?	Which course will you attend?	Which course will you attend?

Experiment 5a, by condition

Control	Coercive		Mimetic		Normative						
<p>Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i>. Both software packages have been approved by the Ministry and are completely identical except for the characteristics described in the table below. The table shows the performance assessment of the two software packages, on a scale from 0 (minimum) to 100 (maximum), issued by an entirely reliable independent agency.</p>	<p>Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i>. Both software packages have been approved by the Ministry and are completely identical except for the characteristics described in the table below. The table shows the performance assessment of the two software packages, on a scale from 0 (minimum) to 100 (maximum), issued by an entirely reliable independent agency.</p>		<p>Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i>. Both software packages have been approved by the Ministry and are completely identical except for the characteristics described in the table below. The table shows the performance assessment of the two software packages, on a scale from 0 (minimum) to 100 (maximum), issued by an entirely reliable independent agency.</p>		<p>Your organization must choose which management software to adopt between two options of the same price: either <i>Sigma</i> or <i>Orion</i>. Both software packages have been approved by the Ministry and are completely identical except for the characteristics described in the table below. The table shows the performance assessment of the two software packages, on a scale from 0 (minimum) to 100 (maximum), issued by an entirely reliable independent agency.</p>						
	<i>Sigma</i>	<i>Orion</i>	<i>Sigma</i>	<i>Orion</i>	<i>Sigma</i>	<i>Orion</i>	<i>Sigma</i>	<i>Orion</i>			
Easy-to-use	74	72	Easy-to-use	74	72	Easy-to-use	74	72	Easy-to-use	74	72
Speed	89	87	Speed	89	87	Speed	89	87	Speed	89	87
Accuracy	93	91	Accuracy	93	91	Accuracy	93	91	Accuracy	93	91
Technical support	76	74	Technical support	76	74	Technical support	76	74	Technical support	76	74
			However, ministerial guidelines suggest the adoption of <i>Orion</i> .			However, all organizations with the best national reputation will adopt <i>Orion</i> .			However, the professional association to which you belong suggests that you adopt <i>Orion</i> .		
Which software do you adopt?			Which software do you adopt?			Which software do you adopt?			Which software do you adopt?		

Experiment 5b, by condition

	Coercive		Mimetic		Normative	
Control	<p>You must decide which training program to attend between the following two: either <i>Delta</i> or <i>Gamma</i>. The two programs provide the same number of credits, have the same schedule of classes, and require exactly the same effort. The performance assessment of the two courses, on a scale from 0 (minimum) to 100 (maximum), issued by an entirely reliable independent agency is shown in the table below.</p>					
	<i>Delta</i>	<i>Gamma</i>	<i>Delta</i>	<i>Gamma</i>	<i>Delta</i>	<i>Gamma</i>
Practical usefulness	74	72	74	72	74	72
Quality of the instructors	89	87	Quality of 89 the instructors	Quality of 87 the instructors	Quality of 89 the instructors	Quality of 87 the instructors
Quality of the content	93	91	Quality of 93 the content	Quality of 91 the content	Quality of 93 the content	Quality of 91 the content
Efficacy of the teaching methodologies	76	74	Efficacy of 76 the teaching methodologies	Efficacy of 74 the teaching methodologies	Efficacy of 76 the teaching methodologies	Efficacy of 74 the teaching methodologies
Which course will you attend?	Which course will you attend?		Which course will you attend?		Which course will you attend?	