



A Micro-Institutional Inquiry into Resistance to Environmental Pressures

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A Micro-institutional Inquiry into Resistance to Environmental Pressures

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A MICRO-INSTITUTIONAL INQUIRY INTO RESISTANCE TO ENVIRONMENTAL PRESSURES

ABSTRACT

This article contributes to the emerging stream of micro-institutional research, which zooms in on the internal organizational processes that are responsible for organizations' differential responses to the external environment. Specifically, the investigation offers new knowledge of how organizational identity processes can shape whether decision makers will resist versus give in to environmental pressures. Building on the notion that organizational identity acts as a filter through which decision makers relate to the external environment, I develop the theoretical argument that strong organizational identification increases resistance to environmental pressures due to two mechanisms: (1) it bolsters the decision maker's certainty and (2) it deflects the decision maker's attention from the environment. A series of laboratory experiments not only test the mediated relationship between organizational identification and resistance to environmental pressures but also contrasts different types of organizational identity. The empirical results support the hypothesized positive link between organizational identification and resistance, which becomes particularly strong when the organizational identity is normative (vs. utilitarian). The findings reported here enrich institutional theory by adding microfoundations to organizational practice-adoption decisions and shedding new light on relevant enabling conditions for agency and within-field heterogeneity.

Keywords: Microinstitutionalism, Institutional theory, Organizational identity, Lab experiments

Institutional theory is currently undergoing a fundamental shift from a formerly purely macro-level approach toward a comprehensive multi-level paradigm that explicitly incorporates individuals (Bechky, 2011; Fine & Hallett, 2014; Thornton, Ocasio, & Lounsbury, 2012). This transformation is driven by the recognition that "much analytical purchase can be gained by developing a micro-level component of institutional analysis" (Powell & Colyvas, 2008: 276) to complement earlier macro-level accounts, with the goal of making the theory both more precise and more general as a result (Thornton & Ocasio, 2008). After decades of neglect, the motivations, cognitions, backgrounds, and behaviors of individual actors have thus moved to the foreground of institutional inquiry (Boxenbaum, 2014; Lawrence, Suddaby, & Leca, 2011; Zilber, 2016).

However, several important questions related to the role of individuals in institutional theory have remained largely unaddressed so far. The current investigation tackles one such theoretical puzzle that is particularly pressing: Facing the same environmental pressures to adopt certain organizational

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2 practices, why is it that some organizational decision makers resist those pressures while others give in to
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4 them and conform to isomorphic templates? Answering this question is of critical importance for at least
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6 two interrelated reasons, the first pertaining to its distinctive focus on individual decision makers as the
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8 unit of analysis and the second to its explanandum of resistance to adopting organizational practices.
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11 First, in contrast to the conventional macro-institutional emphasis on field-level homogeneity, an
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13 analytical focus on decision makers has significant potential for explaining within-field heterogeneity—
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15 that is, why not all organizations in a field are the same (Tolbert, David, & Sine, 2011; Zucker, 1991).
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17 While there is no doubt that environmental pressures can be very powerful, they are rarely so strong that
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19 all organizational decision makers have no choice but to succumb to them unreflectedly (Binder, 2007;
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21 Fiol & O'Connor, 2003). Indeed, an increasing consensus is emerging that decision makers can exercise
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23 considerable discretion in deciding to what extent their organization becomes isomorphic with the
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25 environment. Therefore, a revised account that does away with the long-standing “institutional-dope”
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27 assumption (DiMaggio & Powell, 1991), and that instead endows decision makers with the ability to
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29 subjectively make sense of the environment, has great potential to significantly broaden our
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31 understanding of the adoption of institutionalized prescriptions. Unfortunately, relevant micro-
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33 sociological processes, which “form a necessary link in the causal chain connecting abstract isomorphic
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35 pressures to concrete organizational actions, are all too often merely assumed or even ignored by
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37 institutional theorists” (Heugens & Lander, 2009: 76). Consequently, greater attention to the local
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39 conditions and how they shape the way decision makers perceive, interpret, and act on the environment
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41 are indispensable for institutional inquiry to move forward (Bechky, 2011; Douglas Creed, Hudson,
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43 Okhuysen, & Smith-Crowe, 2014; Hallett, 2010b; Powell & Bromley, 2015). It is this call to develop the
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45 microfoundations of institutions and to bring “individuals back into institutional theory” (Lawrence et al.,
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47 2011: 53) that provides a key motivation for the current investigation.
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56 Second, a reinvigorated commitment to explaining variations in resistance to adopting
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2 organizational practices (e.g., Dhalla & Oliver, 2013; Pache & Santos, 2010) is warranted for both
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4 practical and theoretical reasons. From a practical perspective, whether isomorphic templates for
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6 organizing get adopted by an organization can have major implications not only for that organization's
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8 social evaluation, but also for its technical efficacy and differentiation from competition, with deviating
9
10 organizations often outperforming conformers in terms of profitability (Barreto & Baden-Fuller, 2006;
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12 Meyer & Rowan, 1977; Zucker, 1987). This investigation uncovers an important micro-level predictor of
13
14 such deviance and thus perhaps of an organization's competitive advantage. From a theoretical
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16 perspective, knowledge about the conditions under which actors resist environmental practices directly
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18 speaks to the enduring agency debate (e.g., Heugens & Lander, 2009; Zilber, 2002)—that is, the question
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20 of whether people are mere institutional carriers who passively reproduce their external world vs. active
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22 human agents who purposefully interpret and resist their environment. Developing a middle-ground
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24 perspective that transcends the conventional dichotomy of structure vs. voluntarism and unpacks the
25
26 conditions under which people will fall closer to one or the other end of this continuum is an important
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28 element in building a richer notion of agency and contingent actorhood in institutional theorizing
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30 (Battilana, 2006; Battilana & D'Aunno, 2009), which has the potential to take institutionalism beyond a
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32 restricted model of constraint.
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40 Despite the great relevance of understanding how decision makers experience and react to
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42 environmental pressures to adopt institutionalized prescriptions, prior investigations into this issue are
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44 severely limited (cf. Suddaby, 2010; Zilber, 2008). We know very little about whether and how the
45
46 characteristics of decision makers and their immediate context shape organizational resistance.
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48 Traditionally, scholars studying responses to adoption pressures have used a macro lens (see Scott, 2014
49
50 for an overview), whereas recent micro-level investigations evoking the notions of institutional
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52 entrepreneurship (Battilana, Leca, & Boxenbaum, 2009), institutional work (Lawrence et al., 2011), or
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54 inhabited institutions (Hallett & Ventresca, 2006) have so far largely bracketed organizational template-
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2 adoption decisions. As Chandler and Hwang (2015) emphasize, the institutional practice adoption and
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4 microfoundations literatures have yet to be integrated systematically in order to fully grasp the reasons
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6 for organizational heterogeneity.
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9 My particular approach to redressing this oversight and identifying an important source of
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11 decision makers' heterogeneous responses to institutional pressures is motivated by the need to avoid
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13 both the over-socialized view of earlier neoinstitutional theorizing as well as the reductionist trap of
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15 overly utilitarian, atomistic accounts (Powell & Colyvas, 2008). In most cases, organizational decision
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17 makers do not respond to institutional pressures in isolation but in the context of their particular social
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19 setting (Hallett, 2010a). Thus, in order to capture human beings in their collective character, it is
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21 important to explicitly account for the effect of their immediate social context on cognition and behavior
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23 (Battilana & D'Aunno, 2009; Fine & Hallett, 2014).
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28 In terms of decision making related to practice adoption, an especially salient immediate social
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30 context is undoubtedly that of the organization (Suddaby, Elsbach, Greenwood, Meyer, & Zilber, 2010;
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32 Zilber, 2002). Therefore, I build on recent efforts to infuse institutional theory with organizational
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34 identity processes (Dejordy & Creed, 2016; Greenwood, Raynard, Kodeih, Micelotta, & Lounsbury,
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36 2011; Hatch & Zilber, 2012; Kraatz & Block, 2008; Thornton et al., 2012) to argue that actors'
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38 sensemaking and adoption decisions are substantially influenced by their identification with and identity
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40 of the organization. The concept of organizational identity roots the individual in the organizational
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42 context (Ashforth, Rogers, & Corley, 2011), structures ongoing organizational sensemaking activity
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44 (Fine & Hallett, 2014), and provides an ideal window for institutionalists to examine micro-level
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46 dynamics in organizational decision making because it reflects the taken-for-granted collective character
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48 of organizational members and avoids the imagery of muscular, heroic individuals (Scott, 2014).
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50 Organizational identity forms a critical link between the institutional environment and the cognition and
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52 behavior of organizational decision makers (Glynn, 2008; Thornton & Ocasio, 2008), but it has yet to be
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2 systematically examined in conjunction with organizational responses to environmental pressures.
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4 Building on the notion that organizational identity represents an important filter through which
5 the environment is perceived, interpreted, and acted upon (e.g., Greenwood et al., 2011; Raffaelli &
6 Glynn, 2014), this article develops a novel theoretical argument regarding the role of organizational
7 identity processes in decision makers' responses to environmental pressures. I argue, and empirically
8 demonstrate, that strong organizational identification increases organizational decision makers' resistance
9 to environmental pressures and that this effect is due to two cognitive mechanisms related to how they
10 perceive themselves and the environment. Specifically, strong organizational identification is shown to
11 (a) bolster the decision maker's certainty and (b) deflect the decision maker's attention from the environment.
12 Moreover, this research moves beyond studying identification to compare the consequences of different
13 types of organizational identity, specifically contrasting a normative and a utilitarian ideal type. Overall,
14 this article addresses the following three research questions: (1) Does organizational identification affect
15 decision makers' resistance to environmental pressures, and (2) if so, why? (3) What particular attributes of
16 an organization's identity modulate this resistance?
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35 This investigation makes several important contributions. First, it adds to recent micro-
36 institutional inquiry by shedding new light on the role of decision makers' cognition in organizational
37 practice adoption. While in no way devaluing the impact of the external environment on organizations,
38 microinstitutionalists have called for greater emphasis on interpreting macro-level environments through
39 the lens of micro-level perceptions (e.g., Bitektine & Haack, 2015; Greenwood et al., 2011; Powell &
40 Colyvas, 2008; Suddaby, 2010; Thornton et al., 2012), and they have identified the need for more
41 theorizing dedicated to the individual-level processes through which environments affect organizations.
42 Because organizational decision makers mediate the interface between organizational environment and
43 organizational action, we can fully grasp the nature and effect of external institutions only by
44 understanding the cognitive processes involved in dealing with those institutions (Barley, 2008; George,
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2 Chattopadhyay, Sitkin, & Barden, 2006; Glaser, Kroezen, & Thornton, 2015). In particular, identifying
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4 the local contexts and cognitive processes that shield decision makers from external institutions is critical
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6 for understanding relevant enabling conditions of actorhood, an issue that researchers have identified as
7
8 particularly critical to advancing the agency debate in institutional theory (Battilana, 2006; Powell &
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10 Bromley, 2015). Specifying such enabling conditions will “help ease the unfortunate dichotomy between
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12 heroic actors and ‘cultural or institutional dopes’” (Hwang & Colyvas, 2011: 63). Contributing to this
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14 line of inquiry, the current investigation highlights organizational identity as a central local condition
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16 promoting decision makers’ resistance to environmental pressures. It provides support for the notion that
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18 an individual’s agency is strongly guided by his or her social identification and identity. Further, it
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20 specifies two concrete cognitive mechanisms—certainty and attention—that explain actors’ variation in
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22 resistance, thus directly addressing repeated calls for greater insight into the cognitive processes through
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24 which people experience and make sense of institutional pressures (Battilana & D’Aunno, 2009; Bechky,
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26 2011; Thornton & Ocasio, 2008; Zilber, 2002).

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33 In addition to these theoretical advancements, this article makes a methodological contribution by
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35 developing a novel experimental setup with manifold potential uses for future institutional inquiry. For a
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37 long time, experiments have been virtually unheard of in institutional research, but recently scholars have
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39 begun to follow up on Zucker’s (1977) seminal work and leverage the ability of experimental methods to
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41 isolate theoretical factors of interest and clarify the mechanisms underlying causal effects. Bringing
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43 quantitative micro work to institutional theory, experiments represent a neglected but much-needed tool
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45 for uncovering micro-level processes and explaining how individuals experience, make sense of, and
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47 react to institutions. Experiments thus allow for building new causal theory by addressing key questions
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49 at the heart of institutional theory that would be difficult to study with other methods (Bitektine, Lucas, &
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51 Schilke, forthcoming; Haack, McKinley, Schilke, & Zucker, 2016). The procedures and findings reported
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53 in the current research should encourage future scholars to employ experimental methods when studying
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2 institutional phenomena, thus helping to expand the “resource space” of potential contributions available
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4 to the institutional research community (Bitektine, 2009; Bitektine & Miller, 2015).
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6 7 **THEORETICAL BACKGROUND**

8 **Toward a Micro-Level Component of Institutional Theory**

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10 Why do organizations adopt practices whose material benefits are difficult to assess even in retrospect?
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12 This important question is at the core of institutional theory. A long line of institutional research suggests
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14 that various mimetic, normative, and coercive pressures cause organizations to adopt templates that make
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16 them isomorphic with their environment (Scott, 2014). Following the foundational works of Meyer and
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18 Rowan (1977), Zucker (1977), and DiMaggio and Powell (1983), institutionalism has developed into a
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20 leading—perhaps the dominant—perspective in organizational analysis these days (Greenwood, Hinings,
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22 & Whetten, 2014; Powell & Bromley, 2015).
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28 Despite its significant contributions, institutional theory has become the subject of increasing
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30 criticism for its overly strong emphasis on macro-level issues (Bitektine, 2011; Hallett, 2010b; Powell &
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32 Colyvas, 2008). Traditionally, the theory focused heavily on environmental drivers of organizational
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34 behavior while neglecting the processes by which organizational actors cope with the environment and
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36 which may thus explain why organizations differ in their acceptance of versus resistance to external
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38 pressures (cf. Felin, Foss, & Ployhart, 2015; George et al., 2006). That is, by viewing the source of
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40 organizational behavior as exogenous, institutionalists have largely “black boxed” the organization
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42 (Gavetti, Levinthal, & Ocasio, 2007; King, Felin, & Whetten, 2010; Zilber, 2016; Zucker, 1983).
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47 This line of criticism is fueled by the observation that, even in the long run, many organizations
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49 will *not* conform to institutional pressures (Kraatz & Zajac, 1996; Pedersen & Dobbin, 2006). Heugens
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51 and Lander’s (2009) comprehensive meta-analysis of 144 institutional studies analyzing the effect of
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53 environmental pressures on isomorphism finds that, although this effect is significant, reported effect
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55 sizes are relatively small, and using environmental institutions to explain a few percentage points of the
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2 variance does not an iron cage make.
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4 In response to such criticism, institutionalists have increasingly come to accept the notion that
5 organizations do not simply react to environmental demands, and this opens up the way for investigations
6 into factors that help to explain why resistance rather than conformity may characterize an organization's
7 response (Oliver, 1991; Park, Sine, & Tolbert, 2011). In particular, institutionalists have recently become
8 interested in investigating factors relevant to the micro level, which can provide considerable additional
9 leverage for understanding the reasons for variability in organizations' responses to comparable
10 institutional environments (DiMaggio & Markus, 2010; Zucker, 1991). Although organizations within a
11 given institutional field are typically exposed to similar environmental pressures, these organizations'
12 decision makers may not experience, and consequently may not respond to, such pressures in the same
13 way (Raffaelli & Glynn, 2014; Suddaby, Viale, & Gendron, 2016; Tolbert et al., 2011). A sharper focus
14 on cognitive processes, which for too long have been "obscured by the macro-gaze common in
15 contemporary neo-institutionalism" (Hallett, 2010b: 53), thus seems indispensable to explain the
16 feasibility of varying organizational responses within the same macro-institutional environment.
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35 In particular, the research stream on inhabited institutionalism (Hallett & Ventresca, 2006) has
36 recently made significant progress in illuminating the role of cognitive processes in how people engage
37 with external institutions. Binder (2007) and Hallett (2010b), for example, demonstrated that institutions
38 are "inhabited" by individuals who actively make sense of institutional rules through the lens of their
39 unique experiences and local context. Similarly, Fine and Hallett (2014) argued that actors' cognitive
40 processes play a key role in interpreting external institutions and ultimately guiding organizational action.
41 In short, a micro-level understanding of institutional processes goes hand in hand with a cognitive lens.
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51 Indeed, a cognitive micro-level approach to institutional theory is highly consistent with some of
52 the theory's intellectual roots (cf. Barley, 2008; DiMaggio & Powell, 1991; Hallett, 2010b; Powell &
53 Colyvas, 2008; Zucker & Darby, 2005)—especially Selznick (1957) and Berger and Luckmann (1966).
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2 In his seminal study of how institutions work, Selznick (1957: 4) insisted that “no social process can be
3 understood save as it is located in the behavior of individuals, and especially in their perceptions of
4 themselves and each other.” Similarly, shared objectified schemas of “how things are done” are key to
5 Berger and Luckman’s (1966) view of how individuals make sense of everyday social reality,
6 accentuating the subjective interpretations of individuals that manifest in social groups. Notably, they
7 highlight that “[i]dentity is, of course, a key element of subjective reality” (Berger & Luckmann, 1966:
8 194). Although social identities can stem from a variety of contexts, institutional scholars have devoted
9 special attention to *organizational* identity.

20 **Organizational Identity and Institutional Theory**

21 Organizational identity has a long history in institutional inquiry.¹ Sixty years ago, Selznick (1957: 40)
22 emphasized that an “infusion [of values] produces a distinct identity for the organization.” Nonetheless, it
23 has only been relatively recently that institutionalists have rediscovered the importance of organizational
24 identity and have started to increasingly incorporate the concept into their theorizing (Glynn, 2008;
25 Pedersen & Dobbin, 2006). This renewed interest in organizational identity can be at least partially
26 explained by heightened efforts to better explain agency in the institutional-theory framework. To that
27 end, scholars have started to study under what conditions organizations are more likely to possess agency
28 (Battilana, 2006; Heugens & Lander, 2009) and, in doing so, have singled out organizational identity as a
29 potentially critical source of such actorhood (Dejordy & Creed, 2016; Greenwood et al., 2011; Kraatz &
30 Block, 2008). Because organizational identity shapes decision makers’ views about what constitutes
31 appropriate behavior, it forms a fundamental basis for intentionality (King et al., 2010).² As such,
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52 ¹ Indeed, institutional and identity theory share various common themes and assumptions (Kroezen & Heugens, 2012: Table 1).

53 ² It is worth noting that an approach to organizational identity that emphasizes the perceptions of individuals within
54 organizations differs considerably from how population ecologists have predominantly conceptualized organizational identity
55 in terms of market categories (cf. Gioia, Price, Hamilton, & Thomas, 2010). Whether and how these two conceptualizations of
56 identity interact is beyond the scope of this article (but see Gioia, Patvardhan, Hamilton, & Corley, 2013 for a relevant
57 discussion), and the focus here is on the former, internal perspective.
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2 organizational identity is central to the very constitution of organizations as social actors who are enabled
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4 to interpret and perform their own role within the macro-institutional order. Organizational identity is
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6 thus often viewed as a much-needed corrective to the oversocialized view of traditional
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8 neoinstitutionalism (Scott, 2014).
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11 In my research model, I build on these ideas to advance a view of organizational identity as
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13 integral to addressing this article's puzzle of why decision makers vary in their resistance to
14
15 environmental pressures. I focus on organizational identity for three main reasons: (1) organizational
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17 identity roots the individual in the organizational context (Ashforth et al., 2011; Fine & Hallett, 2014)
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19 and thus provides the linkage that is required for delving into the cognitive processes that are involved
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21 when individuals make adoption decisions on behalf of their organizations; (2) organizational identity is
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23 a key source of actorhood (King et al., 2010) and is thus likely to be a relevant predictor of heterogeneity
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25 and resistance; and (3) organizational identity has the quality of an objective reality for organizational
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27 members (Dejordy & Creed, 2016) and is thus highly consistent with the taken-for-grantedness aspect of
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29 institutional theorizing (Glynn, 2008; Pedersen & Dobbin, 2006). Rather than conceiving of identity as a
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31 conceptually autonomous concept external to institutional theory, I consider it a central element of
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33 microinstitutionalism, in line with several other recent investigations (Dejordy & Creed, 2016; Greenwood
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35 et al., 2011; Hatch & Zilber, 2012; Kraatz & Block, 2008; Thornton et al., 2012). I elaborate this view by
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37 showing how organizational identity enables decision makers to resist environmental pressures.
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45 **Conceptualizing Organizational Identity**

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47 Two key subdimensions of organizational identity that need to be distinguished for analytic
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49 purposes are *organizational identification* and *organizational identity content* (e.g., Haslam, Postmes, &
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51 Ellemers, 2003; Sluss & Ashforth, 2007). Whereas organizational identification denotes the extent to
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53 which members perceive themselves as subordinate parts of the organization, organizational identity refers
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55 to the particular characteristics that are (either objectively or subjectively) shared among those members
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2 (Gioia & Thomas, 1996; Whetten, 2006). The emphasis of organizational identification is thus on the act of
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4 classifying oneself as an organizational member (Ashforth & Mael, 1989; Thornton & Ocasio, 2008). It
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6 reflects an individual's perception that he or she belongs to a larger aggregate of humans delineated by an
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8 organizational boundary. Organizational identification can be thought of as a continuous concept ranging
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10 from low to high.
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14 Organizational identity content, on the other hand, pertains to the central, enduring, and distinct
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16 attributes of the organization (Albert & Whetten, 1985). These organizational attributes offer shared³
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18 social meanings that individuals attribute to themselves in their roles as organizational members (Scott,
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20 2014). Organizational identity content is a categorical concept that can be usefully represented by
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22 relevant ideal types (Thornton & Ocasio, 2008), such as a normative and a utilitarian organizational
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24 identity (Albert & Whetten, 1985; Gioia & Thomas, 1996).
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28 **HYPOTHESES**

29 Based on these considerations, I develop my research model that links organizational identity processes
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31 to resistance to environmental pressures.⁴ Given their distinct and complementary character (Ellemers,
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33 Spears, & Doosje, 2002; Haslam et al., 2003), I consider the roles of both organizational identification
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35 and organizational identity content and develop distinct hypotheses for these two identity subdimensions.
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37 Moving beyond main effects, I derive relevant cognitive mechanisms that help to explain the proposed
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39 identity-resistance relationship. While cognitive underpinnings of institutions can be manifold (George et
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41 al., 2006), I focus on two processes that are particularly pertinent for my model because they
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43 simultaneously operate as key consequences of organizational identity *and* as relevant sources of
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51 ³ The degree to which social meanings are shared by members can of course vary from organization to organization. This idea
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53 is captured by the notion of organizational identity strength—the extent to which identity beliefs are widely shared and
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55 densely articulated among organizational members (Ashforth, Harrison, & Corley, 2008; Besharov & Brickson, 2016)—which
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57 is beyond the scope of the current investigation.

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59 ⁴ On a theoretical level, environmental pressures can be conceptualized as being either of mimetic, normative, or coercive
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nature (DiMaggio & Powell, 1983), although my empirical tests later will focus on the first two types of pressures and any
generalizations to coercive pressures necessarily have to remain speculative at this point.

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2 variation in resistance (as developed below)—namely, certainty and attention. Finally, I contrast different
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4 types of identity and their respective effects on resistance. In constructing my conceptual argument, I
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6 draw from extant micro-institutional theorizing where possible, but I also follow Boxenbaum's (2014)
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8 recommendation to complement and deepen these relatively nascent ideas by borrowing from relevant
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10 social psychological research, particularly as it speaks to the consequences of identity processes.
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13 14 **The Effect of Organizational Identification on Resistance to Environmental Pressures**

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16 The concept of identification is based on the notion that people have a tendency to classify themselves
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18 and others into social categories, including organizations (as well as religious denominations, gender, age
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20 groups, etc.) (Thornton et al., 2012). *Organizational* identification thus pertains to self-categorization as a
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22 member of an organization (Thornton & Ocasio, 2008). Importantly, strongly identifying decision makers
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24 not only locate themselves in the social category of the organization but also interact with their
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26 institutional environment in terms of this category, allowing themselves to be guided by their role as a
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28 representative of the organization (Scott, 2014). As a consequence, organizational identification has
29
30 profound implications for organizational decision making as it pertains to environmental pressures.
31
32
33

34
35 In a way, identification transforms organizations into “institutions in their own right,”
36
37 immunizing them against external pressures for compliance (Greenwood et al., 2011; Zucker, 1983). In
38
39 her landmark investigation into institutional persistence, Zucker (1977: Experiment 3) compared
40
41 participants acting individually to those placed in an organizational context, and she found the latter to be
42
43 substantially more resistant to third-party influence attempts than the former. Extrapolating from this
44
45 finding, I expect such a resistance effect stemming from the organizational context to be significantly
46
47 stronger for decision makers who highly identify with their organization than for those who identify only
48
49 weakly. Given that strongly identifying actors tend to approach decision situations from the perspective
50
51 of the organization (rather than from that of individuals making decisions on their own account) (Scott,
52
53 2014), previously made organizational decisions are perceived as higher on institutionalization and thus
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1
2 as less situation-dependent and susceptible for change (Zucker, 1977). As a result, strong identification
3
4 has the potential to outweigh isomorphic pulls of the field (Battilana & Dorado, 2010). In other words,
5
6 the feeling of belonging to and representing the organizational entity legitimizes distinctiveness and, to a
7
8 certain extent, overrides concerns about field-level pressures (Binder, 2007; Greenwood et al., 2011),
9
10 which ultimately explains nonconforming action. I thus expect strongly identifying decision makers to
11
12 display greater commitment to their organizations' practices and greater resistance to environmental
13
14 pressures that challenge or offer alternatives to those practices, as per the following baseline hypothesis:
15
16
17

18
19 *Hypothesis 1: There will be a positive effect of organizational identification on resistance to*
20 *environmental pressures.*
21

22 **Mediating Processes**

23
24 So far, I have argued that feelings of belonging to and representing the organizational entity create
25
26 changes in decision makers' tendencies to resist environmental pressures. But what *specific* cognitive
27
28 attributes stemming from organizational identification are responsible for these behavioral differences?
29
30 Zucker (1991) insists that unpacking the cognitive processes involved in the maintenance and rejection of
31
32 external institutions is a prime task for the micro-level approach to institutionalism. Notably, these
33
34 cognitive processes constitute a critical missing part of an understanding of agency in the institutional-
35
36 theory framework (Zilber, 2002). Building on extant micro-institutional theorizing and enriching it with
37
38 social psychological insights, I propose that organizational identification increases resistance to
39
40 environmental pressures for two reasons: organizational identification (1) increases the decision maker's
41
42 certainty and (2) shapes the decision maker's attention to the environment (as I elaborate in greater detail
43
44 below). Consideration of the decision maker's certainty and attention to the environment is consistent
45
46 with the sequential decision-making model outlined by Tolbert and Zucker (1996), whereby
47
48 organizational actors will first assess their own subjective situation as well as information from external
49
50 sources, before making their choice. Moreover, social-identity scholars propose that individuals'
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1
2 identification with an in-group fundamentally shapes their perceived certainty and focus of attention
3
4 (Turner, 1982, 1987). Taken together, certainty and attention serve as key social mechanisms linking
5
6 individuals with their social systems and creating the fine-grained coupling between macro cause and
7
8 micro effect that Bechky (2011) and Weber and Glynn (2006) have called for.
9
10

11 **Certainty.** A consistent finding in identity research is that decision makers' subjective certainty
12 is a positive function of social identification (e.g., Fransen, Haslam, Steffens, Vanbeselaere, De Cuyper, &
13 Boen, 2015; Mullin & Hogg, 1998). Most notably uncertainty-identity theory (Hogg, 2000, 2007) suggests
14 that identifying with a larger entity increases people's situational certainty in who they are, what they
15 should think, and how they should feel and behave. This is not only because identification with similar
16 in-group members creates a strong sense of belonging and connection that raises people's self-esteem
17 (Ashforth et al., 2008; Bergami & Bagozzi, 2000; Fine & Hallett, 2014; Pache & Santos, 2013), but also
18 because identification increases perceived coherence with the in-group and thus furnishes consensual
19 validation of self (Fan & Zietsma, forthcoming; George & Chattopadhyay, 2005; Hogg & Terry, 2000).
20 Through categorizing themselves as prototypical group members, strongly identifying individuals
21 perceive their own attitudes and judgments to be aligned with those of other group members, which
22 bolsters their subjective certainty. Interestingly, this consensual validation effect through self-
23 categorization operates even in settings where relatively little information about the group prototype is
24 available; through self-anchoring, strongly identifying individuals will generalize attributes of self to the
25 prototype based on the assumption of shared attributes due to common category membership (Cadinu &
26 Rothbart, 1996; Otten & Epstude, 2006). In sum, identifying with a larger social entity can significantly
27 increase certainty in decision making.
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51 Enhanced certainty, in turn, should increase decision makers' resistance to environmental
52 pressures. One of the central behavioral assumptions of institutional theory is that organizational decision
53 makers have a strong preference for certainty (DiMaggio, 1988; Greenwood, Suddaby, & Hinings, 2002;
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1
2 Oliver, 1991). Following a psychodynamic approach, institutional theory is attuned to decision makers'
3
4 worries about failure and social disapproval and their corresponding need to create behavioral clarity and
5
6 thus a comforting sense of security (Powell, 1991; Sturdy, 2004). Indeed, it has been suggested that a
7
8 main reason why decision makers give in to institutional pressures is because doing so may decrease their
9
10 subjective uncertainty (Berger & Luckmann, 1966). Conforming to institutionalized scripts that appear to
11
12 reflect the perceived collective wisdom of the environment represents a common response to a state of
13
14 uncertainty (DiMaggio & Powell, 1983).
15
16
17

18
19 What is often made less explicit by institutionalists is the flipside of this argument. As decision
20
21 makers' subjective uncertainty *decreases*, so does their perceived need to follow external logics (Oliver,
22
23 1991, 1992). With growing confidence⁵ in their own judgments and greater clarity regarding how to
24
25 behave in a certain situation, nonconformity with environmental institutions becomes an increasingly
26
27 tenable approach for decision makers to achieve organizational goals, thus increasing the degree of
28
29 discretion assumed by the organization (Greenwood et al., 2011). As such, decision makers' subjective
30
31 certainty is a key mechanism explaining resistance to environmental pressures.
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35
36 Together, then, the above arguments suggest that to the extent that organizational identification
37
38 creates certainty, it will also result in greater resistance to environmental pressures. In other words, because
39
40 increased identification makes organizational decision makers more confident, these decision makers will
41
42 be less likely to resort to environmental conformity as a certainty-enhancement strategy.
43
44

45
46 *Hypothesis 2: Organizational identification has a positive effect on certainty, and certainty in*
47
48 *turn has a positive effect on resistance to environmental pressures, such that certainty mediates*
49
50 *the positive effect of organizational identification on resistance to environmental pressures.*

51
52 **Attention.** Next, I offer the position that organizational identification affects the extent to which
53
54 attention is oriented toward environmental stimuli. According to social identity theory, self-

55
56 ⁵ According to Sniezek (1992), confidence can be understood as quasi-synonymous with subjective certainty and can be
57
58 formally defined as the strength of belief in the quality of one's judgment.
59
60

1
2 categorization as a member of a group modulates attention “in that it specifies who should and should not
3
4 be attended to for appropriate information” (Abrams & Hogg, 1990: 190). Specifically, strongly-
5
6 identifying individuals tend to reject information that threatens the local reality accepted by the in-group,
7
8 particularly when that information originates from external sources outside of that in-group (Turner,
9
10 1982, 1987). The reason is that the more an individual identifies with a social entity, the less valid and
11
12 relevant she will perceive information from outsiders to be. Strongly identifying individuals use the
13
14 categorical membership of the information source as a heuristic cue for information appropriateness, such
15
16 that the validity and relevance of out-group information are discounted (Mackie, Gastardo-Conaco, &
17
18 Skelly, 1992; Turner, 1987). As a result, out-group information will likely be dismissed and receive only
19
20 minimal attention (Stapel, Reicher, & Spears, 1994). Mackie and colleagues found empirical support for
21
22 the notion that information from out-group members elicits relatively little attention and systematic
23
24 processing (Mackie et al., 1992; Mackie, Worth, & Asuncion, 1990). Consistent with this argument, I
25
26 expect that decision makers who strongly identify with their organization (i.e., the in-group) will pay less
27
28 attention to cues from other actors in the organizational environment (i.e., the out-group).
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35 As environmental stimuli vary in the attention they receive from different decision makers, so do
36
37 their availability, accessibility, and salience during decision deliberation and thus their ability to shape
38
39 organizational behavior (Glaser, Fast, Harmon, & Green, 2016; Nigam & Ocasio, 2010; Thornton et al.,
40
41 2012). Environmental pressures that are largely ignored have little potential to evoke meaning and define
42
43 what is an appropriate course of action. On the other hand, environmental pressures that receive
44
45 substantial attention from decision makers are more likely to encounter critical reflection, influence
46
47 sensemaking, and ultimately inform organizational action. For instance, if decision makers devote
48
49 significant resources to scanning and interpreting practice adoption decisions by other organizations in
50
51 their field, these decisions will be more likely to shape those actors’ own adoption choices, diminishing
52
53 their likely resistance to mimetic pressures (Chandler & Hwang, 2015; Fiol & O’Connor, 2003). In short,
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1
2 responses to environmental pressures are substantially affected by the attention of organizational decision
3
4 makers to their institutional environment. Consequently, Thornton et al. (2012) view decision makers'
5
6 focus of attention as a crucial micro-level mechanism shaping organizational decisions vis-à-vis their
7
8 institutional environment.
9

10
11 Taken together, these arguments suggest that organizational identification will lead decision
12
13 makers to devote less attention to environmental institutions, and reduced attention will, in turn, inhibit
14
15 action towards adopting practices implied by the environment. Because attention to the external
16
17 environment constitutes a necessary step toward conformity, reduced attention will buffer the
18
19 organizational decision maker from environmental pressures.
20
21

22
23 *Hypothesis 3: Organizational identification has a negative effect on attention, and attention in*
24
25 *turn has a negative effect on resistance to environmental pressures, such that attention mediates*
26
27 *the positive effect of organizational identification on resistance to environmental pressures.*⁶

28 **The Role of Identity Content**

29
30 Beyond organizational identification, I suggest that the content of the organizational identity will shape
31
32 decision makers' focus of attention and, thus, the degree to which they resist environmental pressures.
33
34 Organizational identities vary in terms of the key attributes that members believe make the organization
35
36 unique (Dutton & Penner, 1993; Selznick, 1957). The content of the organizational identity provides
37
38 guidance on what the organization is and how it and its members should behave (Glynn, 2000; Scott,
39
40 2014). The central, enduring, and distinct attributes of the organization thus function as referents for
41
42 members when they act or speak on behalf of the organization (Dutton & Dukerich, 1991; Fox-
43
44 Wolfgramm, Boal, & Hunt, 1998; Whetten, 2006). Further, fellow members of the organization are also
45
46 expected to hold views that are in line with its identity (Fine & Hallett, 2014). To achieve in-group
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55 ⁶ Note that in a mediation model the combination of a negative effect of the independent variable on the mediator and a
56
57 negative effect of the mediator on the dependent variable means that the indirect effect of the independent variable through the
58
59 mediator is positive.
60

1
2 consistency, the decision maker will thus tend to adopt the underlying norms herself in order to avoid
3
4 potential differences (Ridgeway, 2006; Thornton et al., 2012). Accordingly, the norms underlying
5
6 organizational identity should lead the decision maker to adopt the prototypical position.
7

8
9 Relevant identity claims may be expressed as mission statements, policies, and routines. These
10
11 operate as the organization's enduring signature, providing members with a shared set of
12
13 phenomenological points of reference that guide consequential deliberation and organizational decision
14
15 making (King et al., 2010; Whetten, 2006). Configurations of such identity claims can be usefully
16
17 examined in terms of ideal types, with deliberate simplification affording comparative analysis to suggest
18
19 testable hypotheses (Thornton & Ocasio, 2008).
20
21

22
23 Building on the works of Parsons (1960), Etzioni (1961), and Albert and Whetten (1985), Gioia
24
25 and Thomas (1996) identified two ideal-typical identity configurations, which I use in this article to
26
27 derive a hypothesis regarding organizational identity content; these are utilitarian identity and normative
28
29 identity. A utilitarian identity is governed by values related to the maximization of profit and economic
30
31 rationality. Obligations to the organization are defined in terms of self-interest, with remuneration and
32
33 other extrinsic motivators as the major means of control over employees (Etzioni, 1961). The concept of
34
35 normative identity, on the other hand, is typified by Parsons' (1960) pattern maintenance organization
36
37 with primarily cultural, educational, and expressive functions. This church- or family-like identity
38
39 underscores traditions, symbols, and values of altruism (Foreman & Whetten, 2002), and members tend
40
41 to emphasize the authenticity and expressive value of their outputs (Lamertz, Heugens, & Calmet, 2005).
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46
47 Comparing these two types, I propose members of an organization with a utilitarian (as opposed
48
49 to a normative) identity will pay relatively greater attention to their external institutional environment.
50
51 Thornton and Ocasio (1999), for example, document how publishing houses increasingly following a
52
53 logic of capitalism and profit maximization (cornerstones of a utilitarian identity) have shifted their focus
54
55 to the organization's comparative market position. Perceiving their own legitimacy to be based on the
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1
2 organization's competitive position, decision makers in these publishing houses increasingly directed the
3
4 focus of their attention to external market needs (rather than just produce "good" books that would "sell
5
6 themselves"). Along similar lines, the case study by Brown, Humphreys, and Gurney (2005) described a
7
8 UK-based tour operator's utilitarian identity as evoking the need to devote constant attention to the
9
10 market in order to remain competitive and achieve organizational goals. Likewise, Gioia and Thomas
11
12 (1996: 381) cited the president of a university with a strongly utilitarian orientation as being "a great
13
14 believer in peer comparisons," because such comparisons were seen as a key source of organizational
15
16 learning and profitability. In their quantitative analyses, these authors found an association between a
17
18 utilitarian (vs. normative) organizational identity and decision makers favoring an offensive (vs. defensive)
19
20 strategy that emphasizes diligent monitoring of external changes and an urge to be well-informed about
21
22 new programs. Therefore, I expect a utilitarian identity, with its strong focus on the organization's
23
24 competitive position in its field, to lead decision makers to pay greater attention to their external
25
26 environment, which in turn increases the potential for pressures from this environment to shape behavior.
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33 A normative identity, on the other hand, de-emphasizes an external market orientation and directs
34
35 attention away from environmental issues (Gioia & Thomas, 1996). A normative identity has been found
36
37 to foster commitment to the organization's ideals and create a kind of aesthetic autonomy (Moss, Short,
38
39 Payne, & Lumpkin, 2011). Members of organizations characterized by this type of identity tend to focus
40
41 on intangible organization-internal capabilities as defining features and insulate themselves from
42
43 organizational outsiders (Glynn, 2000). As such, individuals embedded in a normative identity will likely
44
45 devote comparatively fewer cognitive resources to their environment, making them less prone to
46
47 environmental pressures.⁷ Therefore:
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55 ⁷ Note that I have no conceptual reason to believe, nor was I able to find any suggestive evidence that, *ceteris paribus*, a
56 utilitarian identity ought to engender greater or lesser certainty (the second proposed mechanism underlying the identification-
57 resistance effect).
58
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1
2 *Hypothesis 4: Resistance to environmental pressures will be stronger when the organizational*
3 *identity is normative (vs. utilitarian), and this effect will be mediated by attention to*
4 *environmental stimuli.*
5

6 7 **METHODS**

8 **Study Overview**

9
10 This article uses three experimental studies to test the four hypotheses (see Table 1 for an overview). The
11 first two studies build on a well-established experimental task (introduced by Berger & Fisek, 1970). In
12 each of several trials, participants have the opportunity to adjust their initial choice after learning about
13 responses from competing participants. Focusing on those trials in which self and alter disagree, self
14 staying with his/her previous choice is used as a measure of resistance to environmental pressures, the
15 dependent variable in this research. The third study mirrors the structure of the first but uses a slightly
16 different task that introduces normative (rather than mimetic) pressures.
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26
27 ---Insert Table 1 about here---
28

29 **Methodological Considerations**

30
31 As noted above, this article uses a set of experiments. Notwithstanding their limitations, experiments
32 have the important advantage of controlling for extraneous factors that would be difficult to isolate in a
33 field setting. By using random assignment and systematically varying theoretically relevant information,
34 one can be confident that observed differences in the dependent variable are due to the manipulated
35 features rather than to other factors, thus allowing for strong internal causal inference (Brewer, 1985;
36 Thau, Pitesa, & Pillutla, 2014; Webster & Sell, 2007). No other methodology can establish causality—the
37 gold standard of science—to the extent that experiments can. What is more, experiments can significantly
38 enhance our understanding of underlying mechanisms that are often difficult to detect and isolate in
39 contextually-rich non-experimental field studies. It may thus not be too surprising that experiments are
40 increasingly becoming the go-to method for micro-institutional inquiry (cf. Bitektine et al., forthcoming).
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55 A possible source of concern regarding experimental methods may be the question of whether a
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1
2 laboratory setting can resemble a real-life organization. In considering this issue, it is important to bear in
3
4 mind that experiments generalize to naturally occurring situations not directly but only through theory
5
6 (Kanazawa, 1999; Lucas, 2003b; Martin & Sell, 1979; Stolte, Fine, & Cook, 2001; Zelditch, 1980).
7

8
9 Therefore, an adequate experimental setting needs to ensure that the theoretical principles can be tested
10
11 so that the results inform the underlying theory, which bridges the experimental study and the real world
12
13 (Bitektine et al., forthcoming). Although institutional theory is often thought of as an innately macro-
14
15 level approach, researchers have argued that, through sociological miniaturism (Stolte et al., 2001),
16
17 predictions of institutionalism can also be applied to and tested at the level of smaller laboratory
18
19 organizations (Zucker, 1991). In fact, previous work has successfully implemented experimental designs
20
21 to study key aspects of institutional theory, including the institutionalization of abstract group standards
22
23 (Zucker, 1977), the institutionalized perception of female leadership in organizations (Lucas, 2003a), and
24
25 institutional processes leading to price bubbles (Levine, Apfelbaum, Bernard, Bartelt, Zajac, & Stark,
26
27 2014; Levine & Zajac, 2008), as well as consequences of institutional complexity (Raaijmakers,
28
29 Vermeulen, Meeus, & Zietsma, 2015), different types of institutional logics (Glaser et al., 2016) and
30
31 institutionalized belief systems (Hafenbrädl & Waeger, forthcoming). Following this line of research, I
32
33 develop an experimental setting that fits the specific needs of the current investigation.
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39 **Study 1**

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42 **Main task.** The research problem required a situation in which participants are placed in
43
44 organizations (defined here as “goal-directed, boundary-maintaining, and socially constructed systems of
45
46 human activity,” Aldrich & Rueff, 2006, p. 4) and make ambiguous decisions on behalf of their
47
48 organization; moreover, it also required that they be confronted with information on others’ behavior, in
49
50 response to which participants could adjust their initial choice and emulate others’ behavior (which
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52 allows for capturing variations in resistance to environmental pressures). Finally, participants should be
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54 task-oriented and should expect to be evaluated, so that they are motivated to perform the task well.
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2 To establish such a setting, I used a variant of the standardized experimental situation first
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4 introduced by Berger and Fisek (1970). This approach is well established and has been shown to be
5
6 applicable to the study of various sociological problems (Berger, 2007). Importantly, the standardized
7
8 experimental situation is very similar to the designs used in earlier experimental research in institutional
9
10 theory studying actors' responses to institutional pressures (Lucas, 2003a; Zucker, 1977) but has the
11
12 advantage of being amenable to computerization. Computerization offers several well-known benefits,
13
14 including the reduction of experimenter effects and greater control over timing (Molm, 2007).
15
16

17
18 More specifically, the task employed here required participants to undergo a series of ambiguous
19
20 decision trials, in which they made binary choices on various organizational problems. Participants were
21
22 told that their group was running a large flower shop and that they would need to make several strategic
23
24 decisions for the shop on behalf of their group (more information on the group assignment appears
25
26 below). For example, one of the questions reads, "Your group's flower shop needs to decide on the
27
28 location for a new branch. Which of the following solutions do you choose?" The two options given were
29
30 "open branch in a shopping mall" and "open branch downtown." I extensively pretested and refined these
31
32 scenarios before arriving at a final list of 25 questions (please see Appendix A for more details). These
33
34 questions represent common strategic problems faced by real-life organizations, thus ensuring high levels
35
36 of ecological validity (Lant & Montgomery, 1992). In addition, the questions concern situations in which
37
38 the material benefits associated with a structure are ambiguous and not readily calculable, consistent with
39
40 Tolbert and Zucker's (1996) recommendations regarding adequate empirical contexts for institutional
41
42 analysis. Finally, the questions were not overly complex, so as to ensure that even participants with
43
44 limited indepth knowledge about strategic management would be able to comprehend them (Wason,
45
46 Polonsky, & Hyman, 2002).
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53
54 In each decision round, participants were first asked for their group's initial response.
55
56 Subsequently, they were shown a response that they were told had been provided by a competing group.
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1
2 In reality, the competing group's responses were computer-generated to disagree with the participant's
3
4 initial choice in the majority (i.e., 20) of the 25 trials,⁸ consistent with Foschi (1996). Environmental
5
6 pressures were thus operationalized by confronting participants with evidence of peer groups having
7
8 chosen the alternative response, which is consistent with the core idea behind mimetic isomorphism—
9
10 that organizations feel pressured to adopt and replicate the solutions that others in their field have chosen
11
12 (DiMaggio & Powell, 1983)—as well as with earlier measures of environmental pressures used in
13
14 archival research (Mizruchi & Fein, 1999).⁹
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18

19 After learning about the competing group's choice, participants had the opportunity to adjust
20
21 their own group's initial response to provide a final choice for the respective trial. That is, participants
22
23 could either resist the influence attempt (1 = stay with the initial choice) or conform to the influence
24
25 attempt and imitate others (0 = change the initial choice). Focusing on the 20 trials in which self and alter
26
27 initially disagreed, self's behavioral response of staying with his or her original choice was used as a
28
29 measure of resistance (Berger & Fisek, 1970), the study's dependent variable. After reading the
30
31 instructions, participants went through a practice trial that familiarized them with the structure of the task.
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35 **Participants and procedures.** A total of 187 participants were recruited for a study on “decision
36
37 making” through the subject pool of the behavioral lab of a large public university. Participants were
38
39 scheduled in groups ($M_{\text{session size}} = 10.2$ participants). To qualify for participation in the study, participants
40
41 were required to have sufficiently high levels of English proficiency (as self-reported in the post-task
42
43 questionnaire) and to demonstrate that they had paid sufficient attention to the study materials (as
44
45 assessed based on the response to a screener question hidden in the post-task questionnaire). On the basis
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52 ⁸ The following 20 trials were randomly chosen to have competitor disagreement: rounds 1, 3, 4, 5, 6, 7, 8, 9, 10, 12, 13, 16,
53 17, 18, 19, 20, 21, 22, 24, and 25.

54 ⁹ The conceptualization of resistance to environmental pressures has certain similarities to the notion of escalation of
55 commitment (Staw, 1976), in that both ideas have to do with organizational persistence (or the lack thereof). What makes the
56 institutional theory-grounded concept of resistance different is its distinct focus on the organization's position vis-à-vis
57 external forces, such as competitors behaviors (Schreyögg & Sydow, 2011).
58
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1
2 of these criteria, eighteen people were excluded from the study, yielding a usable sample size of 169
3
4 participants (72 percent female, $M_{\text{age}} = 21$ years).¹⁰ Participants were randomly assigned to one of the two
5
6 experimental conditions: weak organizational identification ($n = 84$) or strong organizational
7
8 identification ($n = 85$).
9

10
11 Upon arriving at the lab, participants were ushered into separate cubicles equipped with
12
13 computers. A research assistant (who was blind to the study's hypotheses) obtained the participants'
14
15 informed consent and told them they had to wait until all session participants had arrived before the
16
17 experiment could start. Once the signal to begin was given, all further instructions were displayed on the
18
19 computer screen in each participant's cubicle. Participants first underwent the identification manipulation
20
21 before completing the study's main task and subsequently filling out a post-task questionnaire that
22
23 included manipulation checks and other survey items. Finally, participants were debriefed and received
24
25 US \$6.50 as remuneration for their participation. The procedure took about 35 minutes to complete.
26
27

28
29
30 **Manipulation.** To vary organizational identification, I employed a variant of the well-established
31
32 minimal group paradigm (introduced by Tajfel, Billig, Bundy, & Flament, 1971), which uses
33
34 categorization into a superordinate organization as the primary means for manipulating identification.¹¹
35
36 The minimal group paradigm has the advantages of being compatible with ad hoc (as opposed to
37
38 preexisting) groups and of not requiring potentially confounding face-to-face interaction between the
39
40 group members. Even under these relatively stripped-down conditions, prior research has shown this
41
42 conservative approach to be very effective in inducing identification (e.g., Brewer, 1979; Grieve & Hogg,
43
44 1999). In particular, I adopted the organizational identification manipulation procedure devised by
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48
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50
51 ¹⁰ Specifically, two of the participants indicated their level of English language proficiency to be novice or less, while sixteen
52
53 participants responded incorrectly to the screener item, "To show that you have read this question, please choose 0 (the very
54
55 left button) as your response" (this item was adapted from Berinsky, Margolis, & Sances, 2014 and was hidden within a
56
57 number of other questionnaire items). I also ran the analyses including these eighteen participants (i.e., with $n = 187$), and the
58
59 results were substantively similar.

60
¹¹ The minimal group paradigm is consistent with Thornton et al.'s (2012: 79) view that social identification "can arise even in
the absence of networks of interpersonal relations and interactions."

1
2 Doosje, Spears, and Koomen (1995) and Ellemers, Spears, and Doosje (1997), which has been
3
4 recommended by Haslam (2004: Appendix 2) specifically for lab studies with ad hoc organizations.¹²
5
6

7 This manipulation procedure is described next.

8
9 The first phase of the procedure required participants to engage in a word and number association
10 test, which ostensibly served the purpose of dividing people into one of two groups that would later
11 compete. The test presented participants with a series of key words (e.g., water) and key numbers (e.g.,
12 1111), after which they were asked to choose one of four alternative responses they associated most with
13 the key word (e.g., rain, fire, drink, or well) or with the key number (e.g., 1110, 1112, 111, or 4; see
14 Appendix B for the full list of items used in the association test). Based on their responses, participants
15 were led to believe that a computer algorithm would be able to assess their dominant thinking style and
16 assign them to either the group of “inductive thinkers” or the group of “deductive thinkers” (in reality, all
17 participants in all study conditions were assigned to the group of “inductive thinkers”).¹³ They were also
18 told that each group consisted of four members who would compete against other groups on several tasks.
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33 I then varied identification between conditions as follows. In the strong organizational
34 identification condition, participants were told that the research team would like them to stay in the group
35 to which they had been assigned for the rest of the study, and they were asked whether or not they would
36 agree with this (which all but one participant did). This question was included because prior research has
37 shown that voluntary group commitment enhances identification with a group (Turner, Hogg, Turner, &
38 Smith, 1984). In the weak identification condition, participants were simply informed that they would
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50 ¹² The identification manipulation procedures adopted here feature several similarities to those used in the famous Robbers
51 Cave study (Sherif, Harvey, White, Hood, & Sherif, 1961), including group formation based on ostensible similarities and
52 intergroup competition that increases group salience.

53 ¹³ To explore whether people have differential associations with the two group labels, I had 40 mTurk workers rate their
54 sentiments toward a group of deductive thinkers ($n = 20$) or a group of inductive thinkers ($n = 20$). Based on responses to an
55 answer scale ranging from 1 (strongly negative) to 5 (strongly positive), I did not find a significant difference in sentiments
56 toward deductive thinkers ($M_{\text{deductive thinkers}} = 3.65$) vs. inductive thinkers ($M_{\text{inductive thinkers}} = 3.60$), $t = 0.25$, $df = 38$, $d = 0.08$,
57 $p > 0.10$.
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2 stay in their assigned group for the rest of the study, without being asked to voluntarily commit to do so.
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4 Afterwards, participants in the strong organizational identification condition performed an
5 intergroup reward allocation task, in which they allocated points using “Tajfel matrices” (Tajfel et al.,
6 1971). These matrices provided fourteen different payoff tuples for two individuals, with payoffs on one
7 side of the spectrum benefitting the first person while hurting the second and payoffs on the other side
8 benefitting the second person while hurting the first. In four of the six matrices, participants were asked
9 to divide points between members of their own group (the inductive thinkers) and members of the other
10 group (the deductive thinkers), whereas in one matrix the points were divided between two in-group
11 members and in another matrix between two out-group members.¹⁴ Leyens, Yzerbyt, and Schadron
12 (1994:68) suggest that performing this intergroup reward allocation task increases category salience and
13 thus identification. Participants in the weak organizational identification condition performed the same
14 task but only after (rather than before) the study’s main task.
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30 Next, participants were asked to indicate, on a 9-point scale, to what extent they agreed with five
31 general questions that directly or indirectly related to group membership or social contact (e.g.,
32 “Relationships with other people are very important to me”).¹⁵ After they had provided their responses,
33 they were told that these five questions were “group involvement questions” that would, together with the
34 participant’s choices on the association test, allow for computing a personalized group involvement
35 score—that is, a measure of the extent to which the participants felt involved with their respective group.
36 It was deliberately left ambiguous how exactly this involvement score would be computed. Participants
37 in the strong identification condition were then informed that their group involvement score was 53
38 points, which purportedly was significantly above the average score of 40, whereas participants in the
39 weak identification condition were told that their group involvement score was 27 points and thus
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56 ¹⁴ See Appendix C for a list of the Tajfel matrices used in the intergroup reward allocation task.

57 ¹⁵ See Appendix D for all five “group involvement questions.”
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2 significantly below the average score of 40.
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4 To analyze the effectiveness of the manipulation, I measured perceived identification using four
5 items pertaining to the inductive thinkers in-group (“I identify with this group,” “I do not fit in well with
6 the other members of this group” (reverse coded), “I would like to get to know the other group
7 members,” and “I feel like I belong to this group”), anchored on a nine-point answer scale ranging from 1
8 (strongly disagree) to 9 (strongly agree). The coefficient alpha ($\alpha = 0.79$) demonstrated sufficient
9 reliability of the four-item identification measure. Results of a one-way ANOVA showed that the mean
10 of this measure among participants in the strong identification condition ($M_{\text{strong identification}} = 6.29$) was
11 significantly greater than the mean among participants in the weak identification condition (M_{weak}
12 $\text{identification} = 5.60$), $F(1, 167) = 11.69$, $d = 0.53$, $p \leq 0.001$. As a supplementary behavioral manipulation
13 check, I also compared the number of points allocated to in-group members in the reward allocation task
14 (focusing on the four trials of the reward allocation task in which participants were asked to divide points
15 between members of their own group and members of the other group) and found that significantly more
16 points were allocated to in-group members in the strong identification condition ($M_{\text{strong identification}} = 38.55$)
17 than in the weak identification condition ($M_{\text{weak identification}} = 29.80$), $F(1, 167) = 7.61$, $d = 0.42$, $p \leq 0.01$.
18 This result provided further behavioral support for a successful manipulation. Appendix E offers details
19 on the comprehension and suspicion checks that were conducted.
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42 **Main effect.** Because participants completed 20 relevant individual rounds of the decision task, I
43 computed an average proportion of stay-decisions across these trials to capture the dependent variable of
44 resistance.¹⁶ A one-way ANOVA revealed significant differences in resistance across conditions,
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55 ¹⁶ As an alternative to averaging the responses across trials, I also conducted random-intercept logistic regressions with
56 participant as clustering variable (Rabe-Hesketh & Skrondal, 2012). The results of these analyses are consistent with those
57 reported in the article.
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2 $F(1, 167) = 10.44, d = 0.50, p \leq 0.01$.¹⁷ Participants in the strong-identification condition were more
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4 resistant ($M_{\text{strong identification}} = 0.89$) compared to participants in the weak-identification condition (M_{weak}
5
6 identification = 0.81), providing empirical support for hypothesis 1.
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9 **Mediational analyses.** Hypotheses 2 and 3 stated that the effect of organizational identification
10 on resistance to environmental pressures is mediated by the decision maker's certainty (H2) and attention
11 to environmental stimuli (H3), such that organizational identification increases certainty but decreases
12 attention to environmental stimuli, both of which, in turn, affect resistance. Subjective certainty can be
13 formally defined as the strength of belief in the quality of one's judgments (e.g., Sniezek, 1992). It was
14 measured at the participant level in the post-task questionnaire using the following three items (with an
15 answer scale ranging from 1 = strongly disagree to 5 = strongly agree): "I feel confident about my
16 responses," "I feel confident about being a participant in the experiment," and "I found it easy to provide
17 appropriate responses" (see Sniezek, 1992; Zucker, 1977, for similar items). The measure demonstrated
18 good psychometric properties ($\alpha = 0.82$). Attention can be captured by considering the time allocated to
19 processing information from a source (e.g., Dutton, 1986: 4). Consistent with this approach, attention was
20 proxied at the trial level using the behavioral measure of reaction time (Prinzmetal, McCool, & Park,
21 2005) for the second-stage decision in the individual trials of the main task, indicating the degree to
22 which the participant paid attention to the competing group's choices (with greater attention being
23 reflected by longer reaction times). While I acknowledge that reaction time is a composite measure of a
24 number of unobserved mental processes, it is well-aligned with the (similarly multi-faceted) concept of
25 attention, and specifically with its sub-process of executive attention, which is central to organizational
26 decision making and involves the allocation of cognitive resources in working memory to incoming
27 schema-inconsistent stimuli (Ocasio, 2011). Although the duration of the second-stage decision
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56 ¹⁷ In the article, I report the results of ANOVAs, but all findings are robust to using tobit regressions instead.
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2 presumably also encompasses the process of indicating the group's final choice, in addition to processing
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4 the competitor's response, it is reasonable to assume that participants who completed stage 2 quickly
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6 have not paid much attention to whatever their competitor's choice was, whereas those that spent
7
8 considerable time on this screen have tried to make sense of the response from the competitor. Since
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10 reaction times (measured in seconds) were highly skewed, I redefined the variable using a logarithmic
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12 transformation. I then created an average across the 20 trials for each participant.
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16 I began testing hypotheses 2-3 by running two simple mediation bootstrapping tests (Preacher &
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18 Hayes, 2004; the mediation tests were run with 5,000 bootstrap samples using version 2.16 of the
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20 PROCESS macro in SPSS; Hayes, 2013), in which each of the two potential mediators was analyzed
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22 independently (Hayes, 2013: Model 4). The indirect effect of identification on resistance was positive
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24 and significant for certainty ($\hat{a}\hat{b} = 0.019$; 95% confidence interval (CI) = [0.005, 0.042]), as was the
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26 indirect effect in the mediation model for attention ($\hat{a}\hat{b} = 0.029$; 95% CI = [0.008, 0.057]). Following
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28 Preacher and Kelley (2011), I also report the completely standardized indirect effects as measures of
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30 effect size; these were $\hat{a}\hat{b}_{cs} = 0.065$ for certainty and $\hat{a}\hat{b}_{cs} = 0.101$ for attention.
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35 I then examined both factors simultaneously in a single multiple-mediators model (Hayes, 2013:
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37 Model 6). Estimation results for this model showed that the two parallel indirect effects were statistically
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39 significant (via certainty: $\hat{a}\hat{b} = 0.017$; 95% CI = [0.005, 0.036]; $\hat{a}\hat{b}_{cs} = 0.059$; via attention: $\hat{a}\hat{b} = 0.027$;
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41 95% CI = [0.005, 0.055]; $\hat{a}\hat{b}_{cs} = 0.094$). However, the serial indirect effect through both certainty and
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43 attention was not found to be significant ($\hat{a}\hat{b} = 0.002$; 95% CI = [-0.005, 0.013]; $\hat{a}\hat{b}_{cs} = 0.006$). Finally,
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45 the total indirect effect (i.e., the sum of the three specific indirect effects described above) was
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47 statistically significant in this model ($\hat{a}\hat{b} = 0.046$; 95% CI = [0.020, 0.079]; $\hat{a}\hat{b}_{cs} = 0.159$). Figure 1 shows
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49 the estimates for the individual direct effects in the multiple-mediators model. It is worth noting that the
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51 direct effect of identification on resistance was positive but no longer significant once certainty and
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53 attention were included as covariates, indicating full (Baron & Kenny, 1986) or indirect-only (Zhao,
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2 Lynch, & Chen, 2010) mediation. A correlation table for this and the other studies reported in this paper
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4 is provided in Appendix F. Three supplementary post hoc analyses exploring gender effects, temporal
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6 tendencies, and measure validity are summarized in Appendix G.
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8
9 ---Insert Figure 1 about here---

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11 **Discussion.** The results of study 1 provided support for hypotheses 1 to 3. As predicted, I found a
12
13 significant main effect of organizational identification on resistance to environmental pressures, with
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15 greater resistance in the strong than in the weak identification condition. Further, study 1 provided
16
17 important insights into the theoretical processes responsible for the observed main effect. Specifically, in
18
19 line with hypotheses 2 and 3, both decision maker certainty and attention to environmental stimuli
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21 mediated the identification-resistance relationship. In sum, the results of study 1 contribute to
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23 understanding how organizational identification influences cognition and affects the way decision makers
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25 respond to pressures from the environment.
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30 **Study 2**

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32 Designed to test hypothesis 4, study 2 uses the experimental procedures of the strong identification
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34 condition in study 1 while adding identity content to the manipulation by requiring participants to
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36 contribute to a mission statement for their group. Organizations frequently codify their identity claims in
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38 their mission statements, which gives employees a sense of meaning and guides the actions of the
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40 organization (Leuthesser & Kohli, 1997; Pearce & David, 1987). In this experiment, mission statements
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42 serve to activate and increase the salience of preexisting understandings of normative and utilitarian
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44 logics stored in individuals' memories (Higgins, 1996; Thornton et al., 2012). Using mission statements
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46 to operationalize identity type is particularly consistent with the social actor view on identity (Whetten,
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48 2006; Whetten & Mackey, 2002),¹⁸ which emphasizes that organizations make overt "claims" about who
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57 ¹⁸ For more details on the prevalent views on organizational identity, see Gioia et al. (2013).
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2 they are in society and that such claims have a profound influence not only on external but also on
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4 internal audiences.
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7 **Participants and procedures.** The participants for this study included 180 business-major
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9 undergraduate students at a large public university. Students participated in exchange for \$6.50 and
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11 course credit. As in study 1, self-reported levels of English proficiency and an attention screener question
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13 were used to exclude seven people from the study, resulting in a usable sample size of 173 participants
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15 (51 percent female, $M_{age} = 21$ years). Participants were randomly assigned to either the utilitarian identity
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17 condition ($n = 92$) or the normative identity condition ($n = 81$). Except for the manipulation, the
18
19 procedures and materials were identical to those of the strong-identity condition in study 1.
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23 **Manipulation.** After finishing the practice trial of the flower shop task, participants were
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25 informed that, like any other organization, their flower shop needed a mission statement, which was
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27 defined as a coherent business purpose that is both central and distinctive. To craft such a mission
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29 statement, each participant was told that all group members would need to contribute one sentence and
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31 that he or she would be the last member of the group to do so. Before adding their own sentence,
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33 participants in the normative identity condition were shown the following statements, ostensibly
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35 contributed by the other members of their team (these statements build on the work of Gioia & Thomas,
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37 1996): “Superior quality (rather than competitive performance) is what makes us unique,” “Our strategy
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39 is based on what we ourselves consider to be the right way of doing business (rather than what the
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41 competitive market might reward the most),” and “What motivates our business is that we do what we
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43 believe is right for us (even if it’s not always the most profitable course of action).” Conversely,
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45 participants in the utilitarian identity condition were exposed to the following team member statements:
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47 “Superior competitive performance (rather than quality etc.) is what makes us unique,” “Our strategy is
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49 based on what the competitive market values and rewards the most (rather than what we ourselves might
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51 consider to be the right way of doing business),” and “What motivates our business is that we are highly
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2 profitable (even if this means changing our ways).” Subsequently, participants in both conditions were
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4 required to complete the sentence “When we make decisions, we primarily take into consideration...” by
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6 choosing between two alternatives: “...our own assumptions, traditions, and ideology (rather than
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8 competitive information)” or “...the objective information that is available from the competitive
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10 environment (rather than specific assumptions, traditions, or ideologies).”¹⁹ They were encouraged to select
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12 the sentence that would be consistent with what the other team members had entered before them.
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16 Appendix H summarizes the manipulation checks for study 2.
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19 **Main effect.** Results of a one-way ANOVA showed that resistance averaged across trials was
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21 significantly greater in the normative identity condition ($M_{\text{normative identity}} = 0.92$) than in the utilitarian
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23 identity condition ($M_{\text{utilitarian identity}} = 0.87$), $F(1, 171) = 4.69$, $d = 0.33$, $p \leq 0.05$. These results provided
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25 empirical support for hypothesis 4.
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28 **Mediational analyses.** I then tested whether the observed identity-type effect was mediated by
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30 attention to environmental stimuli, also including the decision maker’s certainty as a second potential
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32 mediator in the analysis. I used the same three-item measure for certainty that I employed in study 1
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34 ($\alpha = 0.84$) and again used the national logarithm of reaction time to gauge attention.
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38 A multiple-mediators model (Hayes, 2013: Model 6) showed that the indirect effect of identity
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40 type on resistance via attention was statistically significant ($\hat{a}\hat{b} = 0.007$; 95% CI = [0.001, 0.021]; $\hat{a}\hat{b}_{cs} =$
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42 0.029). However, the indirect effect via certainty was not significant ($\hat{a}\hat{b} = 0.000$; 95% CI = [-0.010,
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44 0.008]; $\hat{a}\hat{b}_{cs} = -0.002$), nor was the serial indirect effect through both certainty and attention ($\hat{a}\hat{b} = 0.000$;
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46 95% CI = [-0.001, 0.001]; $\hat{a}\hat{b}_{cs} = 0.000$). Finally, the total indirect effect lacked statistical significance ($\hat{a}\hat{b}$
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48 = 0.007; 95% CI = [-0.005, 0.021]; $\hat{a}\hat{b}_{cs} = 0.027$). Figure 2 summarizes the estimates for the individual
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53 ¹⁹ To validate the eight statements used for the utilitarian/normative identity manipulation, I provided definitions of the two
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55 identity types to 40 mTurk workers and had them rate each statement on a bipolar scale ranging from 1 = utilitarian to
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57 9 = normative. Results confirmed my *a priori* classification of the items. A paired sample *t* test showed that the mean across
58
59 the four utilitarian-identity statements was significantly smaller ($M = 2.73$, $SD = 1.79$) than the mean across the four
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normative-identity statements ($M = 6.52$, $SD = 1.51$), mean diff = 3.79, $t = 8.13$, $d = 1.29$, $p \leq 0.001$.

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2 direct effects in the multiple-mediators model, and Appendix I describes a post hoc analysis pertaining to
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4 gender effects.
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7 ---Insert Figure 2 about here---
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9 **Discussion.** The results of study 2 extended those of the previous study by showing that the type of
10 identity matters, as participants in the normative identity condition were significantly more resistant to
11 environmental pressures than were participants in the utilitarian identity condition. Mediation analyses
12 indicated that this was due to differences in the attention that participants paid to environmental stimuli.
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18 **Study 3**

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20 The environmental pressures on which studies 1 and 2 focused emphasized mimetic processes leading to
21 conformity. Another important way in which institutions can exert themselves on organizational decision
22 makers is through normative pressures (DiMaggio & Powell, 1983). To investigate whether the findings
23 related to identity type generalize to these sorts of pressures, I conducted study 3. Study 3 builds on the
24 structure of study 2 but employs a different task that introduces normative pressures. Moreover, study 3
25 introduces a control condition in addition to the normative- and utilitarian-identity conditions. Finally,
26 study 3 uses a non-student sample.
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37 **Main task.** Normative pressures are imposed through field norms that specify how things are
38 done (Scott, 2014). One particularly common and important source of normative pressures are industry
39 standards established by professional organizations that define appropriate behavior (Berrone et al., 2013;
40 Greenwood et al., 2002; Rossman & Schilke, 2014). Study 3's main task focused on one particular
41 standard established by the International Organization for Standardization (ISO), the world's largest
42 developer of industry standards (Helms, Oliver, & Webb, 2012). This particular standard—ISO 31000—
43 lays out certain codified procedures for organizational risk management. In the task, participants were
44 asked to read some basic background information as well as a list of pros and cons related to the standard
45 (for the full text of the vignette, please see Appendix J) and then to respond to two items, which asked
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2 them to indicate their support for adopting ISO 31000 for their flower shop (“Our flower shop is going to
3 use ISO 31000 as a guide to integrate risk management in our company” and “Our flower shop is going
4 to invest in an ISO 31000 adoption training,” anchored on a 9-point scale ranging from 1 = totally
5 disagree to 9 = totally agree). The two-items were reverse-coded and averaged to capture participants’
6 resistance to normative pressures.
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14 **Participants and procedures.** The participants included 531 adults recruited via Amazon
15 Mechanical Turk (mTurk), an online crowdsourcing service offering large volumes of small web-based
16 tasks to anonymous online workers for monetary compensation (for further details about mTurk and
17 analyses that confirm the quality of mTurk responses, please see Buhrmester, Kwang, & Gosling, 2011;
18 Weinberg, Freese, & McElhattan, 2014). Participants were paid \$1 for an online study that took about 10
19 minutes to complete. An attention screener question was used to exclude 25 people from the study,
20 yielding a usable sample size of $n = 506$.²⁰ Within that sample, 48.0% of participants were female, and
21 they were 36.6 years old on average ($SD = 11.8$), with an average of 14.6 years of full-time work
22 experience ($SD = 11.1$). To assess the degree to which participants had relevant first-hand experience
23 with organizational decision making, I included the following question: “Have you ever run an
24 organization or organizational unit—no matter how large or small—such that you personally had a
25 significant say in its key strategic decisions?” Of the participants, 56% answered “yes” to this question.²¹
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²⁰ In study 3, the attention screener included in the post-task questionnaire asked participants what type of product the company they were representing in the main task was primarily offering (with answer choices being food, medical devices, and flowers).

²¹ Those participants who indicated they did have organizational decision-making experience were subsequently asked to provide more details about the organization and their job. The median number of employees in these organizations was 10, suggesting that most organizations participants were in charge of were rather small. Inspection of freely entered text describing the main industry showed that many of these organizations were in the fields of retail, information technology, education, and miscellaneous services. Self-reported job titles included co-owners, managers, supervisors, and consultants.

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2 manipulation, completed the main task and responded to a brief post-task survey; they were then given a
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4 code to be entered in mTurk in order to receive their compensation.
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7 **Manipulation.** Study 3 used the manipulation of organizational identity type employed in study
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9 2 while adding a third control condition in which no identity manipulation took place. To keep the length
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11 of the study approximately constant, participants in this control condition still completed the association
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13 test and the reward allocation task, but without any reference to group formation (specifically, in this
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15 condition, the association test ostensibly served the purpose of evaluating participants' personal style of
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17 thinking, the reward allocation task only referred to anonymous study participants rather than in-
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19 group/out-group members, and participants did not contribute to or learn about a mission statement).
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21 Participants in the control condition were only informed right before the main task that they were being
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23 assigned to a group with three other randomly chosen participants that would need to make
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25 organizational decisions together. Appendix K demonstrates the effectiveness of the manipulation.
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31 **Main effect.** Results of an ANOVA showed that resistance ($\alpha = 0.96$) was significantly different
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33 across the three conditions, $F(2, 503) = 11.07, \eta^2 = 0.04, p \leq 0.001$. Resistance was significantly greater in
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35 the normative-identity condition ($M_{\text{normative identity}} = 5.67$) than in the utilitarian-identity condition ($M_{\text{utilitarian}}$
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37 $\text{identity} = 4.52$), $F(1, 334) = 18.47, d = 0.47, p \leq 0.001$, in further support of hypothesis 4. Additionally, in the
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39 control condition, resistance ($M_{\text{control}} = 4.71$) was significantly smaller than in the normative-identity
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41 condition, $F(1, 332) = 13.94, d = 0.41, p \leq 0.001$, but not significantly different than in the utilitarian-
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43 identity condition, $F(1, 340) = 0.55, d = 0.08, p > 0.1$.
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48 **Mediational analyses.** Certainty was measured using the three-item scale employed previously
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50 ($\alpha = 0.90$). Similar to the previous studies, attention was captured by the natural logarithm of the time
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52 spent reading about the ISO standard. I first conducted mediation analyses using a multicategorical
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54 independent variable (control, utilitarian identity, normative identity) and the unweighted contrast coding
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56 approach described by Hayes and Preacher (2014) and implemented in the PROCESS script (Hayes,
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2 2013: Model 4).²² The model with certainty as mediator showed that the control condition relative to the
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4 two identity conditions combined did not have a significant indirect effect on resistance through certainty
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6 ($\hat{a}\hat{b} = -0.025$; 95% CI = [-0.113, 0.028]), nor was this indirect effect through certainty significant for the
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8 contrast comparing the two identity conditions ($\hat{a}\hat{b} = 0.011$; 95% CI = [-0.010, 0.078]).²³ Moreover, in
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10 the model with attention as mediator, the control condition relative to the two identity conditions
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12 combined did not have a significant indirect effect on resistance through attention ($\hat{a}\hat{b} = -0.036$; 95% CI
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14 = [-0.153, 0.061]). However, this indirect effect through attention was statistically significant for the
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16 utilitarian- vs. normative-identity contrast ($\hat{a}\hat{b} = 0.127$; 95% CI = [0.028, 0.263]).
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21 Further, a multiple-mediator model using a binary independent variable contrasting the
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23 utilitarian- and normative-identity conditions (Hayes, 2013: Model 6) showed that the indirect effect of
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25 identity type on resistance via attention was statistically significant ($\hat{a}\hat{b} = 0.139$; 95% CI = [0.035, 0.310];
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27 $\hat{a}\hat{b}_{cs} = 0.027$). However, the indirect effect via certainty was not significant ($\hat{a}\hat{b} = 0.003$; 95% CI =
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29 [-0.031, 0.067]; $\hat{a}\hat{b}_{cs} = 0.001$), nor was the serial indirect effect through both certainty and attention ($\hat{a}\hat{b} =$
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31 -0.004 ; 95% CI = [-0.026, 0.002]; $\hat{a}\hat{b}_{cs} = -0.001$). Finally, the total indirect effect was statistically
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33 significant ($\hat{a}\hat{b} = 0.138$; 95% CI = [0.024, 0.320]; $\hat{a}\hat{b}_{cs} = 0.027$). Figure 3 summarizes the estimates for
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35 the direct effects in the multiple-mediators model. The main effect of identity type on resistance was
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37 statistically significant in this model, suggesting partial mediation. Appendix L reports the results of post
38
39 hoc analyses exploring the roles of gender and task experience.
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45 ---Insert Figure 3 about here---

46 47 GENERAL DISCUSSION

48 This article suggests that organizational identity processes can significantly affect institutional action,
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53 ²² For multicategorical independent variables, the PROCESS script currently does not accommodate multiple-mediator models
54 (Hayes, 2013: Model 6). To probe serial mediation, I separately estimated a multiple-mediator model for the two identity-
55 conditions only (see below).

56 ²³ The effect size option is currently not available in the PROCESS script with multi-categorical independent variables.
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2 providing a novel impetus for adding identity to the list of key concepts that help explain variations in
3 responses to environmental pressures and within-field heterogeneity. The findings have broad theoretical
4 significance because they offer new support for the claim that micro-level cognition plays a critical role
5 in how decision makers respond to macro-institutional pressures, thus giving new insight into the
6 questions of why some organizational decision makers may resist institutional pressures while others do
7 not and, as a result, why not all organizations are the same. The article's findings contribute to the
8 literature in several ways.

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19 First and foremost, this research promotes the development of the microfoundations of
20 institutional theory called for by Zucker (1991), Powell and Colyvas (2008), and many others (e.g.,
21 Bitektine & Haack, 2015; Greenwood et al., 2011; Thornton et al., 2012). This emerging literature asks
22 the important question of how individuals' location in social relations affects the way in which they
23 interpret and respond to their institutional context (Glaser et al., 2016; Powell & Colyvas, 2008).
24 Deviating from traditional neoinstitutional theory, microinstitutionalism thus places great emphasis on
25 intraorganizational processes to better understand differences in the behavior of organizations (Gavetti et
26 al., 2007; King et al., 2010; Zucker, 1983). My findings augment this work and indicate the importance
27 of organizational identification as a key source of variation in how organizational decision makers
28 interact with their external context. I offer initial experimental support for the notion that organizational
29 identification has a significant influence on a key institutional outcome variable—resistance to
30 environmental pressures. Adding greater nuance to our understanding of the cognitive processes through
31 which the local context shapes organizational decision making, the article recognizes two mechanisms—
32 certainty and attention to environmental stimuli—that explain the identification-resistance effect.
33 Identifying these mechanisms equips institutional theory to move beyond the notion of blind imitation to
34 capture more nuanced adoption processes that explain why some decision makers give in to
35 environmental forces while others are able to resist them. The article thus contributes both novel
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2 empirical evidence and additional theoretical richness to the micro-institutional research agenda. In
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4 particular, it provides support for a situated stance (Boxenbaum, 2014), highlighting that the repertoire of
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6 practices an organization comes to adopt is materially affected by the nature of decision-makers'
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8 relationships with their organization. Organizations' tendencies to succumb to or resist to institutional
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10 pressures may thus arise not only from features of the environment but also from key decision makers'
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12 sense of connection to the organization, as well as from fundamental characteristics that are shared
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14 among organizational members. From this perspective, organizational identity constitutes an important
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16 enabling condition for organizational agency. Treating the degree of agency as a continuous (rather than
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18 binary) concept, this paper advocates that organizational actors are likely to fall somewhere in between
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20 the two extremes of heroic actors and institutional dopes depending on their degree of identification and
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22 the type of identity, thus advancing a much needed, contingent middle-ground concerning agency within
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24 institutional theory (Battilana, 2006; Battilana & D'Aunno, 2009; Hwang & Colyvas, 2011; Powell &
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26 Bromley, 2015).
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33 Further, the article makes a methodological contribution by re-incorporating experimental
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35 techniques into institutional analysis and helping to revive the experimental approach to institutional
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37 theory initiated 40 years ago by Zucker (1977). The unfortunate lack of methodological diversity in the
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39 institutional line of research has restricted it to specific kinds of research questions while leaving others
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41 unanswered. For too long, a rigid dichotomy of "macro = quantitative/explanatory" and "micro =
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43 qualitative/interpretative" has persisted and confined institutional research to an unnecessarily limited
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45 interpretation of institutions. Experimental methods help to break away from this false dichotomy and
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47 bring useful new explanatory perspectives to the micro-level study of institutions and their effects, thus
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49 opening up a whole new array of topics accessible to institutionalists. For example, the experimental
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51 approach has the potential to make significant contributions to explaining how groups of individuals
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53 organize and carry out their goals (Heath & Sitkin, 2001) and to clarifying causal effects of micro-level
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2 process (Bitektine, 2011; Brewer, 1985; Raaijmakers et al., 2015; Webster & Sell, 2007), thus allowing
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4 for an approach to institutionalism from the bottom up and complementing existing insights. In my
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6 particular investigation, using an experimental design enabled me to study how institutions specifically
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8 impact ambiguous organizational decisions, which then allowed me to advance my broader theoretical
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10 argument for agency as a contingent continuum. Further, experiments like the ones reported here can give
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12 unique insights into relevant theoretical mechanisms (such as certainty and attention) that help to explain
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14 how organizational decision makers perceive and react to institutional pressures. Such mechanisms are
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16 fundamental to theory building and enrichment (Stinchcombe, 1991) but are often difficult to detect and
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18 isolate in contextually-rich field studies, which may be why they have so far gone untested in such
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20 studies (David & Bitektine, 2009; Kennedy & Fiss, 2009; Thornton et al., 2012). Moving from inside the
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22 organization to external audiences, future experiments also have huge potential to enrich the study of
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24 legitimacy perceptions, a key construct in institutional theory that too often is merely assumed rather than
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26 directly measured and linked to relevant cognitive processes (Haack et al., 2016). Experiments can thus
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28 add considerable richness to the institutional research agenda, following a sociological miniaturism
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30 approach to institutionalism, whereby large-scale social issues are investigated by means of small-scale
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32 social situations (see Stolte et al., 2001 for more details on sociological miniaturism). In sum,
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34 experimental methods should help to expand the “resource space” of potential contributions available to
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36 the institutional research community and help the institutional paradigm to remain vibrant (Bitektine,
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38 2009; Bitektine & Miller, 2015). Specifically, the current article’s findings show that an experimental
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40 manipulation can successfully induce different levels of identification and, in turn, certainty, attention,
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42 and resistance to environmental pressures. It is my hope that these findings, along with the procedures
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44 and measures employed, help to pave the way for future micro-quantitative work in institutional theory.
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54 Finally, the article also makes an integrative contribution (Okhuysen & Bonardi, 2011) by further
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56 synthesizing the highly complementary but thus far too often separated streams of institutional and
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2 identity research. Despite their common foundation in social constructionism and Durkheim's theory of
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4 meaning, these two lines of research have evolved largely independently (cf. Pedersen & Dobbin, 2006),
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6 with relatively little cross-fertilization (but see Glynn, 2008; Kroezen & Heugens, 2012). An integrative
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8 approach provides significant theoretical leverage by allowing for the construction of meaning to take
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10 place both within fields *and* within organizations. It thus enables a richer and more complete approach to
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12 understanding organizational decision making—one that may help to reconcile the seemingly
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14 contradictory observations of homogeneity and distinctiveness that are central to the two literatures.
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16 While recent progress has been made in better understanding how the institutional environment may
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18 shape an organization's identity, the current work complements these efforts by suggesting how an
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20 organization's present identity affects its responses to environmental pressures (cf. Besharov & Brickson,
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22 2016). In this way, the article underlines how identity theory can add to institutional theory the insightful
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24 notion of organizations as filters of external institutional pressures. It is through this filtering role that
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26 organizations themselves can open up room for actorhood in a way that is orthogonal to the choices of
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28 decision makers. Such a position is highly compatible with an organizations-as-institutions perspective
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30 (Greenwood et al., 2011; Zucker, 1983), whereby the complexity created through the interplay between
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32 environmental and organizational practices provides greater potential for discretion and flexibility. All
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34 this implies that previous discussions of enabling conditions of actorhood, which were usually located in
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36 either the individual decision maker or the organizational environment, must be augmented to
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38 accommodate the organization itself.²⁴
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47 In addition to its scientific merit, this research speaks to an issue of high practical importance.
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49 Especially in times of high environmental uncertainty (e.g., during an economic crisis), many
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51 organizations tend to give up some of their agentic qualities and almost automatically adopt certain
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56 ²⁴ I am grateful to one of the anonymous reviewers for generously sharing this thought.
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2 institutional practices in order to “play it safe.” However, as previous research has shown, conformity
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4 with the environment is not always exclusively beneficial; while it may improve symbolic performance
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6 by increasing legitimacy, it can also hurt technical efficacy and differentiation-based competitive
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8 advantage (Barreto & Baden-Fuller, 2006; Meyer & Rowan, 1977; Zucker, 1987). Thus, organizations
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10 may benefit from proactive management of environmental conformity vs. resistance. My investigation
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12 suggests (but certainly does not conclusively prove) that one way to do so may be to steer identity
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14 salience and content. While an organization’s identity has traditionally been thought to be rather enduring
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16 (Albert & Whetten, 1985), others have argued that it may be more malleable (Gioia, Schultz, & Corley,
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18 2000) and have pointed to several communication- and socialization-based approaches to identity
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20 adaptation (Battilana & Dorado, 2010; Harquail, 2006). Moreover, whenever the organizational goal is to
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22 implement practices that challenge traditional models that are well-established in an organizational field
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24 (Battilana, 2006), selecting leaders who strongly identify with their organization may be particularly
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26 advisable.
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33 Although this research sheds new light on the link between organizational identity processes and
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35 resistance to environmental pressures, it is limited, like prior studies, by its conceptual focus and the
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37 methods employed. These limitations open up important avenues for future research. For example, the
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39 article clearly focuses on the consequences of organizational identity while largely bracketing the
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41 question of how identity is constructed. In doing so, it adopts an embedded agency perspective while
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43 neglecting reproduction and transformation from the bottom up (Steele & King, 2011; Thornton et al.,
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45 2012). Clearly, further research is needed to elucidate the duality of organizational identity and
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47 institutionalized decision making (Kroezen & Heugens, 2012).
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52 Moreover, this investigation takes the common but somewhat simplistic theoretical approach of
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54 individual decision makers representing organizational actors (King et al., 2010), thus implicitly framing
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56 the organization as a reflection of its individual members (Hambrick & Mason, 1984: 193). In many cases,
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2 the process of aggregation can be considerably more complicated than a linear pattern, and further insight
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4 is needed to understand how mechanisms such as social interaction and interdependencies affect emergent
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6 organization-level outcomes. Qualitative methods and agent-based modeling seem particularly promising
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8 for extending the current investigation to study both how institutional pressures are enacted through
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10 ongoing interactions with other organizational members and how collective organizational actions
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12 involve complex social aggregation processes (Felin et al., 2015; Smith & Rand, forthcoming).
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16 Finally, it is worth repeating that empirical findings from experimental research, like those
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18 reported here, are generalizable only via theory rather than through one-to-one application (Kanazawa,
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20 1999; Lucas, 2003b; Martin & Sell, 1979; Zelditch, 1980). Clearly, simplifying assumptions and a focus
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22 on the features of particular theoretical interest are necessary to bring organizational research questions
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24 into the laboratory, trading off enhanced internal validity for a certain degree of external validity.
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27 Therefore, experimental studies in institutional theory should spark further research that uses
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29 complementary methods (Levine, 2003), most notably qualitative work (Zilber, 2016), to shed more light
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31 on the dynamic process by which organizational identity develops and is negotiated in organizations. Such
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33 studies will also be able to scrutinize to what extent the findings reported here generalize to populations of
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35 practicing managers in large corporations outside the laboratory. As such, the current investigation provides
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37 plenty of opportunity for future research (e.g., lab studies involving practitioners, field replications, mixed-
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39 methods work) to further validate the findings reported here. Nonetheless, it is important to note that the
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41 usage of realistic and plausible scenarios, such as in this study, can help to reduce concerns about
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43 experiments' external validity (Finch, 1987). As institutions are otherwise difficult to research in real-time,
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45 the use of scenario techniques allows for "introducing" environmental pressures while assessing the effect
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47 of focal independent variables *in situ* and not in a vacuum.
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54 Overall, it is clear that microinstitutionalism is still in its infancy and that most of the work in this
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56 field lies ahead (Powell & Colyvas, 2008; Zucker, 1991). My research adds to this emerging research
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2 stream by building a strong argument for microinstitutionalism that goes beyond exploring micro links
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4 for their own sake and instead showing how the development of microfoundations can further our
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6 understanding of macro-theory addressing organizational practice adoption and deviance. Extending the
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8 current investigation, future research is needed to develop a more comprehensive understanding of the
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10 various conditions and mechanisms relevant to decision makers conforming with versus resisting
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12 environmental pressures. Moreover, environmental pressures often contradict each other in reality,
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14 making it important to study how decision makers process and prioritize competing institutional logics
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16 (Glaser et al., 2016). It is also clear that responses to institutional pressures do not always follow a binary
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18 conformance-versus-resistance choice; thus, qualitatively different types of responses should be
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20 investigated as well (Oliver, 1991; Yoo, Bachmann, & Schilke, 2016), most notably strategies that are at
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22 the heart of the institutional-work literature, such as challenging, attacking, and manipulating institutions
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24 (Lawrence, Leca, & Zilber, 2013). Another significant limitation in extant work is that institutionalization
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26 has rarely been studied as a dynamic process, so our current understanding of the individual stages
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28 through which institutionalization occurs is at best incomplete (Schilke & Cook, 2013; Tolbert & Zucker,
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30 1996). Finally, a comprehensive approach to microinstitutionalism will need to expand its focus to
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32 analyze not only decision makers in organizations but members of external audiences as well. Only rarely
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34 have institutionalists explicitly studied the antecedents and cognitive consequences of audiences'
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36 legitimacy judgments (Haack et al., 2016), despite the centrality of this concept in institutional theory
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38 (Tost, 2011). In sum, I expect microinstitutionalism to provide a particularly fertile ground for inquiry in
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40 the years to come.
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49 CONCLUSIONS

50 In conclusion, this research provides valuable novel findings on a key source of resistance to
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52 environmental pressures. It goes significantly beyond the traditional neoinstitutional macro-level
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54 approach to delve into cognitive processes that help to explain organizational choices. The organizational
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actor and his/her relationships to the organization and its environment assume center stage in this line of inquiry that the current investigation aims to bolster, thus laying further groundwork for an micro-institutional agenda of research aimed at opening the black box of organizational decision making.

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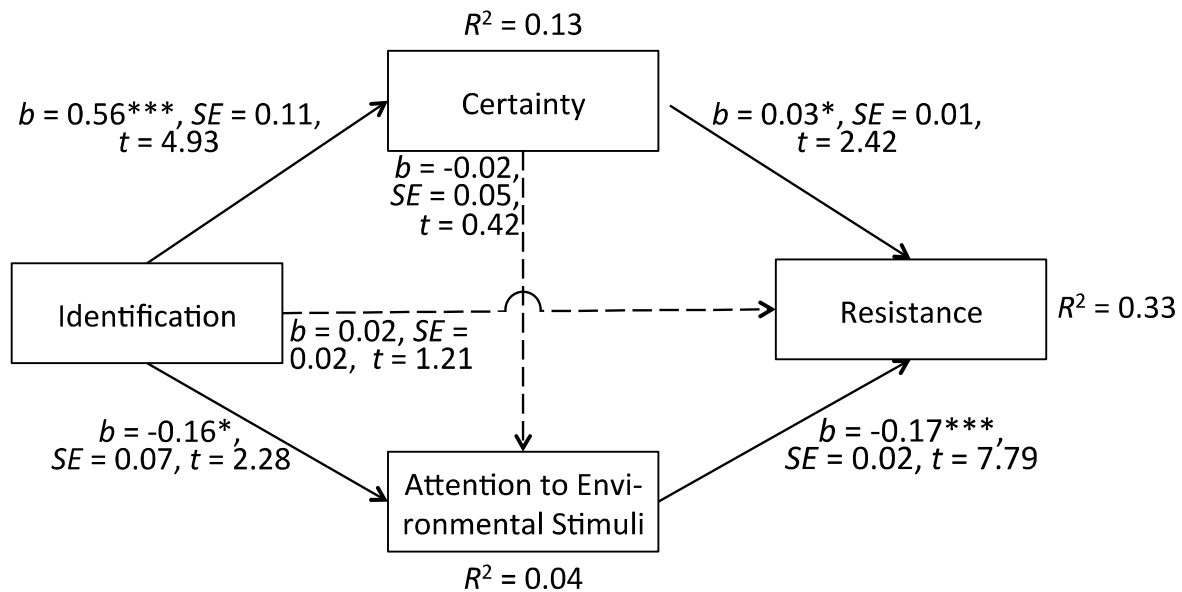
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TABLES AND FIGURES

TABLE 1
Study overview

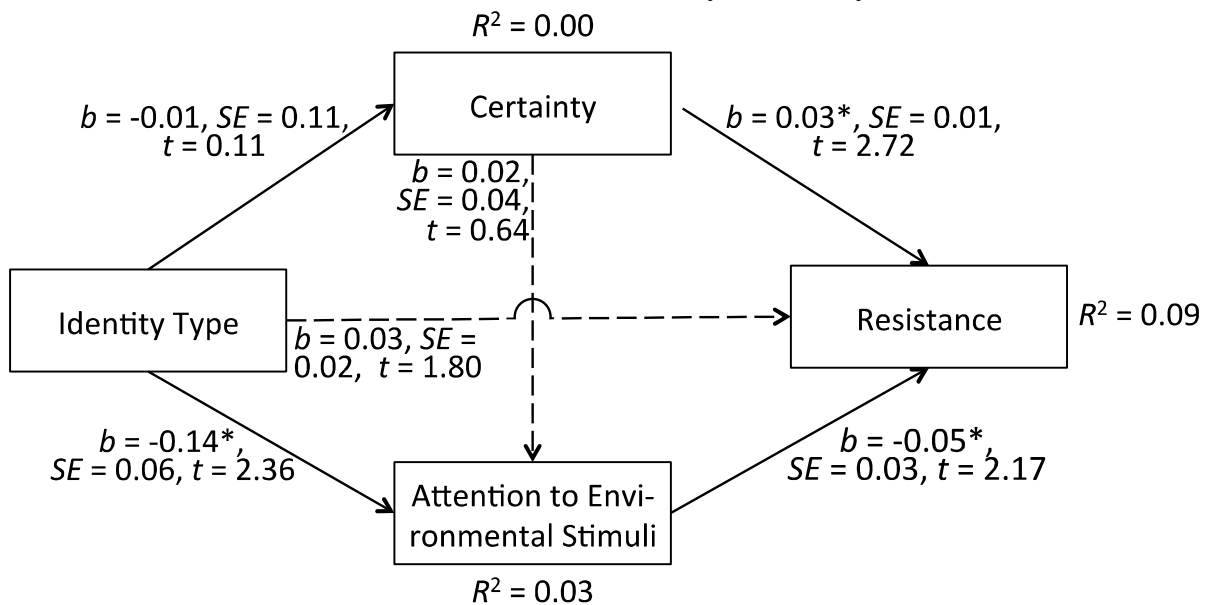
Study	Hypotheses addressed	Experimental conditions	Focal type of environmental pressures	Mediators	Key findings
1	H1, H2, H3	1) Weak organizational identification 2) Strong organizational identification	Mimetic	Certainty; attention	Organizational identification increases resistance to environmental pressures, and this effect can be explained by subjective certainty and attention to environmental stimuli.
2	H4	1) Utilitarian identity 2) Normative identity	Mimetic	Attention	Resistance to environmental pressures is stronger when the organizational identity is normative vs. utilitarian, and this effect can be explained by attention to environmental stimuli.
3	H4	1) Utilitarian identity 2) Normative identity 3) Control	Normative	Attention	Results of study 2 generalize to normative pressures and a non-student sample.

FIGURE 1
Results of the mediation analyses in study 1



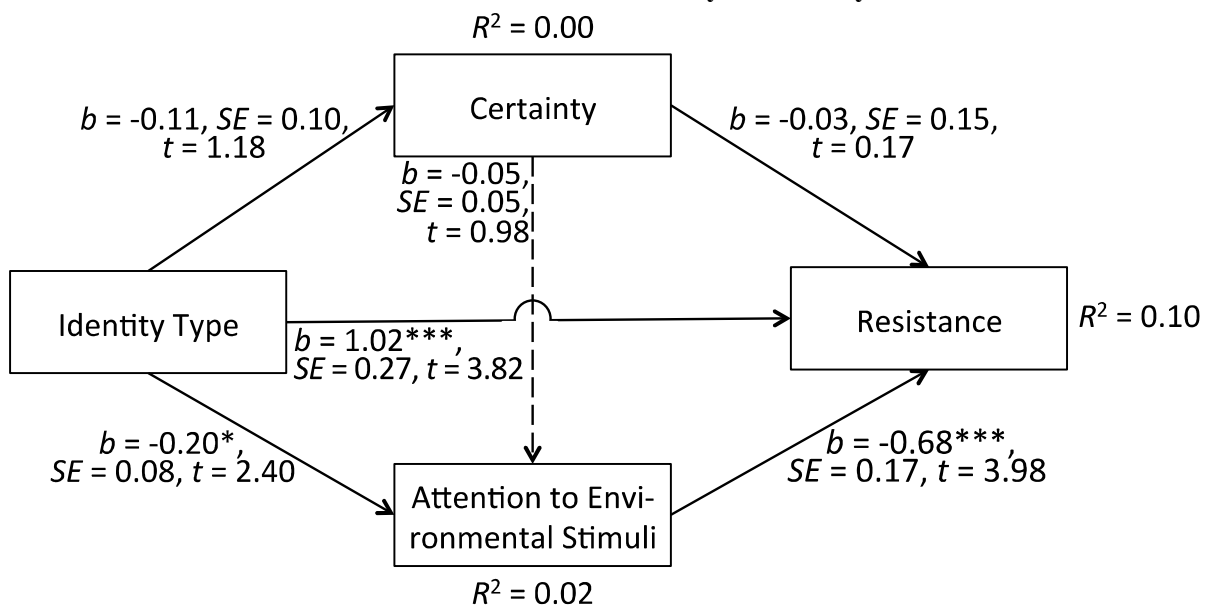
Note. $n = 169$. Strong identification was coded as 1, and weak identification was coded as 0. The statistics indicate direct effects from the multiple-mediators model. Asterisks indicate significant coefficients ($*p \leq 0.05$, $**p \leq 0.01$, $***p \leq 0.001$).

FIGURE 2
Results of the mediation analyses in study 2



Note. $n = 173$. Normative identity was coded as 1, and utilitarian identity was coded as 0. The statistics indicate direct effects from the multiple-mediators model. Asterisks indicate significant coefficients ($*p \leq 0.05$, $**p \leq 0.01$, $***p \leq 0.001$).

FIGURE 3
Results of the mediation analyses in study 3



Note. $n = 336$. Normative identity was coded as 1, and utilitarian identity was coded as 0. The statistics indicate direct effects from the multiple-mediators model. Asterisks indicate significant coefficients ($*p \leq 0.05$, $**p \leq 0.01$, $***p \leq 0.001$).

ONLINE APPENDICES

Appendix A: Organizational Problems Used in the Main Task of Study 1

Initially, I created a long list of 30 decision scenarios (each consisting of a question and two answer choices) based on a variety of strategy and marketing textbooks and case studies. I then ran a pretest via mTurk ($n = 41$), in which I asked participants to select a response and then indicate how certain they were about their choice (on a scale from 1 to 7) for each of the 30 questions. Focusing on those questions with relatively little behavioral response variance and high levels of perceived certainty, I dropped five questions and slightly reworded others to make sure that questions were sufficiently ambiguous and certain answer choices didn't appear objectively superior. The full list of the 25 organizational problems used in study 1 appears below. The self-reported mean of perceived certainty across these 25 questions in the mTurk pretest was 4.61 ($SD = 0.35$).

- 1) Your group's flower shop needs to reduce **personnel costs**. Which of the following solutions do you choose?
 - Discharge a small number of employees
 - Reduce the working hours of all employees
- 2) Your group's flower shop needs to decide on its **hiring policy**. Which of the following solutions do you choose?
 - Hire certified florists only
 - Hire motivated people no matter their education
- 3) Your group's flower shop needs to decide on its **geographic scope**. Which of the following solutions do you choose?
 - Focus on local area
 - Spread over various regions
- 4) Your group's flower shop needs to decide on its **product breadth**. Which of the following solutions do you choose?
 - Focus on flowers only
 - Offer flowers and other garden products
- 5) Your group's flower shop needs to decide on its **pricing strategy**. Which of the following solutions do you choose?
 - Low prices (meaning low profit margins but higher volumes)
 - High prices (meaning high profit margins but lower volumes)
- 6) Your group's flower shop needs to decide on its **replenishment system**. Which of the following solutions do you choose?
 - Reordering inventory at fixed points in time
 - Reordering inventory when running low
- 7) Your group's flower shop needs to decide on **price variations**. Which of the following solutions do you choose?
 - Keep prices constant throughout the year (to reduce consumer confusion)
 - Run frequent price promotions
- 8) Your group's flower shop needs to decide on its **flower portfolio**. Which of the following solutions do you choose?

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- Wide variety of flowers from all over the world
 - Specific types of flowers the shop is known for
- 9) Your group's flower shop needs to decide on the location for a **new branch**. Which of the following solutions do you choose?
- Open branch in a shopping mall
 - Open branch downtown
- 10) Your group's flower shop needs to decide on **who places orders**. Which of the following solutions do you choose?
- Orders are placed centrally by corporate management
 - Orders are placed decentrally by every branch manager
- 11) Your group's flower shop needs to decide on its **ownership form**. Which of the following solutions do you choose?
- Privately held company
 - Publicly traded company
- 12) Your group's flower shop needs to decide on the target segment of its **next ad campaign**. Which of the following solutions do you choose?
- Weddings and events
 - Individual customers
- 13) Your group's flower shop needs to decide on its **sourcing strategy**. Which of the following solutions do you choose?
- Order from few exclusive flower wholesalers
 - Order from many different flower wholesalers
- 14) Your group's flower shop needs to decide on how to **reward outstanding employees**. Which of the following solutions do you choose?
- Personnel trainings
 - Financial boni
- 15) Your group's flower shop needs to decide on a way to **improve the stores**. Which of the following solutions do you choose?
- Improve store design
 - Improve store size
- 16) Your group's flower shop needs to increase **customer retention**. Which of the following solutions do you choose?
- Loyalty card/bonus points
 - Volume discounts
- 17) Your group's flower shop needs to determine its **key financial goal**. Which of the following solutions do you choose?
- Increase sales growth
 - Increase profit margins

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2 18) Your group's flower shop needs to decide on how to obtain **market intelligence**. Which of the
3 following solutions do you choose?

- 4 • Set up an inhouse market research unit
- 5 • Hire a market research consultancy

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8 19) Your group's flower shop needs to decide which **advertising channel** to prioritize. Which of the
9 following solutions do you choose?

- 10 • Advertising via Internet
- 11 • Advertising via local media

12
13 20) Your group's flower shop needs to redesign its **logo**. Which of the following solutions do you
14 choose?

- 15 • Make the logo blue
- 16 • Make the logo red

17
18
19 21) Your group's flower shop needs to decide on whether or not to offer **home delivery**. Which of the
20 following solutions do you choose?

- 21 • Offer delivery service—that's where the money is
- 22 • Don't offer delivery service—that's not worth the hefty investment

23
24 22) Your group's flower shop needs to decide on its **return policy**. Which of the following solutions do
25 you choose?

- 26 • "7 days fresh or your money back"
- 27 • "If you don't love it, we'll take it back"

28
29 23) Your group's flower shop needs to decide on its **expansion strategy**. Which of the following
30 solutions do you choose?

- 31 • Organic growth (growth from existing business)
- 32 • External growth (growth from acquiring other flower shops)

33
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35 24) Your group's flower shop needs to decide on its **opening hours**. Which of the following solutions
36 do you choose?

- 37 • 9am-9pm for all branches
- 38 • Store hours consistent with other stores in the local neighborhood

39
40 25) Your group's flower shop needs to increase its reach among **commercial customers**. Which of the
41 following solutions do you choose?

- 42 • Offer discounted flower subscriptions
- 43 • Hire a sales rep to go out to restaurants, funeral homes, etc.

44 45 46 **Appendix B: List of Items Used in Study 1's Association Test**

47 1) Which of the four words listed below do you associate most with the keyword: **cow**?

- 48 • horse
 - 49 • farmer
 - 50 • grass
 - 51 • milk
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- 2) Which of the four words listed below do you associate most with the keyword: **water**?
- rain
 - fire
 - drink
 - well
- 3) Which of the four words listed below do you associate most with the keyword: **house**?
- apartment
 - home
 - roof
 - school
- 4) Which of the four words listed below do you associate most with the keyword: **film**?
- director
 - cinema
 - camera
 - movie
- 5) Which of the four words listed below do you associate most with the keyword: **lamp**?
- shade
 - genie
 - street
 - desk
- 6) Which of the four words listed below do you associate most with the keyword: **cup**?
- tea
 - coffee
 - glass
 - mug
- 7) Which of the four words listed below do you associate most with the keyword: **phone**?
- dial
 - cell
 - ring
 - call
- 8) Which of the four words listed below do you associate most with the keyword: **book**?
- page
 - reservation
 - story
 - library
- 9) Which of the four words listed below do you associate most with the keyword: **car**?
- engine
 - truck
 - vehicle
 - auto

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2 10) Which of the four words listed below do you associate most with the keyword: **pool**?

- 3
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- table
 - water
 - swim
 - cue

9 11) Which of the four numbers below do you associate most with the keynumber: **12**?

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 - 13
 - 24

15 12) Which of the four numbers below do you associate most with the keynumber: **1111**?

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- 1110
 - 1112
 - 111
 - 4

22 13) Which of the four numbers below do you associate most with the keynumber: **66**?

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- 99
 - 12
 - 6
 - 3

29 14) Which of the four numbers below do you associate most with the keynumber: **101**?

- 30
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- 111
 - 131
 - 11
 - 202

35 15) Which of the four numbers below do you associate most with the keynumber: **1**?

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- 0
 - 2
 - 11
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43 Appendix C: Tajfel Matrices Used in the Intergroup Reward Allocation Task of Study 1

44 1) Please choose one of the following reward allocation structures:

45 Line 1: Rewards/penalties for Member 2 of your group ("inductive thinkers")

46 Line 2: Rewards/penalties for Member 3 of the other group ("deductive thinkers")

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-19	-16	-13	-10	-7	-4	-1	0	1	2	3	4	5	6
6	5	4	3	2	1	0	-1	-4	-7	-10	-13	-16	-19

52 2) Please choose one of the following reward allocation structures:

53 Line 1: Rewards/penalties for Member 3 of your group ("inductive thinkers")

54 Line 2: Rewards/penalties for Member 1 of the other group ("deductive thinkers")

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1	2	3	4	5	6	7	8	9	10	11	12	13	14
14	13	12	11	10	9	8	7	6	5	4	3	2	1

3) Please choose one of the following reward allocation structures:

Line 1: Rewards/penalties for Member 4 of your group ("inductive thinkers")

Line 2: Rewards/penalties for Member 4 of the other group ("deductive thinkers")

-14 -12 -10 -8 -6 -4 -2 -1 3 7 11 15 19 23

23 19 15 11 7 3 -1 -2 -4 -6 -8 -11 -12 -14

4) Please choose one of the following reward allocation structures:

Line 1: Rewards/penalties for Member 3 of your group ("inductive thinkers")

Line 2: Rewards/penalties for Member 2 of your group ("inductive thinkers")

12 10 8 6 4 2 0 -1 -5 -9 -13 -17 -21 -25

-25 -21 -17 -13 -9 -5 -1 0 2 4 6 8 10 12

5) Please choose one of the following reward allocation structures:

Line 1: Rewards/penalties for Member 4 of the other group ("deductive thinkers")

Line 2: Rewards/penalties for Member 3 of the other group ("deductive thinkers")

18 17 16 15 14 13 12 11 10 9 8 7 6 5

5 6 7 8 9 10 11 12 13 14 15 16 17 18

6) Please choose one of the following reward allocation structures:

Line 1: Rewards/penalties for Member 2 of your group ("inductive thinkers")

Line 2: Rewards/penalties for Member 1 of the other group ("deductive thinkers")

17 14 11 8 5 2 -1 -2 -3 -4 -5 -6 -7 -8

-8 -7 -6 -5 -4 -3 -2 -1 2 5 8 11 14 17

Appendix D: Study 1's Group Involvement Questions (Based on Ellemers, Spears, and Doosje 1997)

Next, please indicate to what extent you agree with the following statements:

- 1) Relationships with other people are very important to me.
- 2) I basically never feel lonely.
- 3) Belonging to larger social entities and groups is a crucial part of life.
- 4) Sometimes, the welfare of groups I belong to can be as important as my own personal welfare.
- 5) I care about groups I belong to and want them to be different/better than other groups.

(anchored on a 9-point answer scale ranging from 1 = not at all to 9 = very much)

Appendix E: Comprehension and Suspicion Checks in Study 1

Post-task questionnaire items were used to assess self-reported comprehension and suspicion regarding the task. The mean of the item "I understood the instructions well"—with answer categories ranging from 1 = "strongly disagree" to 5 = "strongly agree"—was 4.21, suggesting that study comprehension was high. Further, the mean of the item "There were other participants involved in the task" was 4.33, indicating that participants were not suspicious about the ostensible group setting. In addition, an open-ended question asked participants to list any aspects of the experiment that they found "weird" or "hard to believe" (if any). While some of the participants expressed doubt that the association test was a valid instrument for discriminating between inductive and deductive thinkers or that the specific group involvement score they were provided exactly matched their group involvement, the actual existence of other study participants and the reality of their responses were very rarely questioned.

Appendix F: Correlation Tables

Table A1: Study 1

Variable	1	2	3	4
1 Identification	1			
2 Certainty	0.36***	1		
3 Attention	-0.20**	-0.10	1	
4 Resistance	0.24***	0.25***	-0.54***	1

Note. $n = 169$. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

Table A2: Study 2

Variable	1	2	3	4
1 Identity type	1			
2 Certainty	-0.01	1		
3 Attention	-0.18*	0.05	1	
4 Resistance	0.16*	0.19*	-0.18*	1

Note. $n = 173$. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

Table A3: Study 3

Variable	1	2	3	4	5
1 Utilitarian identity	1				
2 Normative identity	-0.50***	1			
3 Certainty	0.11*	0.02	1		
4 Attention	0.10*	-0.07	-0.03	1	
5 Resistance	-0.13**	0.20***	-0.04	-0.23***	1

Note. $n = 506$. Baseline: no-identity/control condition. * $p \leq 0.05$, ** $p \leq 0.01$, *** $p \leq 0.001$.

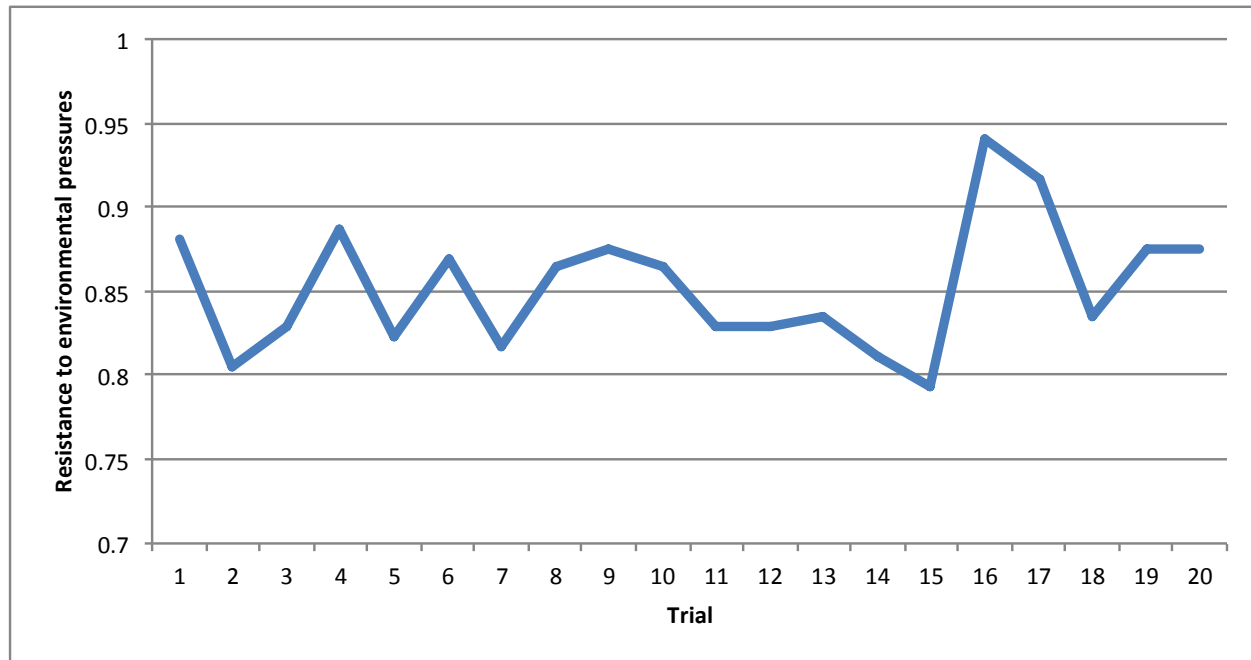
Appendix G: Post hoc Analyses in Study 1

In supplementary post hoc analyses, I first explored potential gender effects by estimating a one-way ANOVA comparing resistance by gender. Results showed that gender had no significant effect, $F(1, 167) = 1.47$, $d = 0.21$, $p > 0.1$.

Second, I explored temporal tendencies to determine whether respondents would learn to resist or accept environmental pressures throughout the trials of the experiment. Running a regression with resistance as dependent variable and trial number (ranging from 1 to 20) as independent variable yielded a nonsignificant coefficient ($b = 0.01$; $SE = 0.01$; $z = 1.38$; $p > 0.10$). Manual inspection of the responses aggregated across participants at the trial level also failed to reveal any discernable cross-trial trends (see Figure A1).

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FIGURE A1
Average resistance to environmental pressures (participants staying with their initial response)
across individual trials in study 1



Third, I assessed differences between the 20 focal trials in which the competitor's response ostensibly differed and the five trials in which there was agreement between the participant's and the competitor's initial choice. Running a paired samples *t* test, I found that participants stayed with their previous choice significantly more frequently in the latter five trials ($M_{\text{control trials}} = 0.94$) than in the 20 focal trials ($M_{\text{focal trials}} = 0.85$), $t = 5.15$, $df = 168$, $d = 0.60$, $p \leq 0.001$, indicating that response changes were indeed a consequence of environmental pressures and lending further credibility to the operationalization of the dependent variable.

Appendix H: Manipulation Checks in Study 2

After participants completed the main task, post-task questionnaire items were used to check the effectiveness of the manipulation. Specifically, I included four items in the post-task questionnaire, based on the measure devised by Gioia and Thomas (1996) that asked participants to characterize their group. The four questionnaire items were "Our group really cares about high quality," "Traditions and symbols are fundamental to our group's functioning," "Economic performance is considered key to fulfilling our mission," and "Financial returns are the central success measure for us." The response scale ranged from 1 ("strongly disagree") to 7 ("strongly agree"). Consistent with Gioia and Thomas (1996), I reverse-coded the last two items of the scale so that higher scores indicated a more normative identity.

The mean of the identity type measure ($\alpha = 0.79$) differed considerably between conditions; specifically, it was significantly higher in the normative identity condition ($M_{\text{normative identity}} = 4.84$) than in the utilitarian identity condition ($M_{\text{utilitarian identity}} = 3.05$), $F(1, 171) = 115.06$, $d = 1.64$, $p \leq 0.001$, supporting the effectiveness of the manipulation. As a supplementary manipulation check, I included an item asking participants where they saw their group on a 9-point continuum, with "Investment Bank on Wall Street" and "Catholic Church" as anchors at the low and high ends of the scale, respectively. The

1
2 mean of this item differed significantly between conditions, $F(1, 171) = 46.49$, $d = 1.03$, $p \leq 0.001$, with
3 participants in the utilitarian identity condition providing responses closer to the investment bank end of
4 the continuum ($M_{\text{utilitarian identity}} = 2.91$) and participants in the normative identity condition being closer to
5 the church archetype ($M_{\text{normative identity}} = 4.85$). I also analyzed whether the identity type manipulation
6 inadvertently led to differences in identification, and I found no significant difference in the perceived
7 identification measure employed earlier ($\alpha = 0.82$) between conditions, $F(1, 171) = 1.33$, $d = 0.17$,
8 $p > 0.10$. Further, there was no significant difference between conditions in terms of the number of points
9 allocated to in-group members in the reward allocation task, $F(1, 171) = 0.58$, $d = 0.12$, $p > 0.10$. These
10 results suggested that the manipulation was effective in inducing the two different types of identity
11 (utilitarian and normative) while holding identification approximately constant.
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15 16 **Appendix I: Post hoc Analyses in Study 2**

17 Interestingly, I found a significant negative main effect of gender in the data of study 2 ($b = -0.04$; $SE =$
18 0.02 ; $t = 2.17$; $p \leq 0.05$), suggesting that women showed less resistance to environmental pressures than
19 men did. The interaction effect between identity type and gender, however, was not significant ($b = 0.06$;
20 $SE = 0.04$; $t = 1.45$; $p > 0.10$). I reran all regressions for study 2 with gender as a control, and the results
21 remained qualitatively unchanged.
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25 26 **Appendix J: Text for the Main Task of Study 3**

27 How to engage in risk management is a complex strategic issue that the top management of virtually any
28 company is facing these days. Your group's flower shop has consistently invested in risk management
29 initiatives about as much as other companies in the industry and has never faced any serious problems
30 related to risk-management issues.
31

32 Not too long ago, the International Organization for Standardization (ISO) has developed a voluntary
33 risk-management standard for companies worldwide to consider—the ISO 31000, which provides
34 principles, framework, and a process for managing risk. Topics that are covered by this particular
35 standard range from implementation guidelines to risk-assessment techniques.
36
37

38 ISO 31000 has been praised by some for helping companies to perform well in an environment full of
39 uncertainty, but at the same time, the standard is not without criticism. Opponents claim it permits only
40 an overly narrow range of methods, has a narrow scope, can not be universally integrated, and is full of
41 illogical definitions of key terms.
42
43

44 To learn a bit more about ISO 31000, please click here:

45 <http://www.iso.org/iso/home/standards/iso31000.htm>
46
47

48 Now you are asked to decide whether or not your flower shop should adopt ISO 31000. To be clear, this
49 is not a decision on whether to make greater investments in risk management generally; it is specifically a
50 decision on whether to adopt this particular ISO 31000 standard.
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Appendix K: Manipulation Checks in Study 3

An analysis of variance revealed significant differences in the self-reported identity-type measure (see study 2) across the three conditions, $F(2, 503) = 175.81, \eta^2 = 0.41, p \leq 0.001$. In support of the effectiveness of the manipulation, the mean was significantly higher in the normative-identity condition ($M_{\text{normative identity}} = 4.76$) than in the utilitarian-identity condition ($M_{\text{utilitarian identity}} = 2.72$), $F(1, 334) = 266.69, d = 1.78, p \leq 0.001$, and the control condition ($M_{\text{control}} = 3.71$), $F(1, 332) = 112.33, d = 1.15, p \leq 0.001$. These latter two conditions were also significantly different from one another, $F(1, 340) = 98.22, d = 1.07, p \leq 0.001$. Similarly, participants in the three conditions differed significantly in their assessment on the “Investment Bank on Wall Street” vs. “Catholic Church” scale previously used in study 2, $F(2, 503) = 87.64, \eta^2 = 0.26, p \leq 0.001$, with the mean in the normative-identity condition ($M_{\text{normative identity}} = 5.13$) being significantly higher than those in both the utilitarian-identity condition ($M_{\text{utilitarian identity}} = 2.55$), $F(1, 334) = 169.12, d = 1.42, p \leq 0.001$, and the control condition ($M_{\text{control}} = 3.65$), $F(1, 332) = 55.20, d = 0.49, p \leq 0.001$. The difference between the utilitarian-identity and control conditions on this measure was also statistically significant, $F(1, 340) = 34.47, d = 0.63, p \leq 0.001$.

Moreover, a comparison of the three conditions across levels of self-reported identification (see the measure from study 1) was significant, $F(2, 503) = 31.36, \eta^2 = 0.11, p \leq 0.001$. There was a significantly lower identification in the control condition ($M_{\text{control}} = 5.15$) than in both the utilitarian-identity ($M_{\text{utilitarian identity}} = 6.47, F(1, 340) = 52.94, d = 0.79, p \leq 0.001$) and the normative-identity conditions ($M_{\text{normative identity}} = 6.20$), $F(1, 332) = 37.73, d = 0.67, p \leq 0.001$. These latter two conditions did not differ significantly from one another in terms of self-reported identification, $F(1, 334) = 2.42, d = 0.16, p > 0.10$.

Appendix L: Post hoc Analyses in Study 3

Similar to study 2, results showed a negative main effect of gender on resistance that was significant at a 10% level ($b = -0.39; SE = 0.22; t = 1.80; p = 0.07$), but the interaction terms of gender with two condition dummies were not significant (p 's > 0.10). Taken together, the gender-related post hoc analyses reported here indicate that there may be gender differences in people's susceptibility to environmental pressures—an intriguing exploratory finding worthy of further study.

Additionally, I was interested in exploring whether the results of study 3 hold when restricting the sample to only those participants who had first-hand experience with organizational decision making. I thus ran subgroup analyses among those who indicated they had such experience ($n = 285$). Consistent with the main results reported above, one-way ANOVAs revealed greater resistance in the normative-identity condition ($M_{\text{normative identity}} = 5.71$) than in the utilitarian-identity condition ($M_{\text{utilitarian identity}} = 4.38$), $F(1, 181) = 13.10, d = 0.54, p \leq 0.001$, and in the control condition ($M_{\text{control}} = 5.05$), $F(1, 189) = 3.52, d = 0.27, p = 0.06$. Moreover, the indirect effect of normative identity (vs. utilitarian identity) on resistance was significantly mediated by attention (95% CI = [0.001, 0.386]) but not certainty (95% CI = [-0.124, 0.026]).

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