

WHEN THE GLASS IS HALF FULL AND HALF EMPTY: CEOS' AMBIVALENT INTERPRETATIONS OF STRATEGIC ISSUES

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Organizational scholars have highlighted the importance of interpretive ambivalence for mindfulness, creativity, and strategic change. Ambivalence occurs when an issue is seen simultaneously as positive and negative. We examine organizational factors that influence the propensity of organizational leaders to evaluate a new strategic issue ambivalently. Data come from a survey of 220 German CEOs confronted with the enlargement of the European Union. We find that CEOs of firms with a more ambidextrous strategic orientation and a moderate sense of organizational control over their environment are most likely to be ambivalent about this issue. Our findings affirm the prevalence of interpretive ambivalence at the executive level and suggest ways for organizations to promote or prevent ambivalence in strategic sensemaking. Copyright © 2009 John Wiley & Sons, Ltd.

1 INTRODUCTION

2
3 Organizational and strategy scholars are increas-
4 ingly interested in the phenomenon of interpretive
5 ambivalence in organizations (Fong, 2006; Gilbert,
6 2006; Piderit, 2000; Weick, Sutcliffe, and Obstfeld,
7 1999). Ambivalence refers to holding competing
8 evaluations of an issue (Kaplan, 1972). For exam-
9 ple, a chief executive officer (CEO) may see a
10 change in the firm's environment as both positive
11 and negative for the firm. Such ambivalent issue
12 evaluations affect strategy processes and organi-
13 zational outcomes. Some scholars have suggested
14 that ambivalence may prevent oversimplifications,
15 enhance mindfulness (Fiol and O'Connor, 2003;

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18
19 Keywords: ambivalence; sensemaking; strategic issue
20 diagnosis; organizational mindfulness; managerial cogni-
21 tion; organizational context

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25 Weick *et al.*, 1999), and encourage wider participa- 26
27 tion in problem solving (Piderit, 2000). In addition, 28
29 Fong (2006) found that the experience of ambiva- 30
31 lence triggers an increased sensitivity to associa- 32
33 tions, which is an important aspect of creativity. 34
35 Others have cautioned, however, that the mind- 36
37 fulness and cognitive complexity associated with 38
39 ambivalence can get in the way of swift responses 40
41 to an event (Levinthal and Rerup, 2006; Porac and 42
43 Rosa, 1996).

44 Ambivalent understandings of strategic issues 45
46 are particularly central for top executives, who 47
48 play a key role in shaping collective interpre- 49
50 tations and strategic responses in organizations 51
52 (Barr, 1998; Gioia and Chittipeddi, 1991; Ham- 53
54 brick and Mason, 1984; Pratt and Doucet, 2000). 55
56 Gilbert (2006), for example, found in a case 57
58 study of a publishing company that the CEO saw 59
60 the emergence of online publishing as simulta- 61
62 neously a threat and an opportunity. The exec- 63
64 utive's ambivalent interpretation of this environ- 65
66 mental shift allowed for experimentation and wider 67
68

1 participation, which enabled the firm to identify
2 successful responses to the drastic change.

3 These studies suggest that leaders' ambiva-
4 lence is more common and more important than
5 previously assumed. But the conditions under
6 which executives develop ambivalent evaluations
7 of strategic issues have rarely been studied
8 (Gilbert, 2006). Previous work on strategic issue
9 interpretation has, instead, examined why execu-
10 tives interpret an issue as either positive or nega-
11 tive (Denison *et al.*, 1996; Thomas and McDaniel,
12 1990). One key factor in evaluative ambivalence
13 is the organizational context of executive sense-
14 making. Organizational structures and belief sys-
15 tems expose executives to information, ready-
16 made framings, and social role expectations (Daft
17 and Weick, 1984; Dutton and Duncan, 1987)
18 that act as perceptual filters and influence which
19 aspects of an issue CEOs attend to (Ocasio,
20 1997). These filters and framings, in turn, influence
21 whether top managers evaluate an issue ambiva-
22 lently.

23 Organizational sources of executive sensemak-
24 ing are of particular interest to strategy schol-
25 ars because they may help explain firm differ-
26 ences in competitive behavior. However, stud-
27 ies that unpack how organizational factors trigger
28 executive ambivalence are decidedly scarce. Our
29 study begins to fill this gap. We embed the con-
30 cept of ambivalence in the literature on strategic
31 issue interpretation and sensemaking (e.g., Dut-
32 ton and Jackson, 1987; Julian and Ofori-Dankwa,
33 2008), and lay out basic organizational and cog-
34 nitive mechanisms that prompt top executives to
35 see issues ambivalently. We use survey data on
36 how CEOs of German firms evaluated a salient
37 strategic issue—the 2004 European Union (EU)
38 enlargement.

39 The paper's contribution is theoretical and
40 empirical. Theoretically, we elaborate the mech-
41 anisms through which organizational context trig-
42 gers CEOs' ambivalent evaluations. Previous
43 research suggests that top decision makers'
44 ambivalence is consequential, but has paid little
45 attention to antecedents (Fiol and O'Connor, 2003;
46 Fong, 2006; Gilbert, 2006). Our study puts this
47 inquiry on firmer ground by drawing on expan-
48 sive social psychological literature on attitudi-
49 nal ambivalence. Empirically, we test hypotheses
50 about the relationship between organizational char-
51 acteristics and CEO ambivalence in what is, to

the best of our knowledge, the first larger sam- 58
ple study. Our analyses suggest that top managers 59
in firms with a more ambidextrous strategic orien- 60
tation and a moderate sense of organizational con- 61
trol are more likely to evaluate the issue ambiva- 62
lently. 63

64
65
66 **THEORETICAL FRAMEWORK**

67
68 Evaluating a strategic issue as positive, negative,
69 or both is an act of interpretation. Interpretation
70 answers the basic question, *what type of situation is*
71 *this?* (Weick, Sutcliffe, and Obstfeld, 2005: 409),
72 which is achieved by 'the fitting of information
73 into some kind of [cognitive] structure' (Thomas,
74 Clark, and Gioia, 1993: 241). Issues and events
75 become meaningful in relation to the firm's exist-
76 ing knowledge and identity (Lyles, 1981). Inter-
77 pretation results in framings of information along
78 more generic dimensions, so that unique issues
79 become comparable. Managers commonly employ
80 the dimensions of valence (positive or negative for
81 the firm) and agency (controllable or uncontrol-
82 lable) in interpreting issues (Dutton and Jackson,
83 1987). The familiar labels of 'threat' and 'oppor-
84 tunity' arise from these assessments (Jackson and
85 Dutton, 1988). Positive evaluations include an
86 assessment that the organization is likely to gain
87 from the issue, while negative evaluations includes
88 the expectation that the current issue will lead to
89 losses (Thomas and McDaniel, 1990).

90 Research in social psychology has found that
91 individuals attach such positive and negative eval-
92 uations to issues, objects, and persons (Fazio,
93 Eiser, and Shook, 2004), and that evaluations not
94 only consist of *cold* analytic assessments but also
95 of *hot* affective reactions (Fazio, 2007). Individ-
96 uals assess the overall valence of an issue based
97 on attending to its multiple aspects (Petty *et al.*,
98 2007). They relate perceived attributes of the issue
99 to repertoires of analogous attributes and evalua-
100 tions stored in memory. The overall evaluation
101 of the present issue is a product of the evalua-
102 tions accessed though the different aspects (Fazio,
103 2007). The valences of attended attributes thus
104 help individuals put a novel, complex issue onto
105 simpler dimensions (Petty, Briñol, and DeMar-
106 ree, 2007), understand the overall implications
107 of the issue, and activate corresponding response
108 schemas (Cacioppo, Gardner, and Berntson, 1999;
109 Higgins, 1997).

1 Previous work on strategic issue diagnosis often
 2 implies that executives habitually classify issues as
 3 either positive or negative (e.g., Chattopadhyay,
 4 Glick, and Huber, 2001; Thomas *et al.*, 1993).
 5 Yet both positive and negative evaluations can
 6 become associated with an issue, so that the per-
 7 son evaluates the issue as positive and negative
 8 *at the same time* (de Liver, van der Pligta, and
 9 Wigboldus, 2007; Petty *et al.*, 2007). The simul-
 10 taneous presence of positive and negative evalua-
 11 tions associated with the same issue is referred to
 12 as attitudinal ambivalence (Kaplan, 1972; Thomp-
 13 son, Zanna, and Griffin, 1995).¹ This notion builds
 14 on the conclusion that a bipolar conceptualiza-
 15 tion of evaluations as ranging from positive to
 16 negative is *insufficient* to capture the actual cog-
 17 nitive processes involved in evaluation (Cacioppo,
 18 Gardner, and Berntson 1997: 6). Several studies
 19 have demonstrated that positive and negative atti-
 20 tudes are separate dimensions (e.g., Costarelli and
 21 Colloca, 2004; de Liver *et al.*, 2007; Eagly and
 22 Chaiken, 1998). In contrast to the measurement
 23 of temperature, where warmer means less cold,
 24 a more positive evaluation does not automatically
 25 lead to a less negative evaluation. Holding evalua-
 26 tions of competing valence is possible, for exam-
 27 ple, when a person faces an issue with positive and
 28 negative facets (de Liver *et al.*, 2007; Petty *et al.*,
 29 2007). In developing a *holistic* view of the issue,
 30 the person will not form a univalent or neutral
 31 but rather an ambivalent evaluation (Petty *et al.*,
 32 2007).

33 What are general sources of ambivalence? Stud-
 34 ies by Linville (1982), Judd and Lusk (1984),
 35 and Rudolph and Popp (2007) suggest that when
 36 individuals consider a greater number of aspects,
 37 they are less likely to perceive an issue as simply
 38 good or bad. However, if the aspects considered
 39 are closely related, a more univalent evaluation is
 40 likely despite the analyzing of much information
 41 (Eagly and Chaiken, 1998; Judd and Lusk, 1984).
 42 Thus, it is primarily when individuals apply dif-
 43 ferent perspectives and knowledge structures to an
 44 issue that looking at more aspects leads to greater

46 _____
 47 ¹ Ambivalence stands in contrast to the more general notion of
 48 ambiguity, which also subsumes vagueness and uncertainty of
 49 evaluations and other framings. An ambivalent evaluation does
 50 not indicate that the valence of an issue is vague or unknown,
 51 which would imply that no specific cognitive structures are acti-
 52 vated. Rather, ambivalence refers to the application of distinct
 53 and competing evaluations of an issue, so that cognitive struc-
 54 tures associated with both evaluations are activated.

ambivalence in the overall evaluation (Rudolph 58
 and Popp, 2007). 59

60 When would executives entertain more diverse
 61 framings and identify more diverse attributes of
 62 strategic issues? Research on managerial cogni-
 63 tion suggests that top executives' interpretive pro-
 64 cessing is shaped by their organizations (Daft and
 65 Weick, 1984; Dutton and Duncan, 1987). Organi-
 66 zations provide a relatively strong context that pro-
 67 vides collective, structurally embedded beliefs and
 68 frameworks through which executives perceive the
 69 issues the firm is confronted with (Dutton and
 70 Duncan, 1987). Organizations also filter the infor-
 71 mation and framings to which a CEO is exposed,
 72 because sensemaking activities are distributed and
 73 relayed to top executives through channels and
 74 routines (Ocasio, 1997; Starbuck and Milliken,
 75 1988). Accordingly, previous research has found
 76 organization-level differences in what attributes
 77 executives attend to and in the framings they apply
 78 (e.g., Dutton and Dukerich, 1991; Thomas and
 79 McDaniel, 1990). Hence, whether CEOs consider
 80 a diverse or narrow set of issue aspects depends
 81 in part on the organizational context that they find
 82 themselves in.

83 Previous research identifies several organiza-
 84 tional factors that narrow or broaden issue inter-
 85 pretation: core beliefs and identities that relate the
 86 organization to its environment (Bettis and Praha-
 87 lad, 1995; Prahalad and Bettis, 1986), accumulated
 88 experiences in a domain of activity (Miller, 1993),
 89 and the coherence of executives' social role expecta-
 90 tions (Merton, 1976). Collective representations
 91 of an organization's environment and beliefs about
 92 what the organization is and how it should act filter
 93 and frame information, and thereby influence how
 94 executives evaluate an issue (Dutton and Dukerich,
 95 1991; Kiesler and Sproull, 1982; Nystrom and
 96 Starbuck, 1984). For example, when executives
 97 look at an issue through the lens of a single-minded
 98 strategic direction or a very homogeneous iden-
 99 tity, they deem a narrower set of issue attributes
 100 relevant. More heterogeneous strategy logics and
 101 identities make more ambivalent evaluations likely
 102 by admitting more diverse aspects for evaluation.

103 Similarly, beliefs about how much the orga-
 104 nization can shape the outcomes of an event in
 105 its environment affect the effort to seek infor-
 106 mation and the diversity of perspectives enter-
 107 tained. CEOs with a greater sense of organizational
 108 controllability increase their sensemaking efforts
 109 because they believe that the effect of the issue

1 depends on their firm's decisions and actions. They
 2 seek more detailed information and arrive at more
 3 nuanced and ambivalent assessments (Bandura,
 4 1997; Weick, 1998). However, as CEOs become
 5 more confident in their firm's ability to master the
 6 issue regardless of other factors, effort declines
 7 and more narrow routine perceptions result (Miller,
 8 1993). Hence, leaders with very low and very high
 9 levels of controllability can be expected to con-
 10 sider a narrow set of frames and attributes, and less
 11 likely to develop ambivalent issue evaluations.

12 An organization's accumulated experience in the
 13 issue domain has also been frequently identified
 14 as an antecedent of executives' interpretations of
 15 events (e.g., Denison *et al.*, 1996; Starbuck and
 16 Milliken, 1988). Cumulative experience leads to
 17 the formation of more fine-grained schemas and
 18 a larger pool of knowledge structures embodied
 19 in organizational routines, structures, and members
 20 (Weick, 1995). This diversity prompts executives
 21 to examine strategic issues from different and more
 22 nuanced angles, consider a greater number and
 23 more diverse aspects, and form more ambivalent
 24 evaluations.

25 Lastly, top executives act not only as individ-
 26 uals, but also as occupants of a formal role in
 27 their firm that comes with a set of social expecta-
 28 tions (Barnard, 1938; Merton, 1957). The social-
 29 structural context of executives' work in the form
 30 of organizational roles primes and triggers fram-
 31 ings and information consistent with role expecta-
 32 tions (Bechky, 2006; Weber and Glynn, 2006).
 33 CEOs' attitudinal ambivalence is partly induced by
 34 what Merton (1976) termed 'sociological ambiva-
 35 lence:' competing normative expectations induced
 36 by different role partners. For example, managers
 37 in different functional areas are likely to view
 38 a strategic issue the organization is facing from
 39 their local perspective (Dearborn and Simon, 1958;
 40 Waller, Huber, and Glick, 1995) and relay corre-
 41 sponding expectations to the top executive (Gioia
 42 and Chittipeddi, 1991). Top corporate executives
 43 often face these situations because they need to
 44 integrate their leadership roles of different busi-
 45 ness units and functions (Gilbert, 2006). At least
 46 for broad strategic issues, top executives therefore
 47 are exposed to more diverse framings and differ-
 48 ent information. Greater structural diversity in the
 49 organization prompts CEOs to look at issues from
 50 different perspectives and entertain more ambiva-
 51 lent evaluations.

In sum, ambivalent evaluations are likely to arise
 when executives examine more diverse aspects
 of an issue, which itself is in part driven by
 the frameworks employed in the process. Orga-
 nizations exert a strong influence over execu-
 tives' interpretations by triggering the frames in
 use. The general contextual antecedents identified
 above—organizational beliefs, experiences, and
 role structures—affect executives' propensity to
 evaluate issues ambivalently. However, this does
 not mean that executives evaluate all issues alike.
 In addition to variation between firms, there is
 also likely variation across issues within firms.
 On the one hand, this is because organizational
 beliefs and experiences often pertain to specific
 domains, and it is the more proximate antecedents
 relevant to an issue's domain that are most strongly
 linked to ambivalence about a specific issue. For
 example, the same organization may hold narrow
 beliefs, perceive very little control over, and have
 little experience in the domain of employment
 issues, but pursue more varied strategies, perceive
 more control over, and have extensive experience
 with technological shifts. Accordingly, executives
 of this firm are less likely to interpret ambiva-
 lently employment issues than technology issues
 provided that both issues offer the same potential
 for ambivalent interpretations.

On the other hand, issues themselves allow
 for different degrees of ambivalence in interpre-
 tations. It is especially strategic issues—defined as
 potentially affecting a firm as a whole (Ansoff,
 1965; Egelhoff, 1982)—that allow more ambiva-
 lent evaluations. Strategic issues are typically ill-
 structured and nonroutine (Lyles, 1981). The com-
 plex nature of these issues invites executives to
 apply different perspectives and arrive at more
 ambivalent evaluations, provided the organiza-
 tional context encourages such ambivalence. In
 contrast, 'issues that are relatively pre-packaged'
 (Julian and Ofori-Dankwa, 2008: 101) make
 ambivalence less likely.

Predictions about ambivalent issue evaluations
 must thus be understood in the context of an
 issue's capacity for more ambivalent interpreta-
 tions and of organizational antecedents in proxi-
 mate domains. In this study, we focus on organiza-
 tional antecedents of German CEOs' ambivalence
 about the 2004 EU enlargement. Before devel-
 oping these hypotheses, we describe this empiri-
 cal setting to assess the issue's potential for
 the development of ambivalent evaluations and

1 to identify the relevant proximate organizational
2 domains.

3 4 5 **EMPIRICAL SETTING: EUROPEAN** 6 **UNION ENLARGEMENT**

7
8 In May 2004, Cyprus and Malta, along with the
9 Central European countries Hungary, the Czech
10 Republic, Slovakia, Poland, Slovenia, Estonia,
11 Latvia, and Lithuania, became members of the
12 EU. In joining the EU, the 10 new member states
13 accepted the binding *acquis communautaire*, which
14 consists of the treaties and regulations passed by
15 the European institutions, as well as all judgments
16 defined by the Court of Justice. As a consequence,
17 most restrictions between new and old member
18 states were eliminated. Goods and capital mar-
19 kets were liberalized, and barriers to foreign direct
20 investment and the free flow of goods and ser-
21 vices across borders abolished. Firms from both
22 old and new member states could, from May 2004
23 on, invest in, import, or export to all 25 member
24 states without limitations.

25 The EU enlargement was an important strategic
26 issue for German firms. It received extensive atten-
27 tion in the media and was discussed long before it
28 took place. The high growth and liberalized mar-
29 kets in the acceding states was seen as stimulating
30 demand and increasing export opportunities for
31 firms in Germany. But market liberalization was
32 also seen to intensify competition between firms
33 of the old and new member states. German firms,
34 in particular, faced competition due to lower wages
35 at firms in the geographically close new member
36 countries.

37 We chose this issue for several reasons. First,
38 whatever the cumulative effect for a specific firm,
39 the 2004 EU enlargement was a salient, equivocal,
40 and complex issue with strategic implications for
41 German firms, which is consistent with the defi-
42 nition of strategic issues (e.g., Dutton, Fahey, and
43 Narayanan, 1983; Dutton, Walton, and Abraham-
44 son, 1989; Thomas and McDaniel, 1990). Julian
45 and Ofori-Dankwa (2008) called on researchers
46 to study the interpretation of such broader strate-
47 gic issues because of their importance for organi-
48 zational environments. The issue of EU enlarge-
49 ment offered a potential multitude of facets and
50 angles and thus matches the issue-level condi-
51 tions for ambivalent evaluations outlined above.
52 The enlargement impinged on several business

58 domains, and we therefore expect organizational
59 beliefs, identities, and experience in these domains
60 to be most relevant for sensemaking processes and
61 resulting differences in CEOs' ambivalence about
62 the event. A first domain is a firm's competitive
63 strategy, as the event opened a sizeable new mar-
64 ket with diverse demand characteristics, changed
65 the set of competitors, and heightened cost-based
66 competition.

67 Second, entry into foreign markets and poten-
68 tial regional strategies and structures are centrally
69 implied by the enlargement project, so that experi-
70 ence with internationalization of sales and produc-
71 tion is especially salient. Third, with the unique
72 nature of this event, attributions of agency over
73 the consequences of EU enlargement by virtue
74 of relevant organizational resources are likely to
75 affect sensemaking efforts more than the firm's
76 general perceived efficacy. More general organi-
77 zational characteristics, such as the diversity of
78 business units and executive teams, are also likely
79 to affect sensemaking processes.

80 81 82 **HYPOTHESES**

83 84 **Strategic orientation**

85
86 A firm's strategic orientation—the belief of how
87 the firm should generally position itself and
88 respond to developments in its environment—is
89 an important filter of information that is embedded
90 in the firm's culture, structure, and routines (Daft
91 and Weick, 1984; Thomas and McDaniel, 1990).
92 A single-minded focus on one strategic orienta-
93 tion primes executives with programmatic ideolo-
94 gies, paradigms, and traditions (Pralhad and Bet-
95 tis, 1986). Thus, executives are likely to consider
96 only a limited variety of issue aspects. When con-
97 structing a holistic evaluation of the issue, CEOs
98 who use the lens of a single strategic orientation
99 examine fewer and more similar attributes. As a
100 result, these executives are less likely to evaluate
101 the issue ambivalently.

102 Domain-offensive or domain-defensive strategic
103 orientations as identified by Miles (1982) pro-
104 vide such coherent frameworks for strategic issues
105 (Daft and Weick, 1984; Thomas and McDaniel,
106 1990). Domain-offensive strategies are associated
107 with exploring and capitalizing on new opportu-
108 nities, while domain-defensive strategies lead to a
109 bias toward exploiting existing capabilities (Gioia
110

1 and Thomas, 1996). Thomas and McDaniel (1990)
 2 emphasize that members of firms with an offen-
 3 sive strategic orientation concentrate their search
 4 efforts on opportunity-related issue information.
 5 In contrast, executives of companies following
 6 a defensive strategic orientation focus on threat-
 7 related issue aspects. Recent research suggests that
 8 some firms consider defensive and offensive strate-
 9 gic orientations at the same time, a state referred
 10 to as strategic ambidexterity (e.g., Gibson and
 11 Birkinshaw, 2004; He and Wong, 2004; Rothaer-
 12 mel and Alexandre, 2009). Considering a domain-
 13 offensive as well as a domain-defensive approach
 14 provides executives with more tentative interpre-
 15 tive guidance and allows them to apply more
 16 competing frames to the issue. A more ambidex-
 17 trous orientation at the group and organizational
 18 level enables CEOs to see a wider spectrum of
 19 attributes and examine the issue from different
 20 angles.

21 Strategic ambidexterity at the firm level, there-
 22 fore, makes executives more likely to evaluate
 23 strategic issues ambivalently. For example, the
 24 CEO of a firm with a singular focus on a domain-
 25 offensive strategy may examine EU enlargement
 26 primarily in terms of access to new markets, tech-
 27 nologies, and products, while the CEO of a firm
 28 with a more ambidextrous orientation is more
 29 prone to consider additional information and cri-
 30 teria such as threats to the firm's home mar-
 31 kets in his summary evaluation. The simultaneous
 32 presence of different frames and filters associ-
 33 ated with ambidexterity leads us to hypothesize
 34 that:

35
 36 *Hypothesis 1: The less a firm's strategic orien-*
 37 *tation is focused on either domain defense or on*
 38 *domain offense, the more ambivalently the CEO*
 39 *will evaluate the issue.*

41 Related experience

42 Experience in a related domain generally guides
 43 issue interpretation (Denison *et al.*, 1996; Weick,
 44 1995) and influences a person's ability to elaborate
 45 on an issue (Eagly and Chaiken, 1998). Through
 46 prior engagement with similar issues, organizations
 47 develop routines and collective beliefs that shape
 48 how managers view information in similar situa-
 49 tions (Nystrom and Starbuck, 1984).

50 Greater related experience increases the com-
 51 plexity of knowledge structures in the issue's

52 domain, which prompts executives to examine the
 53 new issue from diverse angles and arrive at more
 54 ambivalent evaluations. For example, greater job
 55 specialization in the wake of continued experience
 56 may lead members of the organization to apply dif-
 57 ferent frames, collect different information about
 58 the issue, and form dissenting views regarding the
 59 issue. When the information is channeled to the
 60 top, CEOs are exposed to a diverse set of aspects
 61 and divergent evaluations of the issue. In contrast,
 62 executives of a firm that lacks experience with the
 63 issue at hand are likely to fall back on fewer,
 64 more generic frames and find it harder to iden-
 65 tify contingencies. These managers' assessments
 66 are likely to lack nuance, making more univalent
 67 evaluations likely. Psychological research supports
 68 this link empirically. Hertwig *et al.* (2004) accord-
 69 ingly found that lack of experience may prompt
 70 perceptions of the world as less variable and more
 71 clear-cut.

72 The relevant experience domain in our study is
 73 a firm's past activities in foreign markets. The EU
 74 enlargement in 2004 primarily extends the geo-
 75 graphic scope of competition for the firm. We
 76 expect executives in an organization with very lit-
 77 tle experience in international markets to attend
 78 to and consider fewer and less diverse aspects of
 79 the EU enlargement, thus framing the issue unam-
 80 bivalently as either positive or negative. Man-
 81 agers of firms with more international expertise
 82 are more likely to be exposed to a variety of issue
 83 aspects and divergent evaluations. Consequently,
 84 we hypothesize that:

85
 86 *Hypothesis 2: The greater an organization's*
 87 *international experience, the more ambivalently*
 88 *will the CEO evaluate the issue.*

91 Diversity

92 Daft and Weick (1984: 285) emphasize that 'upper
 93 managers bring together and interpret information
 94 for the system as a whole.' What 'the system as
 95 a whole' consists of influences the perspectives
 96 from which executives examine a strategic issue
 97 and the information they will take into account.
 98 For example, the heterogeneity of a top man-
 99 agement team (TMT) influences a CEO's sense-
 100 making about strategic issues because members
 101 of the TMT communicate and act on their dif-
 102 ferent beliefs and understandings (Chattopadhyay
 103
 104
 105
 106
 107
 108
 109
 110

1 *et al.*, 1999). In previous research, increased demo-
 2 graphic diversity in teams has been associated with
 3 more diverse interpretations (Dearborn and Simon,
 4 1958). Strategy scholars have similarly argued that
 5 top managers with different functional specializa-
 6 tions have different schemas or frames of reference
 7 (e.g., Michel and Hambrick, 1992).

8 Top managers from different areas notice differ-
 9 ent information (Starbuck, 1975) and examine a
 10 strategic issue from different perspectives (Dear-
 11 born and Simon, 1958; Waller *et al.*, 1995). A
 12 TMT members' discussion of their more or less
 13 heterogeneous understandings of strategic issues
 14 such as the EU enlargement influences the CEO's
 15 overall evaluation. Different functional responsi-
 16 bilities lead managers to look at the EU enlarge-
 17 ment from different angles and a heterogeneous
 18 team is expected to attend to a wider spectrum
 19 of attributes. The different views and informa-
 20 tion present in a more functional diverse TMT,
 21 increases the likelihood that the CEO develops a
 22 more ambivalent evaluation of the EU enlarge-
 23 ment.

24
 25 *Hypothesis 3a: The greater the top management*
 26 *team's functional diversity, the more ambiva-*
 27 *lently the CEO will evaluate the issue.*

28
 29 The presented reasoning concerning the relation-
 30 ship between functional heterogeneity of the TMT
 31 and a CEO's ambivalence also applies to the rela-
 32 tionship between TMT size and CEO's ambiva-
 33 lence because the size of the team is an important
 34 covariate of TMT heterogeneity not tied to func-
 35 tional responsibilities (Carpenter and Fredrickson,
 36 2001). Larger teams tend to be more diverse (Ama-
 37 son and Sapienza, 1997). We therefore hypothesize
 38 that:

39
 40 *Hypothesis 3b: The larger the top management*
 41 *team, the more ambivalently the CEO will eval-*
 42 *uate the issue.*

43
 44 Executives also occupy structural positions in
 45 subunits that come with diverse role expectations
 46 (Merton, 1976). For example, their organization
 47 may consist of multiple business units that compete
 48 in different industries. Accordingly, top managers
 49 in a diversified firm who are faced with market
 50 changes are likely to see greater complexity in
 51 the situation (Prahalad and Bettis, 1986). They are
 52 expected to understand what the issue means for

each of their firm's businesses and examine the
 issue from the perspective of each business unit
 (Gilbert, 2006). The diversity of perspectives and
 the number of aspects that corporate executives
 examine hinges on the heterogeneity of industries
 in which the firm operates. Executives of more
 diversified companies hold more complex mental
 models, seek information about diverse aspects,
 and are exposed to business-unit managers who
 frame the issue from their industry's standpoint
 (Gilbert, 2006). As a result, we can expect exec-
 utives of a single-industry firm only to examine
 the EU enlargement from their primary industry's
 position, while top managers of diversified firms
 will scrutinize it for each industry in which their
 company competes. Accumulating diverse fram-
 ings and information associated with EU enlarge-
 ment is then likely to lead to a more ambiva-
 lent evaluation overall. We therefore hypothesize
 that:

78
 79 *Hypothesis 3c: The more diversified the orga-*
 80 *nization, the more ambivalently the CEO will*
 81 *evaluate the issue.*

82 83 **Sense of organizational controllability**

84
 85 Sense of organizational controllability refers to
 86 the perception of how much control the organi-
 87 zation has over the environment (Wood and Ban-
 88 dura, 1989). Previous research has conceptualized
 89 perceptions of organizational controllability and
 90 issue valence as two dimensions underlying the
 91 labels of threat and opportunity (e.g., Sharma,
 92 2000; Thomas *et al.*, 1993). However, conceptu-
 93 ally, the belief that a firm has the necessary capa-
 94 bilities and resources to control an issue affects
 95 managers' cognitive processes independent of the
 96 issue's valence (Denison *et al.*, 1996; Durand,
 97 2003). Wood and Bandura (1989) found, for exam-
 98 ple, that perceptions of organizational control often
 99 lead executives to develop a sense of personal effi-
 100 cacy and discretion. A sense of organizational con-
 101 trol shapes executives' approaches to interpreting
 102 issues (Litt, 1988) and the effort exerted to resolve
 103 them (Bandura, 1997). It is important to note that
 104 control, in this context, refers to the perceived abil-
 105 ity of the firm to control an issue, not to the CEO
 106 being *personally* in control. For example, a CEO
 107 may simply trust the ability of his or her firm to
 108 find effective responses. The effect of organiza-
 109 tional control on a CEO's interpretive processing

1 is thus indirect, via perceptions of collective capabilities.
2

3 A sense of organizational controllability affects
4 executives' ambivalence primarily through the
5 effort to seek and frame information. CEOs with
6 a very low sense of organizational controllability
7 limit their efforts to seek detailed information
8 about an issue because they see the outcome as
9 determined by forces beyond their firms' actions.
10 Such executives settle for simpler nonambivalent
11 assessments. This effect of a perceived lack of
12 control in sensemaking is supported by research
13 on decision making (e.g., Friedrich, 1987) and
14 social learning (e.g., Rotter, Chance, and Phares,
15 1972). As perceived controllability increases, so
16 does the likelihood that the CEO will search
17 widely for information. Work by Hashimoto and
18 Fukuhara (2004) shows, for example, that higher
19 perceived control is related to active information
20 seeking.

21 However, as an executive's sense of organiza-
22 tional control increases, he or she becomes more
23 confident in the organization's ability to master
24 the issue regardless of other factors. Very high
25 levels of perceived organizational control may
26 lead to overconfidence and disengagement (Stotz
27 and von Nitzsch, 2005). As confidence rises, it
28 begins to impede more contingent understanding
29 of the issue and lead to greater reliance on over-
30 learned information sources, channels, and rou-
31 tines (Miller, 1993). As a result, leaders with
32 very high perceptions of controllability consider
33 only a narrow set of frames and attributes and
34 therefore develop less ambivalent issue evalua-
35 tions.

36 We thus expect executives with a very low sense
37 of organizational control over the effects of the
38 EU enlargement to arrive at nonambivalent eval-
39 uations. Those with a stronger sense that their
40 firm can control the implications of EU enlarge-
41 ment hold more ambivalent evaluations as they
42 engage with the issue to exercise their limited con-
43 trol. However, at very high levels of perceived
44 controllability, executives increasingly ignore con-
45 tingencies and employ narrow information search
46 processes. As a result of these countervailing pro-
47 cesses, we hypothesize that:

48
49 *Hypothesis 4: The relationship between the*
50 *sense of organizational controllability and the*
51 *ambivalence with which the CEO evaluates the*
52 *issue is inverse U-shaped.*

METHOD

Data and sample

We tested the hypotheses with survey data and sec-
ondary data. With the use of a random-factor gen-
erator, we selected 800 firms from the Hoppenstedt
database.² Consistent with prior research (Chat-
topadhyay *et al.*, 2001; Thomas and McDaniel,
1990), we focused on the CEO who is most respon-
sible for initiating actions in response to strategic
issues (Hambrick and Mason, 1984). We contacted
each executive by telephone and asked for his or
her participation; 578 managers agreed to partici-
pate and, therefore, received the survey instrument
by mail. Based on a two-wave mailing process,
we received 256 completed questionnaires. Twenty
of the received surveys were excluded because
they were not filled out by the CEO or were
incomplete. Another 16 were excluded because
information about the TMT was not available. All
in all, the sample of this study consists of 220
questionnaires, representing a 30 percent response
rate.

Participating firms had, on average, 217 employ-
ees, and ranged from 25 to 10,000 employees.
Approximately half of the sampled firms were
involved in manufacturing, while the other half
were involved in service activities. In order to
test for nonresponse bias, we compared responding
and nonresponding firms on firm size and age in
2003. The results of a t-test revealed that the two
groups were not significantly different regarding
these characteristics. We therefore assumed that
the data used to test the hypotheses was represen-
tative of the sample of firms that we originally
asked to participate. Using self-report data, we
also sought to address the possibility of common
method variance. We analyzed the data with Har-
man's one-factor test. The results of the unrotated
factor analysis showed that no single factor was
dominant (Podsakoff and Organ, 1986). Our data,
therefore, do not appear to suffer from common
method bias.

² The Hoppenstedt database includes data sets of approximately
250,000 German firms that have at least twenty employees or
more. The firms included in the database generated more than
85 percent of the value added in Germany in 2008.

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1 Measurement

2 The research instrument included single ques-
 3 tions and multi-item scales with seven-point Lik-
 4 ert response formats. We adopted or adapted the
 5 scales from previous studies. Originally worded in
 6 English, the scales were translated into German
 7 by native speakers to avoid possible distortions.
 8 The survey instrument was pretested in two steps.
 9 First, we directly presented the survey to 10 CEOs
 10 from seven different industries. We asked them to
 11 examine the face validity of the questions, and
 12 to comment on the clarity of the questions and
 13 the meaningfulness of the language used in the
 14 survey instrument. Based on their feedback, we
 15 made minor changes to the questionnaire. Next, we
 16 selected 100 firms from the Hoppenstedt database
 17 with the use of a random-factor generator. We
 18 sent the questionnaire to 74 executives after ask-
 19 ing them for their participation. These informants
 20 were also asked to comment on the face validity
 21 of the questions and to provide feedback about the
 22 clarity of the language. Based on the feedback we
 23 received from 36 CEOs and the analysis of the
 24 pretest data, we made modifications to the survey
 25 instrument. The measures used in the final survey
 26 instrument and their factor loadings are presented
 27 in the Appendix.
 28

29 Dependent variable

31 The most widely used and validated measure of
 32 ambivalence in the literature of attitudinal and
 33 emotional ambivalence is based on the similarity-
 34 intensity model (SIM) (Fong, 2006; Priester and
 35 Petty, 1996; Thompson *et al.*, 1995). This mea-
 36 sure captures the degree to which opposing eval-
 37 uations of an issue are similar in terms of the
 38 amount of opposing reactions (similarity), while
 39 also taking into account how extreme the evalua-
 40 tions are in both dimensions (intensity). The SIM
 41 has been found to correspond well to subjectively
 42 experienced levels of ambivalence under most con-
 43 ditions (Priester and Petty, 1996). Ambivalence is
 44 calculated as $A = (D+C)/2 - (D-C)$, where D
 45 is the dominant evaluation (here: positive or neg-
 46 ative) and C is the competing evaluation (here:
 47 positive or negative). We measured the degree of
 48 positive and negative evaluations with two items
 49 each, adopted from the work of Thomas and
 50 McDaniel (1990). The inter-item reliability (Cron-
 51 bach's alpha) was 0.90 for the positiveness scale
 52 and 0.79 for the negativeness scale.
 53

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Ambivalence, as measured by this formula, is
 thus greater when positive and negative evalua-
 tions of an issue are about the same and when these
 evaluations are stronger. In our study, the intensity
 component means that evaluations of EU enlarge-
 ment as very positive and as very negative (e.g., 6
 or 7 on the positive Likert scale, as well as 6 or 7
 on the negative scale) reflect greater ambivalence
 than evaluations of EU enlargement as not very
 positive but equally not very negative (e.g., 1 or 2
 on the positive, and 1 or 2 on the negative scale).
 Such 'low-low' evaluations reflect less ambiva-
 lence and, perhaps, greater indifference. The simi-
 larity dimension of the formula implies that scores
 such as 4 on the positive and also 4 on the neg-
 ative scale reflect higher ambivalence than scores
 of 6 on the positive and 2 on the negative scale.
 Such 'high-low' evaluations reflect less ambiva-
 lence and more singular evaluations. Our measure
 therefore discriminates between ambivalence and
 both univalent and weak or indifferent evaluations.

To correct for different means on the two scales
 due to the social desirability of positive evalua-
 tions, we standardized the raw scores on each
 dimension prior to creating the measure. As a
 robustness check, we also calculated ambivalence
 variables using the raw scores rather than standard-
 ized scores. All the reported substantive results
 hold for this alternative variable in terms of signifi-
 cance levels and direction of coefficients, although
 some effects were slightly weaker.

30 Independent variables

31 Strategy

32 The six items measuring firm strategy were adapted
 33 from the work of Thomas and McDaniel (1990),
 34 based on the strategy framework of Miles (1982).
 35 We reworded the items in order to apply them to
 36 the companies of the various industries in our sam-
 37 ple; originally, the items were framed for hospitals
 38 (Thomas and McDaniel, 1990). Higher scores indi-
 39 cate a more domain-offensive strategy. One item
 40 was eliminated due to its low factor loading. The
 41 scale has a coefficient alpha of 0.88.

42 International experience

43 The three items measuring a firm's international
 44 experience were based on the work of Sullivan
 45 (1994) and Zou and Cavusgil (2002). We coded

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111 DOI: 10.1002/smj

1 the items such that higher scores indicate greater
 2 international experience for the organization. The
 3 scale has a coefficient alpha of 0.88.

4
 5 *Sense of organizational controllability*
 6

7 We used three items to measure the extent to which
 8 CEOs thought the strategic issue was under the
 9 control of their firm. These items were adapted
 10 from the work of Thomas and McDaniel (1990).
 11 The coefficient alpha for the scale is 0.89.

12
 13 *TMT characteristics*
 14

15 Information about the size and the functional diver-
 16 sity of the TMT was collected for members of the
 17 2004 TMT of each firm as listed in the Hoppenst-
 18 edt 2004 database. The database provides infor-
 19 mation about TMT membership and about the
 20 members' functional responsibilities as reported by
 21 the companies. To validate the information, we
 22 randomly chose 50 firms from our sample and
 23 contacted the head of each company. Thirty-nine
 24 directors could be reached by phone. All of them
 25 confirmed the information that we collected from
 26 the Hoppenstedt database. Three directors were
 27 succeeded by their sons who had worked for the
 28 firm before and who also confirmed the informa-
 29 tion provided in the Hoppenstedt database. Two
 30 firms had gone out of business. Six directors could
 31 not be reached.

32 We used categories used in previous research
 33 for classifying the functional background of exec-
 34 utives (Carpenter and Fredrickson, 2001; Michel
 35 and Hambrick, 1992; Wiersema and Bantel, 1992):
 36 marketing, distribution, sales, research and devel-
 37 opment, production, engineering, finance and
 38 accounting, law, or general. Because many firms
 39 also listed purchasing as a primary background, we
 40 also included this category. The top manager was
 41 classified by functional background where possi-
 42 ble, and otherwise as general manager. We cal-
 43 culated the degree of heterogeneity using Blau's
 44 (1977) index. This index is calculated as,

$$1 - \sum_{i=1}^N p_i^2,$$

45
 46
 47
 48 where p_i is the proportion of the total team that
 49 each functional category represents. The higher
 50 the resulting score, the greater the TMT's func-
 51 tional heterogeneity. We measured the size of the

TMT by using the total number of members of
 a TMT (Barkema and Shvyrkov, 2007) and used
 the logarithmic transformation of TMT size in our
 analyses.

Corporate diversification

Our measure of diversification is based on the
 number of different industries in which a com-
 pany operates. We obtained each company's indus-
 tries from the Hoppenstedt database, which used
 the European Classification of Economic Activities
 (NACE) system. NACE categories are five-digit
 classifications, comparable to the North American
 Industry Classification System (NAICS). We cre-
 ated a count variable of the number of five-digit
 industry groups in which the firm reported activi-
 ties. As almost half of the sampled firms operated
 in a single industry, we created a binary variable,
 taking the value 0 for single industry firms and 1
 for diversified firms. The five-digit level provides a
 meaningful measure of narrower markets that may
 be subject to different environmental dynamics,
 such as the publishing of books (NACE 22211)
 and sound recordings (NACE 22214). We repli-
 cated our analysis with variables created at the
 four-, three-, and two-digit level, and found results
 weaker as industry classifications broadened.

Control variables

We used two types of controls: variables associated
 with the vulnerability of a firm to EU enlargement
 and alternative factors that might directly affect
 ambivalence. The former variables are important
 because CEOs of firms that are more affected by
 the event are motivated to investigate the issue
 from different angles to gain a better understanding
 of it.

Vulnerability related controls

Firm size and resources. Executives of firms with
 abundant resources might not engage in increased
 information search because they might believe that
 their resources will buffer them from possible risks
 associated with an issue and allow them to seize
 opportunities as they come. Very high levels of
 resources might therefore limit these managers'
 effortful sensemaking and thus the likelihood of
 ambivalent interpretations. We included two vari-
 ables that have been associated with the buffering

1 effect of resources: firm size and slack resources
 2 (Audia and Greve, 2006; Bourgeois, 1981). Using
 3 data from the Hoppenstedt database, we measured
 4 firm size as the number of all full-time employ-
 5 ees. The variable was normalized using the natural
 6 logarithm. We distinguished available and recov-
 7 erable slack resources (Wiseman and Bromiley,
 8 1996). We used a scale developed by Chattopad-
 9 hyay and his colleagues (2001) to measure a firm's
 10 available slack resources. The coefficient alpha for
 11 this scale was 0.76. We created a new four-item
 12 Likert scale with the use of past research and com-
 13 monly accepted theoretical definitions (Bourgeois,
 14 1981; Singh, 1986) to measure recoverable slack
 15 resources. Higher scores indicate lower levels of
 16 slack resources. This scale had a coefficient alpha
 17 of 0.84.

18
 19 *Industry.* We examined controls for the economic
 20 sector of a firm's primary activity and for its nar-
 21 rower industry membership, both of which may be
 22 associated with the relative impact of EU enlarge-
 23 ment on the firm. For example, manufactured
 24 goods have traditionally had a higher exposure
 25 to international markets than services. Therefore,
 26 we included a dummy variable to indicate whether
 27 the firm was primarily engaged in manufacturing
 28 (0) or service (1). In addition, we tested dummy
 29 variables for each industry represented in the sam-
 30 ple, based on firms' NACE codes. As our sam-
 31 ple contained NACE classifications with only few
 32 observations, including the full set of dummy vari-
 33 ables would have reduced the degrees of freedom
 34 for detecting substantive effects within those cate-
 35 gories. As a preliminary step, we therefore tested
 36 which industry dummies had significant effects on
 37 ambivalence, net of other included control vari-
 38 ables, and included only those in the main analy-
 39 ses that did. Only non-metallic mineral products
 40 and construction showed significant effects and
 41 included a sufficient number of observations.

42
 43 *Location.* We included two variables for the loca-
 44 tion of the firm. Firms in the former German
 45 Democratic Republic (GDR) are geographically
 46 closer and more connected historically to the Cen-
 47 tral European countries that joined the EU in 2004
 48 than companies from the former Federal Republic
 49 of Germany (FRG). We used a dummy variable
 50 that indicated whether the firm was headquartered
 51 in the territory of the former FRG (1) or the terri-
 52 tory of the former GDR (0). We also controlled for

the (logged) size of the town in which the company
 was headquartered. Firms located in major popula-
 tion centers may serve a comparatively larger local
 market and therefore be less exposed to economic
 consequences associated with the EU enlargement,
 or may alternatively be more connected to inter-
 national issues. We collected the population size
 of towns from the Web database of the German
 Federal Statistical Office.

Perceived environmental munificence. Perceived
 munificence reflects managers' perceptions of an
 industry environment supportive of sustained
 growth (Sutcliffe and Huber, 1998). CEOs with
 this perception are likely to see their firm's envi-
 ronment as supportive enough to overcome possi-
 ble adversity associated with the EU enlargement
 and are less likely to scrutinize the implications
 of the event. We measured perceived munificence
 with a seven-item scale adapted from previous
 work (Sutcliffe and Huber, 1998). Two items were
 eliminated due to low factor loadings. The coeffi-
 cient alpha for the scale is 0.83.

Ambivalence related controls

Firm age. We controlled for the age of a firm
 because over time firms develop more fine-grained
 and more diverse perceptual filters. Managers of
 older firms might therefore be exposed to more
 diverse information about the EU enlargement and
 as a result develop more ambivalent evaluations.
 We measured the age of the firm as the natural
 logarithm of years since founding. We obtained
 firm age from the Hoppenstedt database.

Firm performance. A firm's financial perfor-
 mance may bias evaluations of specific events to
 the extent that performance levels provide a gen-
 eral evaluation of the firm's situation. We used a
 subjective measure of performance due to the lack
 of archival performance measures. Prior research
 suggests that perceptual measures of performance
 tend to correlate strongly with archival measures
 (Venkatraman and Ramanujam, 1987). The two
 items measuring firm performance were adapted
 from previous work (Venkatraman and Ramanu-
 jam, 1987) and asked respondents to rate their
 company's sales growth and profitability (return on
 assets [ROA], return on investment [ROI]) relative
 to their main competitors. The coefficient alpha for
 the scale was 0.79.

1 *Perceived environmental instability.* In less stable
 2 environments, executives are likely to lack the time
 3 and the cognitive resources to investigate a strate-
 4 gic issue further. Too many issues may demand
 5 executives' attention at the same time in turbu-
 6 lent environments (Eisenhardt, 1989). As a result,
 7 more ambivalent interpretations may become less
 8 likely in these environments. We controlled for
 9 the perceived instability of the environment with
 10 an eight-item scale adapted from Sutcliffe and
 11 Huber (1998). Higher scores indicate perceptions
 12 of greater stability. We eliminated four items due
 13 to low factor loadings. The coefficient alpha for
 14 the scale is 0.58.

16 **ANALYSIS AND RESULTS**

17 We verified the factor structure of the survey mea-
 18 sures using principal axis factoring with oblimin
 19 rotation. We found strong support for the 10-factor
 20 structure suggested by the included measures. In
 21 particular, the items used to measure positive and
 22 negative evaluations loaded onto two factors as
 23 expected. The Appendix shows all survey items
 24 and factor loadings.

25 *Test of hypotheses*

26 We tested the hypotheses with a series of regres-
 27 sion models. We examined residual plots for all
 28 variables in the regression equations and found
 29 no major violations of distributional assumptions.
 30 Variance inflation statistics indicated that multico-
 31 linearity was not an issue. Plotting the data and
 32 statistical analysis (Shapiro-Wilk test) also showed
 33 that our dependent variable was normally distri-
 34 buted. To obtain correct standard error estimates
 35 and accurate significance tests in the face of pos-
 36 sible heteroskedasticity, all models report robust
 37 standard errors using the Huber-White correction
 38 (Gujarati, 1995: 379–383). Table 1 shows descrip-
 39 tive statistics. The results of the regression analysis
 40 are shown in Table 2.

41 We first regressed ambivalence on the con-
 42 trol variables associated with firms' vulnerabil-
 43 ity toward EU enlargement (Table 2, Model 1).
 44 Next, we entered ambivalence related control vari-
 45 ables (Model 2). We then entered the measures
 46 of size and functional heterogeneity of the TMT,
 47 corporate diversification, international experience,
 48 and the linear terms of strategy orientation and

sense of control to obtain estimates of their main
 effects (Model 3). Finally, we entered the quadratic
 terms for the latter two variables to test for non-
 linear relationships (Model 4). In creating the
 quadratic terms, we mean-centered the variables
 before squaring them.

In Hypothesis 1, we expected an inverse U-
 shaped relationship between strategic orientation
 and ambivalence. This expectation was confirmed
 as the quadratic term of the variable is signifi-
 cant and negative while the main effect was
 marginally significant (Model 4). We performed
 simple slope analyses (Aiken and West, 1991) to
 establish whether both sides of the inverted U
 were significant and in opposite directions at two
 standard deviations from the mean. The results
 of the analysis ($p < 0.018$ in both cases) sug-
 gested that clearly domain-offensive and domain-
 defensive orientations reduced ambivalence. In
 Hypothesis 2, we predicted a positive relation-
 ship between a firm's international experience and
 ambivalence. In Hypotheses 3a, 3b, and 3c, we
 predicted a positive relationship between diversity-
 related variables and ambivalent evaluations. These
 hypotheses were not supported. Hypothesis 4,
 which suggested an inverse U-shaped relation-
 ship between a sense of organizational control
 and ambivalent evaluations, was supported. The
 quadratic term of the variable is significant and
 negative while the main effect was nonsignificant.
 Simple slope analyses again confirmed that both
 very high and very low levels of perceived con-
 trol reduced ambivalence ($p < 0.004$ in both cases).
 With regard to our control variables, we found that
 the perceived instability of the environment has a
 positive relationship with ambivalence. In addition,
 we found a marginally significant negative rela-
 tionship between low discretionary slack resources
 and ambivalence in the full model (Model 4).

Figure 1 plots significant relationships using the
 coefficient estimates from Model 4. An ambidex-
 trous strategic orientation and a moderate sense of
 organizational control are associated with the high-
 est level of ambivalence about EU enlargement.

Robustness checks

We conducted a series of further analyses to ver-
 ify the robustness of our findings and to sub-
 stantiate their interpretation. First, we tested our
 hypotheses in separate models that included only
 the controls and the independent variables related

Table 1. Means, standard deviations, and correlation coefficients.

	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	
1. Ambivalence of issue evaluation	0.66	1.39																					
2. Strategic orientation	4.82	1.27	0.00																				
3. Strategic orientation ²	1.62	2.12	-0.14	-0.44																			
4. International experience	3.23	2.00	0.17	0.35	-0.17																		
5. TMT size (logged)	0.97	0.55	0.04	0.11	0.00	0.15																	
6. Functional heterogeneity	0.54	0.27	0.05	0.07	0.03	0.12	0.89																
7. Diversified company (binary)	0.26	0.44	0.02	0.00	-0.01	0.09	0.06	0.05															
8. Sense of control	4.65	1.51	0.21	0.24	-0.14	0.36	0.23	0.20	0.04														
9. Sense of control ²	2.28	2.89	-0.29	-0.11	0.09	-0.24	-0.11	-0.11	-0.12	-0.41													
10. Firm age (logged)	3.47	0.99	-0.02	-0.09	0.07	0.07	0.05	0.07	-0.18	-0.06	0.05												
11. Financial performance	4.62	1.08	-0.01	0.33	-0.08	0.18	0.12	0.12	0.03	0.27	-0.09	-0.06											
12. Perceived instability	4.13	1.14	0.11	0.13	-0.03	0.10	0.03	0.08	-0.02	-0.06	0.09	-0.04	0.05										
13. Firm size (logged)	4.45	1.03	-0.04	0.15	-0.08	0.16	0.32	0.22	0.01	0.21	0.14	0.03	0.28	0.14									
14. Recoverable slack resources	5.03	1.18	-0.15	0.21	-0.08	0.14	0.02	-0.01	0.02	0.18	0.00	-0.13	0.12	-0.02	0.05								
15. Available slack resources	3.70	1.70	0.01	0.19	-0.08	0.09	0.19	0.18	-0.01	0.16	-0.01	0.19	0.26	-0.04	0.15	0.02							
16. Location (1 = former FRG)	0.88	0.33	-0.04	0.01	-0.03	0.04	0.08	0.09	-0.07	-0.01	0.04	0.37	-0.04	-0.16	0.06	-0.03	0.12						
17. Economic sector (1 = service)	0.51	0.50	-0.01	-0.11	0.04	-0.31	0.00	0.01	-0.01	0.03	0.01	-0.17	-0.03	-0.08	0.06	-0.02	-0.06	0.03					
18. Perceived environmental munificence	3.40	1.21	0.15	0.30	-0.16	0.29	0.14	0.04	0.09	0.32	-0.20	-0.13	0.24	0.17	0.22	0.12	0.10	-0.08	0.01				
19. Number of inhabitants (logged)	10.43	2.14	-0.06	0.01	0.08	0.06	0.13	0.11	0.10	0.14	0.00	0.02	-0.06	-0.05	0.12	0.07	0.01	0.25	0.29	0.07			
20. Industry=non-metallic mineral products	0.02	0.13	-0.10	-0.09	0.00	0.07	-0.01	-0.03	-0.08	-0.09	0.03	0.06	-0.02	0.04	-0.05	-0.08	-0.04	0.05	-0.14	-0.11	-0.05		
21. Industry=construction	0.11	0.32	-0.29	-0.10	0.07	-0.33	-0.15	-0.11	-0.08	-0.33	0.23	-0.01	-0.14	0.03	-0.15	0.04	-0.07	-0.04	-0.05	-0.37	-0.13	-0.05	

N = 220. > 0.18 are significant at p < 0.01, > 0.14 significant at p < 0.05

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Table 2. OLS regression estimates
Dependent variable: ambivalence of issue evaluations

	Model 1	Model 2	Model 3	Model 4
Constant	-0.227 (0.420)	-0.688 (0.528)	-0.665 (0.543)	-0.406 (0.534)
Firm size (logged)	-0.087 (0.055)	-0.105† (0.057)	-0.111† (0.06)	-0.075 (0.060)
Recoverable slack resources	-0.093* (0.046)	-0.084† (0.046)	-0.101* (0.047)	-0.087† (0.046)
Available slack resources	0.002 (0.032)	0.006 (0.033)	0.002 (0.034)	0.007 (0.033)
Location (1 = former FRG)	-0.058 (0.169)	-0.028 (0.181)	-0.005 (0.182)	-0.025 (0.177)
Economic sector (1 = service)	-0.047 (0.111)	-0.021 (0.113)	0.014 (0.12)	-0.010 (0.117)
Perceived environmental munificence	0.058 (0.049)	0.044 (0.050)	0.026 (0.053)	0.015 (0.051)
Number of inhabitants (logged)	-0.027 (0.027)	-0.026 (0.027)	-0.035 (0.027)	-0.019 (0.027)
Industry = non-metallic mineral products	-0.791* (0.396)	-0.845* (0.395)	-0.849* (0.401)	-0.883* (0.389)
Industry = construction	-0.728*** (0.179)	-0.772*** (0.180)	-0.626*** (0.190)	-0.594** (0.185)
Firm age (logged)		0.022 (0.061)	0.008 (0.063)	0.017 (0.061)
Financial performance		-0.011 (0.054)	-0.027 (0.056)	-0.010† (0.055)
Perceived instability		0.111* (0.049)	0.116* (0.051)	0.136** (0.049)
Strategic orientation			0.081 (0.042)	-0.095† (0.051)
Strategic orientation ²				-0.064* (0.027)
International experience			-0.043 (0.048)	0.023 (0.032)
TMT size (logged)			0.036 (0.033)	-0.009 (0.219)
Functional heterogeneity			0.001 (0.226)	0.056 (0.436)
Diversified company (binary)			0.058 (0.449)	-0.061 (0.121)
Sense of control			-0.025* (0.124)	0.028 (0.044)
Sense of control ²				-0.060** (0.021)
Model F value	3.796***	3.325***	2.589**	3.190***
R-square	0.145	0.168	0.195	0.251
Adjusted R-square	0.107	0.117	0.120	0.173
Change in F over Model 2			1.098	2.655**

N = 220. Standard errors are in parentheses.

†p < 0.10 * p < 0.05 ** p < 0.01 *** p < 0.001; two-tailed tests.

1 to each hypothesis. This also allowed us to assess
2 the amount of variance accounted for by each
3 hypothesized antecedent individually. These anal-
4 yses fully confirmed the results from the main
5 analysis.

6

We performed two supplemental analyses to ver-
ify our interpretation of the findings regarding the
two dimensions of ambivalence: intensity and sim-
ilarity. Based on the SIM model described above,
we would expect that the examined contextual

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1 factors predict 'true' ambivalence at more intense
 2 evaluations, but not 'indifference' at low-intensity
 3 valuations. The theory behind the SIM model also
 4 suggests that the examined contextual factors pre-
 5 dict ambivalence better when the positive and neg-
 6 ative evaluations of the EU enlargement are very
 7 similar. To verify these expectations, we first split
 8 the sample at the mean of the intensity of eval-
 9 uations: the extremity of the combined positive
 10 and negative scores (mean=2.88). We replicated
 11 our analyses in both subsamples and found that
 12 our main results held for the observations above
 13 the mean (N=116), but not for the ones below
 14 the mean (N=104). Next, we split the sample at
 15 the mean of the similarity of evaluations: how
 16 much negative and positive evaluations deviate
 17 from each other (mean= -2.27). Replicating our
 18 analyses in both subsamples, we found that our
 19 main results held for the observations above the
 20 mean (N=100), but not for the ones below the
 21 mean (N=120). A replication of the analyses with
 22 a sample split at the median provided the same
 23 results. In sum, these analyses support our main
 24 results concerning the antecedents, with the SIM
 25 measure of ambivalence as the dependent variable.

26 Based on the argument that led to the inclu-
 27 sion of the vulnerability controls in the test of
 28 the hypotheses, we performed another analysis
 29 and used information about how important CEOs
 30 perceived the EU enlargement because perceived
 31 importance may influence the attention given to
 32 the issue. The response format for the single item
 33 was 1, 'of very little importance,' to 7, 'of very
 34 large importance.' This information was available
 35 for a subset of respondents (N=101) because data
 36 on the interpretation of EU enlargement were col-
 37 lected as part of a larger research project. Enter-
 38 ing the perceived importance of EU enlargement in
 39 our models in this smaller subsample did not alter
 40 the findings reported in the main analyses. We also
 41 did not find a direct relationship between perceived
 42 issue importance and ambivalence.

43
 44
 45 **DISCUSSION AND CONCLUSION**

46
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 48 Despite the importance of executives' ambivalence
 49 for strategic sensemaking, a systematic discussion
 50 or an empirical analysis of how organizational con-
 51 text influences such ambivalence has been lacking
 52 (Gilbert, 2006). Our study addresses these gaps.

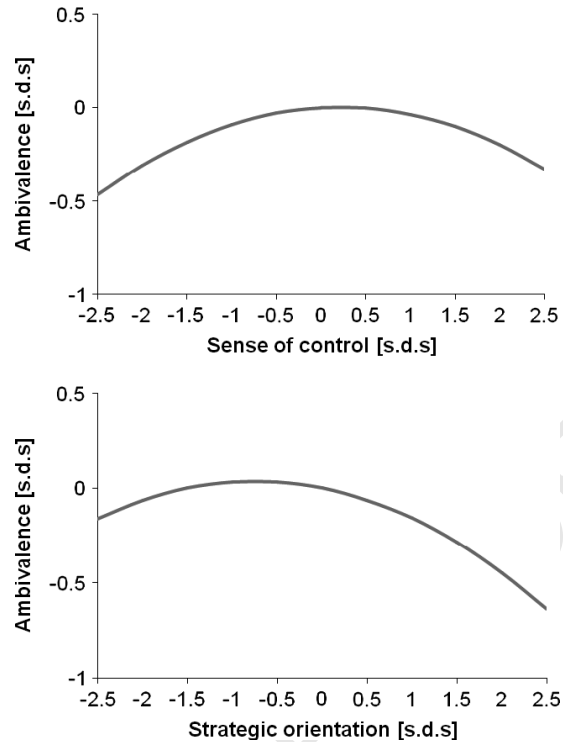


Figure 1. Relationships between ambivalence and strate-
 gic orientation and controllability

58 We provide a theoretical account of how organiza-
 59 tional context may lead CEOs to develop an
 60 ambivalent evaluation of a strategic issue by com-
 61 bining insights from psychological research on
 62 ambivalence with research on strategic issue diag-
 63 nosis and organizational sensemaking. In addition,
 64 we add empirical support for the relevance of the
 65 firm's context for developing ambivalent evalua-
 66 tions. We find that CEOs of firms with a more
 67 ambidextrous strategic orientation and a moder-
 68 ate sense of control over their environment are
 69 most likely to develop ambivalent issue evalua-
 70 tions. This supports our general expectation that
 71 organizational characteristics that supply diverse
 72 perspectives in domains associated with an issue,
 73 and that attribute moderate agency to the firm in
 74 relation to its environment, foster effortful sense-
 75 making and prompt ambivalence at the executive
 76 level. Organizational characteristics that are less
 77 domain specific, such as TMT functional diver-
 78 sity and corporate diversification, appear to be less
 79 potent antecedents.

80 This study contributes to recent research on
 81 strategic sensemaking (Barr and Glynn, 2004;
 82 Julian and Ofori-Dankwa, 2008), as well as to the

1 growing literature on mindfulness and creativity in
 2 organizations (Fiol and O'Connor, 2003; Levinthal
 3 and Rerup, 2006; Weick and Sutcliffe, 2006). First,
 4 it clarifies the effect of organizational characteris-
 5 tics on how CEOs evaluate strategic issues, and
 6 thus tests the role of contextual antecedents of
 7 CEO ambivalence. We also specify underlying
 8 social and psychological mechanisms that link top
 9 executives' context to their strategic sensemak-
 10 ing. Finally, we identify organizational interven-
 11 tion points for fostering the qualities associated
 12 with ambivalence. We discuss each contribution
 13 in turn.

14
 15
 16 **The role of organizational context in**
 17 **executives' ambivalence toward strategic issues**

18 Our findings clarify the link between strategy ori-
 19 entations and executives' interpretations of events.
 20 Prior research predicted a firm's strategic orienta-
 21 tion as domain offensive or defensive to lead to
 22 the interpretation of issues as positive or negative,
 23 but failed to find empirical support (Thomas and
 24 McDaniel, 1990). We instead argue and find that a
 25 more ambidextrous strategic orientation translates
 26 into more ambivalent issue evaluations at the indi-
 27 vidual level of top executives. Executives at firms
 28 that lack strategic ambidexterity are less likely to
 29 develop ambivalent interpretations.

30 Our study also advances research on the conse-
 31 quences of organizational sense of control (Deni-
 32 son *et al.*, 1996; Durand, 2003). We find that a
 33 moderate sense of organizational control is asso-
 34 ciated with CEOs seeing new strategic issues in
 35 more ambivalent ways. The effort to understand
 36 more aspects of an issue increases with perceived
 37 organizational control, but at very high levels of
 38 perceived control confidence may lead to nar-
 39 rower perceptions and reliance on less complex
 40 knowledge structures so that interpretations are
 41 less ambivalent.

42 Interestingly, we find no support for our hypoth-
 43 esis that higher levels of international experience
 44 are related to more ambivalent interpretations. A
 45 possible explanation is that experience in this
 46 domain may not lead to more complex knowl-
 47 edge structures, but may rather lead issues in the
 48 domain to appear more positive due to greater feel-
 49 ings of competence. Although they did not directly
 50 assess ambivalence, Denison *et al.* (1996) accord-
 51 ingly found that more international experience led

to positive interpretations of foreign direct invest- 58
 ment. 59

Finally, our findings do not support the hypothe- 60
 ses that general diversity at the group or organi- 61
 zational level is related to CEOs' ambivalence. 62
 It could be that executives of diversified firms 63
 perceived the EU enlargement as having similar 64
 effects for different business units. Consis- 65
 tent with previous research, we also expected 66
 functional diversity of the TMT to be associ- 67
 ated with cognitive diversity and thereby be a 68
 precursor of ambivalent interpretations. It may 69
 be that the effect of functional responsibilities 70
 on the cognition of TMT members is generally 71
 weak (e.g., Chattopadhyay *et al.*, 1999), or that 72
 top managers adopt views consistent with their 73
 roles as members of the TMT rather than the func- 74
 tional area they represent. Kilduff, Angelmar, and 75
 Mehra (2000), for example, did not find a relation- 76
 ship between functional heterogeneity and cogni- 77
 tive diversity. Future research may reexamine our 78
 diversity-related hypothesis with direct measures 79
 of cognitive diversity of the TMT. 80

In our analysis of antecedents of ambivalence, 81
 we followed the call of Julian and Ofori-Dankwa 82
 (2008), who emphasized the importance of exam- 83
 ining broad and ill-defined issues because such 84
 issues match scholarly conceptualizations of strate- 85
 gic issues (e.g., Dutton *et al.*, 1983) and are 86
 important for organizational environments. Deni- 87
 son *et al.* similarly pointed out that strategic issues 88
 associated with the global business environment 89
 are central because they 'are highly salient and 90
 require action, but are poorly understood' (Denison 91
et al., 1996: 468). Future work on strategic issue 92
 diagnosis should, however, also investigate exec- 93
 utives' parallel interpretation of multiple strate- 94
 gic issues. For example, does strategic ambidex- 95
 terity lead CEOs to evaluate all strategic issues 96
 in ambivalent ways no matter how many other 97
 issues demand attention? Other questions arise 98
 regarding the temporal dynamics of sensemaking 99
 and ambivalence: is ambivalence a permanent or 100
 temporary interpretive state, and do oscillations 101
 between positive and negative evaluations follow 102
 the same pattern as fully parallel evaluations? 103

104
 105
 106 **Intervention points for top executives'**
 107 **ambivalence**

Our examination of how contextual factors trigger 108
 ambivalent evaluations informs research on other 109

1 antecedents. Interpretive predispositions may orig-
 2 inate at the individual, organizational, and envi-
 3 ronmental level, including personal and organiza-
 4 tional identities that clarify positions (Ashforth and
 5 Mael, 1989; Dutton and Dukerich, 1991), expo-
 6 sure to turbulent industries and turbulent team
 7 membership that keep experience and tradition
 8 from accumulating (Eisenhardt, 1989), or ideolo-
 9 gies embedded in organizations that provide norms
 10 and beliefs (Dutton and Dukerich, 1991; Prahalad
 11 and Bettis, 1986). In addition, culture may affect
 12 the prevalence of ambivalent evaluations. Cross-
 13 cultural research has emphasized, for example, the
 14 influence of East Asian and Western cultures and
 15 related philosophical backgrounds on the toler-
 16 ance for ambivalent affective evaluations (Bagozzi,
 17 Wong, and Yi, 1999; Nisbett, 2003).

18 Our study suggests ways to foster organizational
 19 mindfulness and exploration through the ambiva-
 20 lence of top managers. The propensity of execu-
 21 tives to see issues in an ambivalent light can
 22 be increased through interventions aimed at orga-
 23 nizational processes and cultures. Companies can
 24 foster a culture of humility that prevents percep-
 25 tions of high organizational control, and they can
 26 refrain from forging dogmatic and one-sided strate-
 27 gies or identities.

28
 29
 30 **CONCLUSION**

31
 32 The importance of leaders' ambivalence for strate-
 33 gic change, mindfulness, and exploration in orga-
 34 nizations has been highlighted and empirically
 35 demonstrated by a growing number of organiza-
 36 tional scholars. But sources of ambivalence have
 37 often been elusive or highly contingent. Our find-
 38 ings provide a larger systematic test of organiza-
 39 tional conditions under which ambivalent interpre-
 40 tations are likely. Our study not only documents
 41 the contextual nature of ambivalent interpretations,
 42 it also suggests ways for firms to influence ambiva-
 43 lence in strategic sensemaking.

44
 45
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61
 62
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42		87
43		88
44		89
45		90

UNCORRECTED PROOF

APPENDIX: MEASURES ^a AND ITEM LOADINGS				58
Construct	Operational measure		Factor loading	59
Positive interpretation	To what extent do you agree with the following statements?			61
1	Our company will benefit from the EU enlargement.		0.73	62
2	The EU enlargement comprises a potential gain for our company.		0.76	63
Negative interpretation	To what extent do you agree with the following statements?			64
1	The EU enlargement is something negative for our company.		-0.74	65
2	There is a high probability of losing a great deal because of the EU enlargement.		-0.81	66
Controllability interpretation	To what extent do you agree with the following statements?			67
1	Our company can manage the changes resulting from the EU-Enlargement.		0.81	68
2	The EU-enlargement is something controllable for our company.		0.83	69
3	Our company has the capability to address the EU-enlargement.		0.86	70
Strategic orientation	To what extent do you agree with the following statements ? Our company...			71
1	always tries to be the first in the industry to offer new solutions.		0.87	72
2	is usually among the first users of new product design technologies.		0.79	73
3	always endeavors to develop new products.		0.83	74
4	responds rapidly to early signs of market opportunities.		0.78	75
5	has a product portfolio which is constantly growing.		0.62	76
Firm's international experience	To what extent do you agree with the following statements?			77
1	A high percentage of our sales is generated outside of Germany.		0.82	78
2	Our company cooperates with various foreign trading partners.		0.87	79
3	Our company has got a lot of experience in selling to foreign markets.		0.81	80
Firm performance	In our primary business our company performs (1, 'much worse than our competitors,' 7, 'much better than our competitors') with respect to...			81
	Sales growth.		0.87	82
	Profitability (e.g., ROI, ROA, etc.).		0.87	83

^a The response format for all items was 1, 'small extent,' to 7, 'large extent' (indicated were not applicable). For clearness of the table, factor loadings below 0.4 are not reported.

Construct	Operational measure	Factor loading	
Measures ^a and item loadings			58
			59
Construct	Operational measure	<i>Factor loading</i>	60
Available slack resources	To what extent do you agree with the following statements in reference to your company's resources?		61
			62
			63
1	Our company keeps in general high levels of financial resources (e.g., cash, short-term credit) in order to assure a steady flow of production.	0.88	64
			65
			66
2	Our company has easy access to these financial resources for growth and expansion.	0.85	67
			68
Recoverable slack resources	To what extent do you agree with the following statements?		69
			70
1	Employees for executive tasks work at full capacity in our company.	0.84	71
			72
2	Trained employees work at full capacity in our company.	0.89	73
			74
3	Resources (e.g., research and development, logistics. . .) are fully utilized in our company.	0.83	75
			76
4	The production capacities work at full capacity in our company.	0.68	77
			78
Perceived munificence	To what extent do you agree with the following statements? In our industry. . .		79
			80
1	demand is growing and will continue to grow.	0.82	81
			82
2	the investment and sales opportunities are very favorable at the present time.	0.84	83
			84
3	sales have been growing are likely to grow.	0.80	85
			86
4	the total value of assets for the firms are declining and will continue to decline.*	0.57	87
			88
5	the capital expenditures of the firms are growing and will continue to grow.	0.66	89
			90
Perceived instability	To what extent do you agree with the following statements?		91
			92
1	Customer demand and preferences change very little in our industry from year to year.	0.67	93
			94
2	Our company must frequently change the way it produces its goods/services in order to stay competitive.*	0.53	95
			96
3	The actions of our major suppliers change very little from year to year.	0.66	97
			98
4	The volume of sales for firms in our industry fluctuates very little from year to year.	0.74	99
			100
			101
			102
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			110
			111
			112
			113
			114

^aThe response format for all items was 1, 'small extent,' to 7, 'large extent' (indicated were not applicable).

* = reverse coded.

For clearness of the table, factor loadings below 0.4 are not reported.