Received: 29 August 2015 | Revised: 31 May 2017 | Accepted: 16 August 2017 | Published on: 23 January 2018

DOI: 10.1002/smj.2727

WILEY STRATEGIC MANAGEMENT JOURNAL

SPECIAL ISSUE ARTICLE

The power of PowerPoint: A visual perspective on meaning making in strategy

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Research Summary: Relying on ethnographic data from two consulting engagements, we find that strategists use three *visual mechanisms* (depiction, juxtaposition, and salience) to create PowerPoint slides. These visual mechanisms prompt meaning-making through the conversations they stimulate, creating *strategic visibility.* As participants react to visuals, they enact revised interpretations of the strategy, reflecting *strategic resonance.* Based on the interactions among these three subprocesses (*visual mechanisms, strategic visibility*, and *strategic resonance*), we develop a process model for how visuals influence meaning making in strategy engagements. We contribute to existing strategy practice and process studies by explaining how visuals help broker divergent interpretations of a strategy and give rise to new understandings, especially when issues are politically sensitive or analytically complex.

Managerial Summary: The purpose of this study is to understand how strategists use visual information (specifically in PowerPoint slides), and its effects on the strategy process. We find that strategy conversations are influenced by the techniques strategists use to create slides, which in turn shape the kinds of follow-up actions taken. The implications are that: (a) PowerPoint slides can be designed to help tackle complex issues, for instance, when participants have divergent opinions or in politically sensitive situations, and (b) those who craft and edit PowerPoint slides strongly influence the direction of the strategy. The skillful use of PowerPoint is therefore crucial in allowing managers to shape the nature and speed of strategy engagements.

KEYWORDS

PowerPoint, strategy consulting, strategy as practice, strategy process, visual semiotics

> In retrospect, it was great that we found a name so distinctive…it suggested our goal of putting power into the hands of the individual content originator. The "Power" in "PowerPoint" was thought of, not as in "Powerful," but as in "Empowerment." Robert Gaskins, Inventor of PowerPoint. (Gaskins, 2012, p. 165)

1 | INTRODUCTION

How do strategists create visual representations of strategy, and why does visuality matter? Despite the ubiquity of visuality in the social accomplishment of strategy, visuals have been relegated largely to the background in theoretical accounts of strategy processes (Meyer, Höllerer, Jancsary, & Van Leeuwen, 2013). Although Mintzberg (1994, p. 240) once declared that strategy cannot be "tangible," since it consists of abstract concepts in the minds of people, a growing body of work—particularly in the strategy as practice area—is focused on examining the role and impact of materials used by strategy actors to achieve strategic ends in firms (Dameron, Lê, & LeBaron, 2015; Stigliani & Ravasi, 2012; Vaara & Whittington, 2012). Yet, the precise role of visuals as a particular type of material employed by strategists has remained a black box, even though visuals have distinct physical properties that empower and enable actors to interact and convey meanings in ways that differ from other modes of communication (Gylfe, Franck, Lebaron, & Mantere, 2016; Paroutis, Franco, & Papadopoulos, 2015).

Examining this gap is important, as it may help us gain a deeper understanding of the ongoing flow of the strategy process and explain the mechanisms behind both intended and unexpected shifts in direction that the strategy process can take, especially when actors employ visual materials. Existing research on how discursive and material practices are used in the strategy process tends to focus on how actors convey intended meanings (Barry & Elmes, 1997; Paroutis & Heracleous, 2013). But studies of visuality in organizational research more broadly show that visual images give actors the ability not only to illustrate or reproduce what is said in words, but also to "contradict and work against spoken or written messages" (Jewitt & Oyama, 2001, p. 55), potentially creating generative tensions. Kress and Van Leeuwen (1996), for example, showed how heteronormative images in advertising contradicted the language of sexual inclusiveness in the text. However, strategy scholars have yet to explore how dissonance between visual depictions and concurrent strategy talk might influence subsequent actions. Unlocking this puzzle is important, because it could yield a more holistic explanation of how strategy participants make meaning through their use of visuality, and as a result, how strategy meanings emerge that were previously "unseen" or were difficult to convey linguistically (Bell & Davison, 2013; Meyer et al., 2013).

Our concern with this topic arose inductively as we conducted an ethnographic study of two change projects led by ConsultingCo, a top-tier strategy consulting firm. Over the course of our fieldwork, we became acutely aware that while engaging in conversations with clients is important, creating PowerPoint presentations is also an important aspect of consultants' strategy work. Moreover, as the engagements unfolded, we observed that PowerPoint work could be seen as analytically distinct from talk and other activities, such as organizing meetings or making introductions, in that it involved the deliberate and ongoing production and modification of visual features (e.g., shapes, text layout, style formats, models, and pictures) of the slides. When we reviewed studies that had recognized the central role of PowerPoint in strategy making, we realized that PowerPoint's influence was still largely conceptualized as a backdrop to discourse, and treated as an "object" that facilitates the primacy of epistemic culture enacted through discursive practices without exploring the nexus between discursive and visual practice (Kaplan, 2011, p. 323; Mirabeau & Maguire, 2014). Recognizing the penetration of visuality and PowerPoint—particularly in strategy work across the

globe (Berinato, 2016)—we sought to shed more light on the visual/discursive interplay that slides enable and how strategists generatively use them to influence the meaning-making process. This led us to frame our research question as: *How does the interplay of visual and discursive practice in the construction of PowerPoint slides influence the strategy meaning-making process?*

Our visual semiotic analysis of slide construction across two consulting engagements reveals that strategists prepare PowerPoint slides using three *visual mechanisms*—depiction, juxtaposition, and salience. Our findings show that these visual mechanisms prompt recognition of aspects of the strategy through the conversations they stimulate—what we refer to as *strategic visibility.* As participants react to the visuals, they unveil interpretations of the strategy that not only crystallize what is shown on the slide, but also reveal important aspects that are missing, thereby enabling richer understandings of the strategy to emerge and be enacted—what we refer to as *strategic resonance.* We show that visual mechanisms, strategic visibility, and strategic resonance constitute three subprocesses of visual semiosis in an ongoing cycle of slide creation and modification until participants are satisfied with the form that slides take, and with the strategy meanings they generate.

Our study contributes to theory at the intersections of strategy process and practice by conceptualizing strategy meaning making as an ongoing semiotic process in which the interplay between visual and discursive practice influences subsequent actions within the strategy process. We also show that different visual techniques in slide composition enable authors to tackle issues that could be contentious due to their ambiguous, analytically complex, or politically sensitive nature. This extends studies that treat strategy as primarily a discursive accomplishment, for example, through narratives or rhetoric (Barry & Elmes, 1997; Ford & Ford, 1995), by demonstrating the role of visuality in the strategy process. It also extends studies on the materially mediated nature of strategy process and practice (e.g. Kaplan, 2011) by showing *how* visuals *do* more than they *show*. That is, visuals not only provide strategists with a concrete way of "seeing" strategy meanings, they also generate novel extensions to these meanings by provoking conversations about what is missing from the slides. In the next section, we provide an overview of the current treatment of visuality in strategy research. We then examine how a semiotic approach can contribute to debates about visuality in strategy research. After presenting our methods and findings, we conclude by discussing our contributions to scholarship, especially at the intersections of strategy process and practice.

2 | VISUALITY AND THE STRATEGY MEANING-MAKING PROCESS

In line with a growing body of work, we define the strategy process as a materially mediated stream of activities in which strategists accomplish tasks using materials (Dameron et al., 2015), such as PowerPoint slides (Kaplan, 2011), toys (Heracleous & Jacobs, 2008), plans (Giraudeau, 2008; Spee & Jarzabkowski, 2011), popular strategic tools (Wright, Paroutis, & Blettner, 2013), and whiteboard presentations (Werle & Seidl, 2015). Even though strategists engage primarily in visual activities when using these materials, strategy researchers who have investigated materiality have focused mainly on what actors say (Balogun, Jacobs, Jarzabkowski, Mantere, & Vaara, 2014), and paid relatively scant attention to what actors create, see, draw, or display (Meyer et al., 2013). This limited appreciation of visual activities (or visuality) in strategy research is also at odds with the prominent role visuals play in shaping strategy activities in firms, for example, with the growing use of presentations and data visualizations, to the extent that "visual communication is a must-have skill for all managers, because more and more often, it's the only way to make sense of the work they do" (Berinato, 2016, 94).

Visuality can play an integral role in the strategy process. Studies on displayed emotions (Liu & Maitlis, 2014) and body language (Gylfe et al., 2016) have begun to demonstrate that interactions among strategy actors can have a visual dimension. These interactions can impact the strategy process by accentuating urgency (Liu & Maitlis, 2014) or enabling novel combinations of knowledge to emerge (Paroutis et al., 2015). From studies on visual organization more generally (Ray & Smith, 2011), we know that both words and visuals are performative, in different but complementary ways (Bell & Davison, 2013; Meyer et al., 2013). Visual communication also has been conceptualized as distinctive compared to language-based communication (Kress & Van Leeuwen, 1996; Moriarty, 1996); evidence from cognitive studies suggests that humans use two channels: an auditory/verbal channel and a visual channel (Mayer & Moreno, 2003; Paivio, 2013).

Although wider visual organization and strategy materiality studies have demonstrated the importance of visuality in firms, they have neglected some important dynamics, particularly around their effect on the strategy process. First, while strategy researchers have examined visual interactions among multiple actors, the focus typically has been on small segments of the strategy process, such as a single workshop (Paroutis et al., 2015) or a particular point in time (Heracleous & Jacobs, 2008; Wenzel & Koch, 2018). In the context of wider organizational strategy processes, however, meaning making unfolds over multilevel conversations and repeated interactions with visuals (Werle & Seidl, 2015); we still know relatively little about how this process is constituted and the diversions it takes. Second, strategy scholars have yet to explore how inconsistencies or discrepancies between what is shown and what is said might influence subsequent strategic actions. Unlocking this puzzle is important, because it could explain how participants shift their interpretations of a strategy from one moment to the next (Mantere, 2013).

Strategy scholars have generally assumed a relatively close relationship between form and function—that is, between what strategy materials display and their impact on the strategy process (Kaplan, 2011; Werle & Seidl, 2015). However, some studies imply that this relationship may be more complex than previously assumed. Mirabeau and Maguire (2014) examined the use of slides during town hall meetings and found that middle managers interspersed their own slides with those of top managers to legitimate their projects. In other words, slides may take on additional, symbolic meanings beyond what they visually display, which influences their significance within the strategy process. When Meg Whitman, CEO of Hewlett Packard, for example, was presented with a deck of 76 slides, her ability to react to a graph in one slide was viewed by a senior executive as a demonstration of her strategic skill in picking up key issues and shaping the ensuing strategy discussion: "It was a very powerful expression of her strategic insight. This was just one graph on a slide" (Burgelman, Meza, & McKinney, 2016, p. 313). What is missing, therefore, is an understanding of how the dynamic use of the visual features within PowerPoint slides by strategy actors, in conjunction with discursive practices (e.g., conversations), facilitate the strategy meaning-making process. Such an understanding would shed light on the role of visuality in strategy.

3 | A SEMIOTIC APPROACH TO EXAMINING STRATEGY MEANING MAKING

As we explored this issue, we found work by pragmatist philosopher Peirce particularly enlightening in helping us to conceptualize and empirically track the role of the visuals in PowerPoint slides. Traditional semiotic theory conceptualizes a sign as engaged in a simple, binary relationship in which meaning making arises as an interaction between a sign and its conventional meaning (De Saussure, 2006). However, Peirce proposed a triadic semiotic relationship in which signs and interpretations

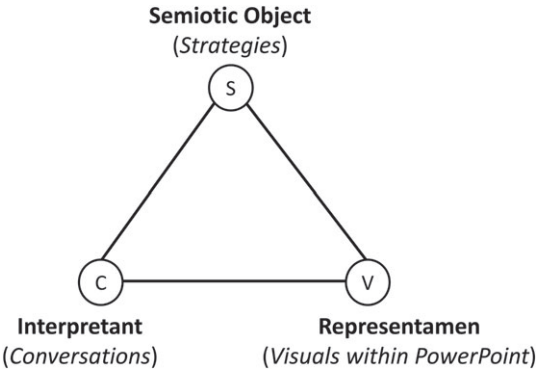


FIGURE 1 Peirce's semiotic triad applied to our focus on strategy (in parentheses)

interact with phenomena "in the world" they represent, and that meaning arises out of this interaction (Peirce, 1998). In other words, he proposed that a semiotically real object (i.e., *semiotic object*) is a distinct component of a sign (i.e., *representamen*), giving rise to its meaning (i.e., *interpretant*) (Nöth, 2011b; Queiroz & Merrell, 2006). The interrelation of the three sign components constitutes the semiotic system and the process of signification.

In this study, we motivate Peirce's sign structure to analyze meaning making around visuals used in the strategy process (Kress & Van Leeuwen, 1996). Specifically, we draw an analogy between the underlying strategies (semiotic object), how these strategies are visually represented in PowerPoint slides (representamen), and actors' interpretations of the strategy as a result of conversations about the visuals (interpretant) (see Figure 1). A PowerPoint slide of a timeline, for example, is not "the strategy," but rather one person's attempt to visualize the most important priorities from his or her perspective. However, another person may disagree with this representation of the actual strategy, which may lead to a debate that produces a revised slide. In this example, the strategy has not changed, just its visualization. Thus, a strategy (semiotic object) can have multiple representations (representamen) and generate different understandings (interpretant), which can lead to different strategic actions. By focusing on these dynamic, tension-fueled exchanges, we extend the application of Peirce's semiotic system from a contained analysis of a single slide (e.g., Bourgoin & Muniesa, 2016) to a processual examination of the visual techniques used to construct PowerPoint slides and subsequent effects on the strategy meaning making process.

We find this extension of Peirce's work into the strategy process and practice literature valid and fruitful for three reasons. First, conceptually, Peirce's branch of pragmatist semiotics provides a fresh vocabulary and framework through which to analyze the "sign components" of meaning making, and, more importantly, the practices employed by strategy actors that link these different components. Second, in terms of analyzing visuals specifically, Peirce's work on sign structures provides a way to analyze the meaning of representamen that lack well-defined "dictionary" meanings. Visual images have their own syntax that draws from the iconic and aesthetic domains, and is expressed in terms of how features are spatially arranged and interrelated (Nöth, 2011a). Third, semiotics has been recognized as the most promising avenue for research on visuals (Bell & Davison, 2013; Li, 2017), but has been underutilized in strategy studies concerned with visuality (for an exception, see Brannen, 2004). Visuality may provide the conceptual glue that creates meaningful intersections between strategy process and strategy practice research by linking meaning-making practices with their evolution over time (Whittington, 2017). Overall, we view the strategy meaning-making process as constituted through the interrelation between talk and visuals as actors shift between them to create and enhance meaning. Our approach addresses the recent call by Li (2017)

for additional research on patterns of co-evolution between sign components. We also go beyond studies that have recognized the co-evolutionary interplay between discursive and material practices (Stigliani & Ravasi, 2012), but have bypassed the precise visual features within the materials themselves and their changes, which we argue have the capacity to spur new ideas and frame the direction of meaning-making conversations.

4 | METHOD

We conducted ethnographic case studies of two strategy engagements undertaken by ConsultingCo, a top-tier management consulting company. The client for the first engagement was MiningCo, a global mining company that was proposing to relocate its multidivisional IT function from remotely located mining sites to a permanent, centralized location. The engagement involved formulating a strategy for the new permanent function to be approved by MiningCo top managers. The client for the second case was the newly formed Budget Management Office (BMO) of a state government treasury, empowered to implement government-wide cost-saving measures. Particular features of the case settings made them ideal for observing the nature of talk–visual dynamics within the strategy process. First, strategy consultants had limited experience inside the client organizations, suggesting that multiple modes of communication were likely to be transparently observable (Pettigrew, 1990). Second, consultants are recognized as expert users of visual tools (e.g., PowerPoint), given the abstract nature of client engagements (Berinato, 2016; Bourgoin & Muniesa, 2016). To enhance the trustworthiness of our analysis, we also took several steps to orient our analysis, including committing to prolonged real-time engagement with the site (Lincoln & Guba, 1985), using multiple sources of data, and building a detailed event timeline (Langley, 1999).

4.1 | Data collection

We collected data from a variety of sources, including archival documents, ethnographic observations, and interviews in order to construct a rich understanding of the strategy process within each consulting engagement (Langley, Smallman, Tsoukas, & Van de Ven, 2013). Following other studies designed to generate theoretical insights, our data collection was guided by principles of naturalistic inquiry (Lincoln & Guba, 1985). First, we collected an extensive archive of unobtrusive private documents (Pettigrew, 1990). Before beginning our fieldwork, we assembled a history of the client organization and its strategy context based on publicly available data, as well as PowerPoint presentations and company documents available on the company's internal websites. Subsequently, as the engagement got underway, we gained access to TeamSite, a web-based library to which strategy participants uploaded the latest versions of their PowerPoint presentations, Word documents, or other materials in real time. Often, we encountered the same document in multiple sources (e.g., within TeamSite, as an attachment in emails between strategists, and in meeting presentations), which further validated the importance of specific documents to the strategy process. The final archival database consisted of 61 documents, of which approximately 80% were PowerPoint slides. This provided us with an extensive, real-time record of the events, stakeholders, and visual changes made in the process of strategy formulation (Patton, 2015). In Table 1, we provide a summary of the data collected.

Second, the first author undertook an extensive ethnography of two consulting cases at MiningCo (July–September 2013) and BMO (October–December 2013). Since consultants were not always co-located with their clients or with each other, observations were made in person and over the phone. During this time, 75 ethnographic observations were made by attending the following meetings at

TABLE 1 Data sources and their use in our analysis

Data source	Type of data	Case context	Use in the analysis
Archival data	*PowerPoint slides:* strategy briefs, meetings agendas, project updates, strategy plans *Company documents:* governance manuals, reports, memos, media releases	*BMO case:* 32 PowerPoint decks (426 slides), 8 company documents *MiningCo case:* 19 PowerPoint decks (316 slides), 6 company documents	*PowerPoint slides:* Map the visual techniques used to depict the strategies at different points in the case engagement *Company documents:* Familiarize with the organizational context
Ethnographic observations	*Meetings:* Joint client/consultant strategy workshops, consultant team meetings, client/consultant calls, consultant team calls *Emails:* Client/consultant correspondence, consultant case correspondence *Fieldnotes:* Records of social interaction, conversations, and descriptions of materials used throughout the project	*BMO case:* 7 strategy workshops, 11 team meetings, 14 client/consultant calls, 9 consultant team calls; 580 emails *MiningCo case:* 8 strategy workshops, 4 team meetings, 15 client/consultant calls, 7 consultant team calls; 252 emails	*Meetings:* Familiarize with organizational context, identify client-consultant conversations conducted around PowerPoint slides *Emails:* Identify, integrate, and triangulate evidence from meetings and field notes on what actors are doing in between meetings *Field notes:* Identify what organizational actors are doing in their project work, clarify uncertainties regarding project-related decisions
Interviews	*Interviews:* On how conversations and PowerPoint slides support actors' work, and insights or observations gathered about the strategy during meetings and email correspondence	*BMO case:* 7 consultant interviews, 6 client interviews *MiningCo case*: 5 consultant interviews, 5 client interviews	*Interviews:* Familiarize with organizational context, and integrate observations with actors' accounts to improve understanding of project-related decisions

case sites: 15 joint strategy workshops, 15 consultant team meetings, 29 client/consultant calls, and 16 consultant team calls. In addition, we triangulated our observations with 832 emails provided in real-time during the study period and retrospectively. This enabled us to ensure that our observations tracked key activities. Initially, the first author was physically embedded in the client site to build trust and rapport with strategy actors and gain a firsthand understanding of the case context. Access was aided by the author's prior career as a strategy consultant, which also allowed quick sensitization to the realities and daily minutiae of the case environment (Patton, 2015).

After this initial period, and as the consulting process became more geographically dispersed, subsequent in-person observations concentrated on important strategy workshops while day-to-day interactions were tracked through teleconferences and emails. Throughout this fieldwork, detailed notes were taken, including verbatim quotes, in order to maintain critical distance (Czarniawska, 2008). The authors debated these observations to surface any possible subjective bias (Patton, 2015).

Third, interviews were conducted with key participants before and after strategy workshops to probe theoretically interesting events and emergent observations. Across both cases, 12 interviews with consultants and 11 interviews with client managers were performed, with each set of interviews conducted approximately each fortnight.

Finally, throughout our fieldwork we employed several purposeful sampling techniques to ensure triangulation and information redundancy (Lincoln & Guba, 1985; Patton, 2015). Upon entering the field, we collected data by sampling events, stakeholders, and documents that were critical to understanding the client's strategic context in general, and the issues propelling interactions between consultants and clients in particular. During the course of the fieldwork, we noticed the prominent role of PowerPoint slides, at which point we extended our data collection to assess the

theoretical importance of the practices around the slides and their construction. Finally, as we iterated between data collection and analysis, we sought out data that might challenge our emerging understanding of the processes involved (Patton, 2015).

4.2 | Data analysis

In the first stage of data analysis, we compiled a timeline of key events within each case history from the perspectives of both clients and consultant strategists (Langley, 1999). In the second stage, we analyzed the overall strategy process for distinctive changes in strategy meaning making over the entire case. Triangulating among all three data sources, we were able to identify specific meetings during which conversations around the PowerPoint slides influenced meaning making for both clients and consultant strategists. These became analytically useful periods around which to focus our semiotic analysis. In the third stage, we deployed a semiotic approach to analyze how strategy meaning making emerged during these periods. Building on Peirce's work related to sign structures, we focused on the interactions among the sign components identified in Figure 1 and their effects, which we defined as three semiotic subprocesses.

Working across our data, we first analyzed the semiotic subprocess of the construction of slides to represent strategies (representamen) based on slide compositional patterns. In the first instance we used first-order codes based on how strategists described their slide construction techniques, as well as our own observations of visual changes. This resulted in several first-order constructs of types of visual slides (e.g., picture slides, flow chart slides, matrix slides) which we then aggregated into fewer, theoretically relevant second-order themes (i.e., depiction, juxtaposition, salience) based on similarities in visual techniques used to create the slides. Together, these techniques comprise a semiotic subprocess we call *visual mechanisms.* In Table 2, we provide a visual illustration of our coding and an "in vivo" example.

The second semiotic subprocess we analyzed related to participants' interpretations (i.e., interpretants) of the strategies based on slide visualizations. We relied on ethnographic data collected from meeting transcripts and email exchanges in which the slides were discussed, together with interview data. We soon realized that participants recognized not only aspects that were displayed on the slide, but also aspects that were *not* displayed on the slide that they regarded as important to the strategy. We identified patterns between the types of visuals displayed on the slides and aspects that were recognized, leading to the development of three second-order themes: taking notice, seeing linkages, and recognizing prominence. As we tentatively moved back and forth between the raw data and theory (Shepherd & Sutcliffe, 2011), we labeled this subprocess *strategic visibility*, as it reflected aspects of the strategy phenomena that were recognized by strategists as resulting from the visuals.

Finally, the third semiotic subprocess we analyzed related to how interpretations motivated participants to pursue specific strategy actions (i.e., semiotic objects), such as organizing meetings, browsing and collecting documents, conducting interviews, and making introductions. Drawing on our timeline, fieldnotes, and ethnographic data, we noticed patterns in what strategists actually did as a result of conversations about slides, which led to new, more complex strategies. We identified three second-order themes (i.e., adding relevance, multifaceted strategies, politically acceptable strategies), which comprise a third subprocess we call *strategic resonance.*

Overall, our analysis yielded nine second-order themes that comprise three semiotic subprocesses: *visual mechanisms*, *strategic visibility*, and *strategic resonance.* At this point, we stitched the three subprocesses together into a composite account of the meaning-making process and member-checked this analysis with key ConsultingCo informants to ensure accuracy and credibility (Lincoln & Guba, 1985). This gave us confidence that we were able to show how the strategy

TABLE 2 Illustrative analysis of visual mechanisms within PowerPoint slides

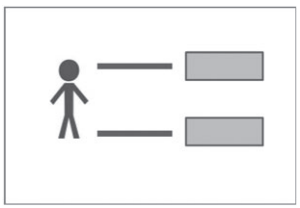
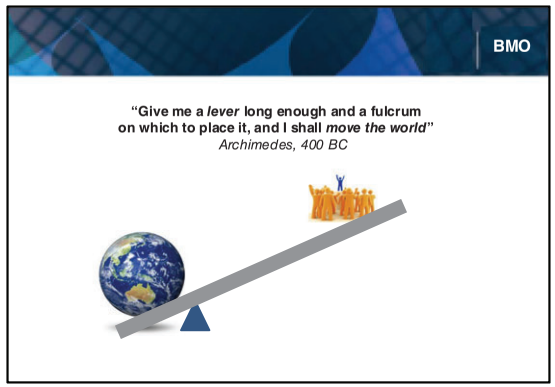
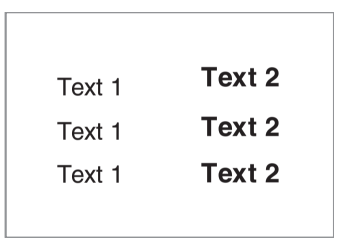
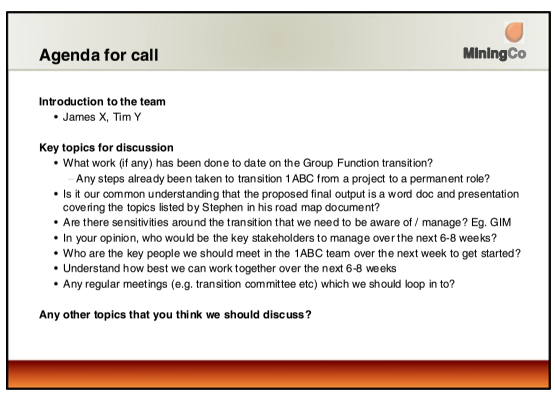
First-order construct	Function	In vivo illustration	Second-order theme
Picture slides 	Convert strategies into pictures, either literally or metaphorically		Depiction
Text slides 	Depict talk textually, with lines and bullet points segmenting the text		Depiction

TABLE 2 (Continued)

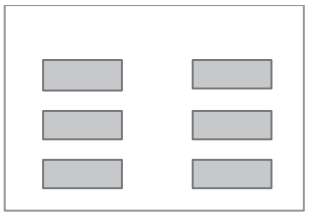
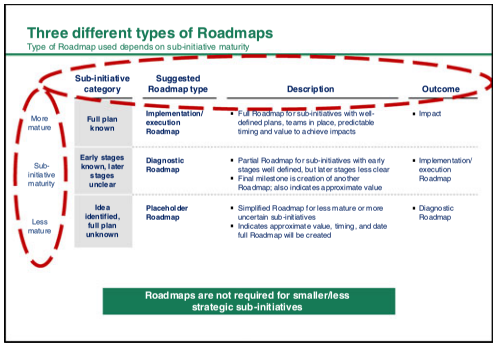
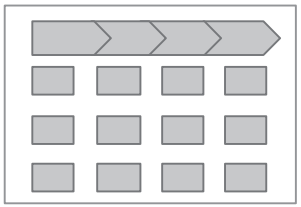
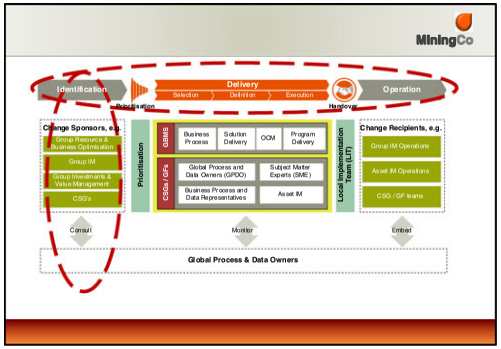
First-order construct	Function	In vivo illustration	Second-order theme
Tables and matrices 	Represent visual features along vertical and horizontal axes		Juxtaposition
Flow charts 	Arrows or chevrons indicate a directional logic to the visual features, either horizontally or vertically		Juxtaposition

TABLE 2 (Continued)

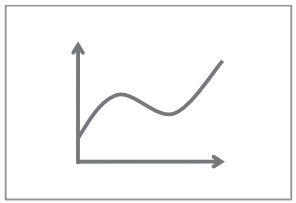
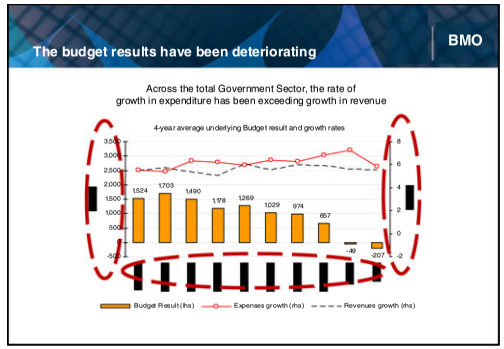
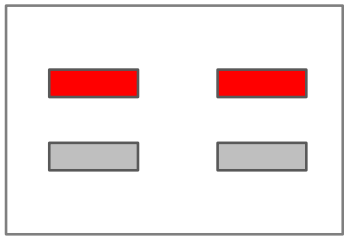
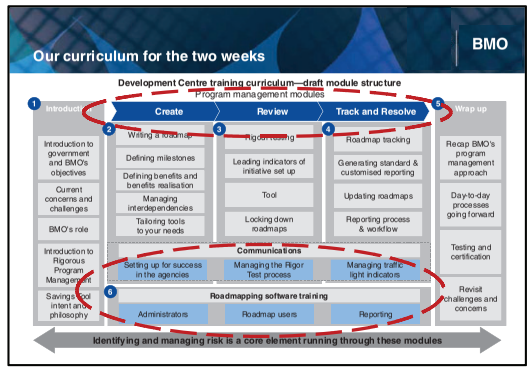
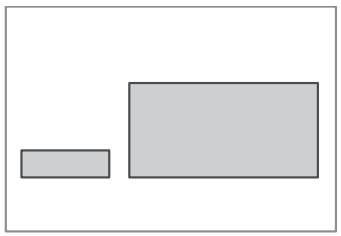
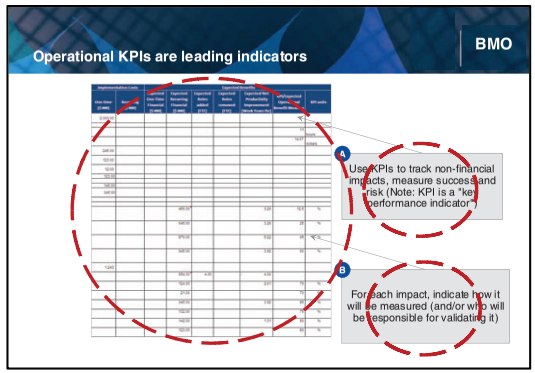
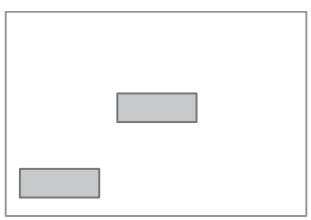
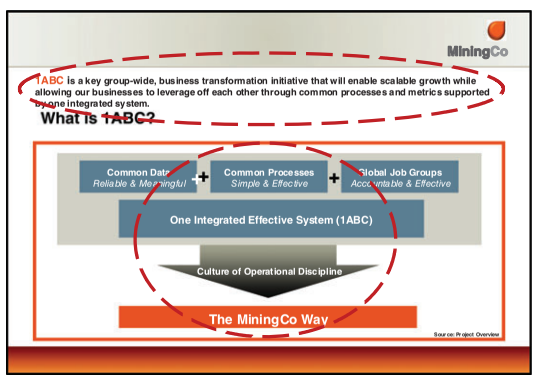
First-order construct	Function	In vivo illustration	Second-order theme
Graphs 	Plot data against horizontal and vertical axes using lines and/or columns		Juxtaposition
Color contrast 	Emphasize specific visual features using brighter colors		Salience

TABLE 2 (Continued)

First-order construct	Function	In vivo illustration	Second-order theme
Size 	Emphasize specific visual features using larger elements		Salience
Centrality 	Emphasize specific visual features by placing more important elements in the center and less important elements on the periphery.		Salience

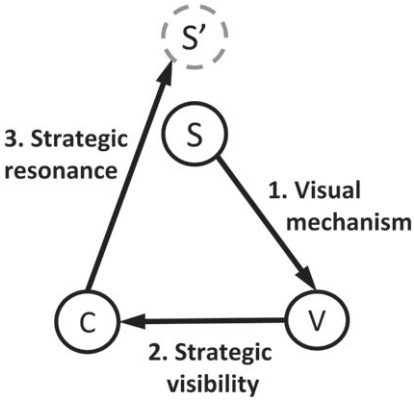


FIGURE 2 The visual semiotic process applied to the construction of PowerPoint slides

meaning-making process was constituted around a slide. However, in an effort to begin theorizing how slides were interrelated as part of patterned action over time (Mintzberg, 1978), we connected our bottom-up observations with how actions, presentations, and interpretations interacted over time (Shepherd & Sutcliffe, 2011). Looking back over our longitudinal data, we realized that slides from one period were revised and/or replaced in subsequent periods. This enabled us to develop a model of strategy meaning making as an ongoing cycle of visual semiotic subprocesses. Throughout this stage we remained open to disconfirming evidence (Miles & Huberman, 1994) that might help us elaborate on the emerging themes and their variants.

5 | FINDINGS

Since the aim of this study was to understand how visual features within PowerPoint are used by strategists to influence the strategy process, we first present detailed descriptions of three visual mechanisms (i.e., depiction, juxtaposition, salience) employed by strategists in creating PowerPoint slides. Then, we show how these visual mechanisms have sequential impacts on two interrelated visual semiotic subprocesses (i.e., strategic visibility and strategic resonance) to ultimately influence strategy meaning making.

5.1 | Visual mechanisms employed by strategists

Following a semiotics approach, an important step toward achieving our aim was to investigate the types of visual mechanisms employed by slide authors and their impacts. We define *visual mechanisms* as the techniques authors use to display visual features on a slide that can be deliberately altered in subsequent versions. This allowed us to approach the phenomenon of creating visual compositions (via PowerPoint slides) as a process of sign creation, which was interdependent with discussion about the slides throughout the strategy process.

A common mechanism deployed especially during the early stages of consulting engagements is *depiction*, defined as the pictorial representation of strategies. In its simplest form, depiction involves creating a picture slide, either as a metaphorical representation or as a literal representation. In the BMO case, for example, consultants opened their presentation of the change strategy with a picture of a lever and fulcrum (metaphorical depiction). The fulcrum was a metaphor for ConsultingCo's change management tools, and the lever represented the strategy engagement process itself (BMO fieldnotes; see Table 2). Slide authors commented that this metaphor was a "quick way" to conceptualize

TABLE 3 How visual mechanisms impact the visual semiotic process

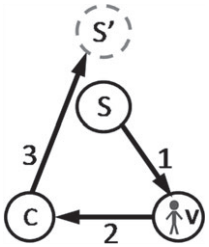
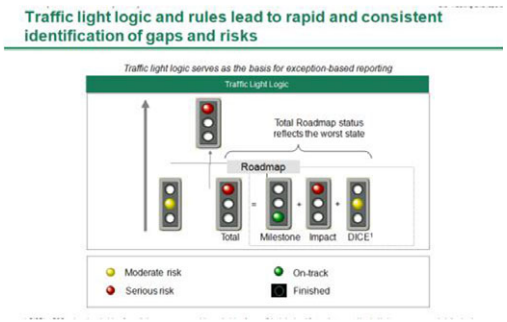
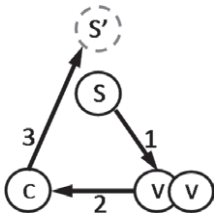
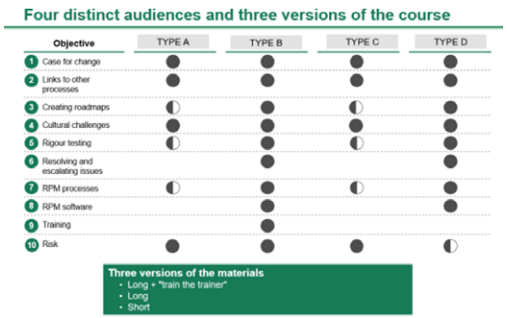
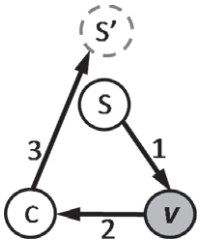
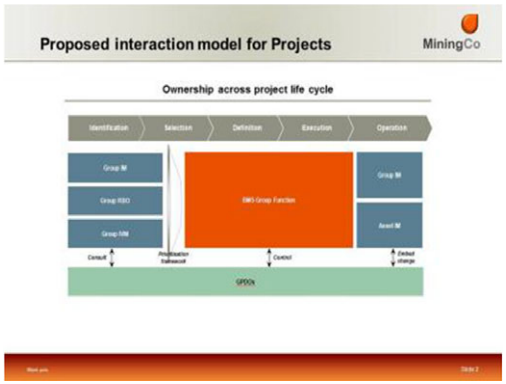
Visual mechanism (arrow 1)	Illustrative example from dataset	Strategic visibility (arrow 2)	Strategic resonance (arrow 3)
Depiction 		Enables participants to notice specific semiotic objects that are or are not depicted as they engage in conversations	Focuses strategies on what is most relevant to top managers or clients as they engage in follow-up actions
Juxtaposition 		Helps participants see linkages between pre-existing semiotic objects as they engage in conversations	Allows strategies to become more multifaceted by incorporating fresh agendas into follow-up actions and brings new stakeholders, resources, and processes to bear on the strategy process

TABLE 3 (Continued)

Visual mechanism (arrow 1)	Illustrative example from dataset	Strategic visibility (arrow 2)	Strategic resonance (arrow 3)
Salience 	(a)  (b) 	Enables participants to recognize the prominence or significance of particular semiotic objects as they engage in conversations	Allows strategies to become more politically acceptable by considering diverse interests when pursuing follow-up actions

strategic change tools that helped other participants "see the point of the strategy" (BMO Junior Consultant, interview). Examples of literal depiction are text-only slides—pictorial representations of talk. We observed 12 occasions across both case contexts when consultants met before client meetings to prepare and print off "agenda slides," which converted their verbalized objectives into a visual list of concrete goals for the meeting (see Table 2). These objectives could then be externalized relative to talk and reordered, rearranged, or deleted as strategists used their physical presence to acquire critical distance from the strategic concerns the text represented. Depiction is distinctive as a visual technique because it provides a type of exteriority, objectivity, and physical distance to a complex concept or emotion. For example, as participants converted their discussions about priorities into a slide, these priorities went from being described by strategists in conversation as "options" to specific "proposals" that were physically presented to the client (MiningCo Senior Consultant, meeting).

Many consultants used *juxtaposition* in slide construction by placing previously constituted elements in new side-by-side combinations, for example, through matrices or tables, flow charts, and graphs. Strategists frequently grouped information into horizontal and vertical axes, with certain information located at the intersection of these axes. For example, when BMO consultants needed to differentiate three types of templates or "roadmaps" to describe the savings initiatives staff could pursue, they created matrices or tables to map the plan types (*y*-axis) against plan characteristics (*x*-axis) in order to highlight differences at the intersections of these criteria (BMO fieldnotes; see Table 2). However, when strategists added chevrons or arrows to these visuals, they became flow charts, since they indicated changes over time. For example, MiningCo participants used chevrons to depict the IT project methodology as a series of ordered, linear stages (see Table 2). Line graphs are another example of juxtaposition as they plot information against an *x*/*y* axis, with the lines and columns linking the axes. During the BMO case, for example, consultants presented a line graph of the government's budget expenditure (expenditure amount on the left *y*-axis) to represent how the government's expenditure had grown unsustainably in recent years (time on the *x*-axis). The right *y*-axis provided another measure of this expenditure as a percentage of the government's budget (expenditure % on right *y*-axis) (see Table 2). What makes juxtaposition distinctive as a visual technique is the ability to simultaneously present logical linkages between two or more different pieces of information. Informants reflected that matrices enabled them to "get to insights quicker by comparing parts of the strategy that hadn't been combined before" (MiningCo Junior Consultant, interview). Another informant referred to juxtaposition as providing "intersections" between parts of the strategy (BMO Senior consultant, interview). Thus, a key attribute of juxtaposition is the analytical framework used to tacitly or explicitly link items in space, and the instantaneous comparisons this enables compared to viewing the visuals separately.

Finally, we observed that consultants visually manipulated the *salience* of slide elements in various ways (e.g., color, shape, placement; see Table 2). Strategists used color contrasts to increase the salience of certain information, since bright colors stand out compared to darker colors. Strategists also used larger shapes to increase information salience, as they were intended to be "more noticeable" than smaller shapes (BMO Junior Consultant, email). Finally, centrally placed visual features attracted attention more easily than features on the periphery. Although these features attracted attention in their own right, they took on added meaning when strategists altered the level of salience from one slide to the next. For example, in amending the BMO slide shown in Table 2, consultants shifted the number of chevrons in dark blue from five to three, in order to highlight not only that there were three core modules (displayed meaning), but that there were *fewer* core modules than previously depicted (changed meaning) (BMO fieldnotes). Salience makes one feature more visually compelling than others through tonality and spatiality. Strategists frequently referred to changes in

salience as "dialing up" or "toning down" visual features, suggesting their use as signals of gradations or change (MiningCo Senior Client, workshop). Although linguistic emphasis also accomplishes this, multiple types of visual emphasis can be employed simultaneously.

5.2 | How visual mechanisms influence strategy meaning making

Following the semiotic approach in our analysis, we found that *visual mechanisms* comprise one of three sequential subprocesses of the broader visual semiotic process related to strategy meaning making. The second subprocess, *strategic visibility*, involves participants recognizing and discussing aspects of the strategy based on what is (or is not) displayed visually in the slide. The third subprocess, *strategic resonance*, is evidenced in follow-up actions that reflect participants' more developed understandings of the strategy as a result of the prior two subprocesses.

Inspired by Peirce's semiotic triad, we depict this process as a triangle in Figure 2, where the points represent sign components: visuals (V) (i.e., representamen), conversations (C) (i.e., interpretants), and strategies (S) (i.e., semiotic objects). The arrows represent these sign components in action (i.e., the semiotic subprocesses). Through *visual mechanisms* (arrow 1), a strategy (S) is represented in pictorial form on a slide (V). *Strategic visibility* (arrow 2) refers to participants' recognition of specific aspects of a strategy based on what is (or is not) displayed, as evidenced by in vivo conversations (C) about the visuals; these conversations shape meanings in ways that are both expected and unexpected by those who created the visual. Finally, *strategic resonance* (arrow 3) is the combined effect of these prior two processes on what participants actually do as a result of their evolved understandings. By illustrating the semiotic process as a "broken" triangle, we show how the strategy meaning-making process is constituted as a sequence of cumulative semiotic subprocesses that lead to the ongoing formulation of revised strategies (S'). Although the interrelationship between semiotic subprocesses was common across all the slide discussions we observed, different visual mechanisms spurred different types of responses. We draw on examples from both consulting cases to illustrate this finding, and summarize the general patterns associated with specific slides in Table 3. We also illustrate the supporting data on juxtaposition in Video S1.

5.2.1 | How depiction influences strategy meaning making

Strategists used depiction to translate disagreements or complex conceptual ideas into objects that could be debated without personalizing differences of opinion. We found depiction took the form of either literal pictures (e.g., a photograph or transliteration to text), or metaphorical pictures, such as diagrams that represented strategy principles. In both cases, the act of creating a visual forced the slide author to frame a point of view or focal point and externalize it, thereby concentrating the audience's attention on the message itself rather than on who was saying it. The use of depiction was particularly prevalent in the early stages of our fieldwork when there was the highest level of ambiguity and misunderstanding about what consultants should be doing. In May 2013, when ConsultingCo partners accepted the task of transforming the 1ABC project into a permanent group function, they had already been working within another division of MiningCo for several years. Therefore, the consultants directed their initial efforts toward reviewing company reports, memos and strategy plans, and making comparisons with previous client experiences (MiningCo Junior Consultant, emails; MiningCo fieldnotes). In the BMO case, consultants were similarly proactive: in July 2013, a separate team within ConsultingCo had secured a project to "design and establish a Budget Management Office (BMO) and help commence its operations" (BMO Company Document-04). However, even before joining the client site, consultants had started reviewing key documents, framing the direction of the project, and pursuing introductory meetings with key

stakeholders. For example, when the government announced austerity measures in the press, consultants immediately considered implications (BMO Senior Client, email). However, this proactivity also engendered confusion. Thus, depiction became a way for strategists to focus participants' attention on a specific, contentious issue for analytical discussion and evaluation.

At the start of the MiningCo project, for example, consultants initially assumed the clients wanted advice on how to optimize their IT project management methodology (MiningCo fieldnotes). After early meetings with middle managers, James, ConsultingCo's senior partner on the case, asked his team to "prepare a pack on [ConsultingCo's] best practice approaches to project management" to try and "anchor" the conversation (MiningCo Senior Consultant, email). The package included a slide picturing six traffic lights with red, yellow, and green indicators. The "traffic light" (see Table 3, row 1) metaphor for ConsultingCo's conceptual approach to IT project management was viewed as the "simplest" explanation, since describing it linguistically could be "overwhelming, especially when they haven't got the background" (MiningCo Junior Consultant, interview). As a *visual mechanism*, depiction thus provided a quality of externality and physical tangibility to a strategy specific issue that enabled participants to "see" the concept without judging how it was said. This fostered *strategic visibility* by creating a focal point to help strategy actors notice what slide authors thought was important. This focal point was recognized by Tim, the chief client manager, as representing an "exceptions based" approach to project management in which only "red traffic light issues" were discussed (MiningCo Senior Client, workshop). Although ConsultingCo did not literally use traffic lights as a strategy tool, the metaphor gave meaning to the complex notion of exception-based project management.

Interestingly, the impact of the traffic light slide went beyond the visuals to the conversations provoked "around the slide" (MiningCo Junior Consultant, interview). As one informant reflected, the value was in "what it allowed [the client] to talk about" (BMO Junior Consultant, interview). The traffic light slide provoked the client manager to clarify that he did not want a "benchmarking study" of the 1ABC project, as implied by the slide. Although it was helpful to "validate" the existing IT project management methodology against ConsultingCo's best practice, the actual main objective was to make 1ABC a permanent group function within MiningCo (MiningCo Senior Client, workshop). The irrelevance of the IT project management methodology surprised ConsultingCo junior consultants, as it contradicted their partner's previous instructions. As a result, the consulting team redirected their efforts toward preparing a Word document report that would be delivered to MiningCo top managers to "make the business case" for a permanent function (MiningCo Senior client, workshop). As one consultant later noted, "before the call we were not very clear on why [Tim] wanted us," but after the call, consultants had greater visibility on Tim's intentions for the strategy (MiningCo Junior Consultant, interview). Thus, *strategic visibility* arose as much from what was displayed as from what was missing from the slide.

The enhanced strategic visibility from depiction led to increased *strategic resonance* (i.e., new and revised activities resulting from evolved understandings of the strategy). In the MiningCo case, strategic actions were impacted in terms of the types of people engaged in the work and what they did (represented as the shift from S to S'). A key follow-up action from the exchange with Tim was to shift energy toward reviewing MiningCo's internal governance documents and better understanding policies and procedures to create a new permanent function. As the rest of the week unfolded, consultants engaged in unanticipated activities, consulting an online library of governance documents and contacting consultants working in another part of MiningCo to see whether they had encountered relevant documents (MiningCo fieldnotes). At the same time, James, the senior consulting partner, decided to "switch off" certain activities that he had originally identified as being important, but appeared less central after the meeting (MiningCo Senior Consultant, email). For example,

a MiningCo consultant had made contact with ConsultingCo's Belgian mining expert to obtain additional analysis on measuring IT project management effectiveness, but this initiative was dropped as a result of the conversation around the traffic light slide (MiningCo fieldnotes).

Overall, our semiotic analysis shows how the visual depiction of strategy and the conversations about those visuals lead to revised, follow-up actions in the strategy process itself. A strategy evolves in new directions as participants develop a more complex appreciation of intentions and work through misunderstandings. This complex appreciation does not arise from either visuals or talk alone, but rather from their interplay, which enables discordant representations and understandings to surface and be addressed.

5.2.2 | How juxtaposition influences strategy meaning making

Strategists used juxtaposition as a *visual mechanism* when they wanted to provoke new logical linkages between previously disconnected aspects of a strategy. This became important in the BMO case when consultants needed to come up with a novel way to identify which bureaucrats should implement the government's austerity measures. During the due diligence phase, consultants had created a slide detailing "10 objectives" (see Table 3, row 2), which outlined a set of goals and values that the government had announced as part of the austerity measures. However, as consultants discussed this slide with the BMO, it became evident that the clients wanted relatively targeted interventions, and had only worked with the largest government agencies such as health and education to achieve specific goals such as identifying cost savings (BMO fieldnotes). After this conversation, consultants began to research departmental organizational structures more carefully in order to diagnose who should be responsible for implementing which sets of objectives.

From these investigations, it became apparent that only a small number of officeholders were relevant in implementing changes related to cost savings, with senior executives making political decisions about the budgets (one set of objectives), and lower-level managers implementing them within the technology system (a different set of objectives). As these conversations circulated, participants felt the need to "draw a slide mapping the [training] objectives against the different levels [of officeholders] involved" (BMO Senior Consultant, call). As one consultant later noted: "You reach these points where you need a 2×2 to bring all these ideas together" (BMO Junior Consultant, interview). The resulting visual was a 4×10 matrix with stakeholder types in the columns (4 columns), juxtaposed against learning objectives in the rows (10 rows) (see Table 3, row 2). At the intersection of each column/row (i.e., 40 cells), the slide author drew a circle depicting the perceived relevance of the training to the officeholder's decision-making power within the government's hierarchy. Since matrices organize information into overlapping categories, they make communicating complex ideas more achievable than with one axis alone.

The added value of juxtaposition as a visual mechanism was that it allowed strategy participants to see linkages that were previously hidden, thereby increasing *strategic visibility.* As participants responded to these matrices and flow charts, conversations converged on comparisons made between the axes. This included highlighting gaps as well as overlaps, offering a more nuanced understanding of patterns in the strategy than were available by viewing one axis alone. For example, as consultants presented the slide in Table 3 (row 2) to Sue, the BMO Senior Client, she noticed that columns referring to two types of officeholders had fewer circles than the columns referring to the two other types of officeholders. Linking this with the objectives on the *y*-axis, she recognized that based on the current strategy, two types of officeholders had fewer training objectives than other officeholders in the government. Pointing to the slide, Sue acknowledged this displayed meaning by saying, "So is the idea that we wouldn't be putting them through the same courses" (BMO Senior Client, workshop)? The title of the slide was: "Four distinct audiences and three versions of the course" (BMO Senior Consultant, workshop). The consultants thought they should economize the

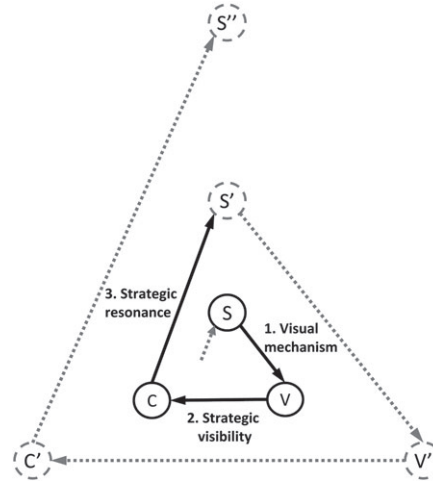


FIGURE 3 Strategy meaning making as an ongoing visual semiotic process

amount of time and number of resources allocated to preparing training materials, because two types of officeholders could sit in the same training. One consultant responded: "They have the same level of knowledge and training needs so I think we could run those two together."

Initially, Sue appeared to accept this proposal, but she was just as concerned about what the consultants had *not* displayed on the slide. After contemplating the depicted recommendation, she agreed that doing the "minimum sufficient" was a policy of the government and therefore the proposal seemed workable (BMO Senior Client, workshop). However, she also pushed back, indicating that some objectives were more urgent and others were not recognized on the slide. Specifically, while she was less concerned about when staff received training on "RPM" processes' and "RPM software" (at the bottom of the objectives list on the slide), she wanted to educate all staff on "the case for change" immediately, rather than deliver the training in segmented groups (BMO Senior Client, workshop). The slide thus provoked crucial dialogue about both depicted and nondepicted aspects of the underlying strategy, thereby enabling Sue to clarify her intentions.

As juxtaposition sensitized strategic visibility to these linkages, strategies took on multiple facets, thereby increasing *strategic resonance.* Multifacetedness added a different type of resonance to the strategy than relevance, since multifacetedness was not so much about simplifying and summarizing a single concept as about drawing de novo connections between multiple aspects of the strategy. These connections motivated new and revised strategy actions (i.e., the shift from S to S') as participants followed through on their enriched appreciation for what the strategy needed to accomplish. In Sue's case, the consultants' slide challenged her to change how she thought about ConsultingCo's involvement in the BMO project. Initially, she had intended to push the consultants to "do the grunt work" and provide a comprehensive program of change for government (BMO Senior Client, interview). However, after viewing the slide in row 2 of Table 3, she realized that what was needed was more selective change in the form of more targeted training interventions: "We realized that we actually wanted to put in place as few processes as possible… large change programs are complicated enough without added layers of inessential process…that are not critical for the key decision makers" (BMO Senior Client, interview). This led to a concrete decision to minimize the number of programs and stakeholders engaged in the strategy process. For consultant participants, the conversations around the matrix slide likewise caused them to shift their efforts away from a "one size fits all" approach (BMO Junior Consultant, email) to a more bespoke, lighter engagement model: something they were not sure Sue would initially support.

One informant reflected, "We thought the BMO wanted to be much more involved in the process than they actually are" (BMO Junior Consultant, interview). As a result, consultants shifted their activities away from working with BMO middle managers during this phase and began working with their colleagues in the United States to better understand ConsultingCo's templates for delivering training programs and how to incorporate best practices into the new training strategy. They also began contacting key senior stakeholders within the government to test the style and depth of training needed at each level of the government, rather than engaging stakeholders throughout the organization (BMO fieldnotes).

5.2.3 | How salience influences strategy meaning making

Strategists used salience as a *visual mechanism* when they manipulated the size, color, and location of visual elements to emphasize specific aspects of strategies. They did this when they wanted a particular issue to take on greater symbolic meaning or importance beyond its literal connotation. For example, in the MiningCo case, consultants' visual representations of the terms "BMS Group Function," "1ABC," and "1GO" evolved throughout the engagement. Consultants initially assumed these were interchangeable terms used to refer to members of the IT project delivery team (MiningCo fieldnotes). As consultants began to develop a process map of how the IT project methodology would operate, the box representing this team was titled "BMS Group Function" (slide [a] in Table 3, row 3). In a subsequent version of the same slide (slide [b] in Table 3, row 3), visual salience increased. Specifically, the term "BMS Group Function" was moved from the center of the orange box to the periphery and retitled "Group Business Management Systems," and the term "1GO" which consultants had been using interchangeably to denote the BMS Group Function was moved to the center and visualized as a bright orange button. Consultants further increased the salience of this object representing the IT project delivery team by creating a color contrast with the dark blue background and matching the color of the 1GO button with the chevrons at the top of the slide labeled "Delivery." In this way, significance was added to words and symbols with specific dictionary meanings based on how they were represented visually.

Words and labels also took on additional significance when consultants made them more or less prominent. Doing so enabled participants to change their overall understandings of these words and labels relative to how they were being used in strategy talk, and helped them recognize their changing statuses over time. This subsequently allowed strategists to increase the *strategic visibility* of these particular aspects of the strategy accordingly. Why did the strategists increase the visual salience of the "1GO" label in the second slide? As consultants discussed their visualizations of the IT project methodology with the client, it became apparent that the term 1GO had political significance for top managers who were deciding the fate of the team. Tim, the team's manager, revealed, "It's had a lot of visibility at the senior leadership level, so people will recognize it" (MiningCo Senior Client, workshop). This gave consultants greater clarity about the strategy than ever before. Indeed, a MiningCo junior consultant, Yang, had been using "1GO" as a common-sense descriptor of the overall process. During a workshop she asked Tim, "Isn't 1GO just the name for the whole thing?" She soon realized that she had misunderstood. However, as a result of the initial slide, Tim was able to provide more detailed information about the political significance of these aspects of the strategy that informed the revisions shown on the second slide. Moreover, discussing the visual salience of 1GO prompted Tim to reveal more about the IT strategy than was displayed on the slide. Specifically, Tim wanted to make the case to top managers that 1GO was a piece of "intellectual property" and something that was widely endorsed and accepted "across all the teams" (MiningCo Senior Client, workshop). This "intellectual property"

argument became a new tactic that consultants began to incorporate into subsequent correspondence and slide designs.

Strategic visibility influenced the kinds of activities participants subsequently enacted by giving legitimacy and power to a particular aspect of the depicted strategy. Indeed, *strategic resonance* became evident as it became more politically acceptable and expedient to use terms that had been made prominent in the slides, which were widely circulated. In September 2013, for example, Tim's 1GO strategy faced an important test of strength when he received an email that his boss, Margaret, had been promoted to MiningCo's top management team. This changed the political landscape around the 1ABC project. The promotion represented another vote on the top management team, yet created a power vacuum around her replacement (MiningCo Senior Client, email). This prompted Tim to ask consultants via email to "fast-track" the change program by sharing the latest version of the process slide (slide [b] in Table 3 row 3) with Margaret and the other functional heads to get their "feedback." Embedded in these slides was the salience of "1GO" and its central positioning to the future of MiningCo's IT operations. Sensing the growing political traction of the "1GO" symbol, Tim directed consultants away from refining the slides to making other key stakeholders (besides Margaret) familiar with "1GO" and ensuring its visuality was prominent in other work circulating throughout the firm. This was seen as critical to "locking in" support for the group so that it was "never lost or diluted" (MiningCo Senior Client, email). Visuality thus was used to influence the political dynamics within the strategy process by using salience to highlight and disseminate the political expediency of certain strategy activities.

5.3 | Visual semiotic processes over time

Combining observations from both field ethnographies, we found that strategists used multiple visual mechanisms both within a single slide as well as across slides over the course of the strategy process. The types and concentration of visual mechanisms used between one slide and the next depended on the context of each case. One way in which strategy evolved was through successive changes to how one visual mechanism was used. For example, a crucial issue in the BMO case was identifying the key bureaucrats who would be trained and entrusted with implementing the government's austerity measures. The early stages of the strategy process were dominated by juxtaposition in slides as strategy participants sought to segment the government's bureaucracy in different ways. Initially, juxtaposition drew linkages between the objectives behind austerity and types of bureaucrats (one instance of juxtaposition), but this later shifted to formulating linkages between objectives and types of learning modules (a second type of juxtaposition) as the conversation shifted to the skill sets and cultural attitudes of these key stakeholders (BMO fieldnotes). In this example, the evolving aspects of the strategy process continued to involve juxtaposition due to the relational complexity involved in the strategic issue at hand. However, the strategy process could also evolve in terms of shifting emphasis between the types of visual mechanisms in use. Indeed, as the audience segmentation was settled in the BMO case, the strategy process became dominated by the use of salience as participants wrestled over the political positioning of sensitive terms and principles behind the austerity program and training. In MiningCo, we observed a shift in the opposite direction as the case evolved. In the above example, we highlighted how visual salience was used to attract political support behind the "1GO" brand and disseminate it widely through the organization. As this began to take effect, strategy participants shifted to juxtaposition in slides as questions were raised about how the formalization of the 1ABC team could align or intersect with competing agendas. This resulted in several matrix and calendar slides that concerned stakeholders used to work through these issues (MiningCo fieldnotes). Overall, we found the visual semiotic process to

be ongoing; strategy participants continued to evolve their use of slides as they obtained sufficient understandings of specific issues.

6 | DISCUSSION AND CONTRIBUTION

Our research was motivated by asking: *How does the interplay of visual and discursive practice in the construction of PowerPoint slides influence the strategy meaning-making process?* PowerPoint is a useful backdrop for our interest in delving more deeply into the micro-foundations of strategy as a visual process. Our analysis reveals that the power of visuals for strategy participants is realized through their use in conjunction with talk. Participants use both visuals (like PowerPoint slides) and talk interdependently as part of a process of semiosis through which they broker thoughts, concepts, and understandings that are difficult to describe in words alone but, in combination with visuality, become easier to "see" from another person's perspective, and then react to. In Figure 3, we present a conceptual framework that provides the basis for our theoretical contribution.

While PowerPoint has many virtues, our findings highlight the value of visuals in empowering authors to address particularly contentious or conceptually complex issues by revealing divergent understandings that can be verified and addressed in subsequent slides. Strategists compose slides using *visual mechanisms* that serve different purposes: *depiction* enables objectivity by turning contentious and ambiguous concepts into static, depersonalized images that can be physically (and symbolically) evaluated at a distance to the author; *juxtaposition* enables immediate comparison between logically and analytically related concepts; and *salience* offers strategists a way to differentiate between complex political nuances and priorities. These mechanisms give rise to *strategic visibility* through the conversations they engender, as audiences come to "see" what slide authors mean in relation to the strategy. These interactions in turn prompt *strategic resonance,* as participants revise their activities based on their evolved understandings. We depict the strategy process as an ongoing set of interrelated semiotic subprocesses (i.e., visual mechanisms, strategic visibility, strategic resonance). The triangle is "broken" because the strategies (S) depicted on a slide are modified as participants change their activities over time (S') as a function of their evolved understandings. The various incarnations of slides and the corresponding follow-up conversations are depicted by dotted lines, highlighting how they extend previous meaning-making efforts (represented by solid lines), yet are distinct.

By conceptualizing strategy as a visual semiotic process, we extend studies in the strategy process and practice tradition by offering new insights into *how* participants pit alternative views of a strategy against each other and form evolved understandings. Prior studies of strategy as discourse have embraced the unfolding strategy process from a variety of perspectives, including a dialogical one (Barry & Elmes, 1997; Ford & Ford, 1995; Heracleous & Jacobs, 2008). Conversations gain momentum as strategy participants co-construct meaning by creating narratives that link different participants across time and space (Balogun et al., 2014). Our use of Peirce's semiotic triad to link strategies, visuals, and conversations is consistent with this dialogical view because it represents an open and dynamic process of meaning making. Yet, it also goes beyond the dialogical view by revealing a crucial yet underexplored dimension of practice (visuality) that participants employ to drive the formation of strategy meanings (Suominen & Mantere, 2010) and influence future actions. In social sciences, semiotics is seen as providing a conceptual and methodological toolkit that enables scholars to better understand how the systems of meaning employed in visual messages are communicated and interpreted (Barley, 1983; Moriarty, 1996). In the context of strategy, our deployment of a visual semiotics-based view of PowerPoint slides shows that visuals are particularly

useful for generating diverse and enriched meanings around issues that are open-ended and poorly understood in strategizing. These open-ended issues are susceptible to multiple interpretations because they are conceptually ambiguous, analytically complex, or politically contentious and therefore engender divergent views about what the underlying strategy actually is.

We show that strategy meaning making in these instances particularly draws on strategists' interdependent use of visuals and talk to perform two generative functions: (a) crystallize strategists' intended meanings with their audiences, and (b) elicit additional meanings that an audience member may intend, but are not currently displayed in the visual. Visuals "perform" certain meanings through the direct relationship between what is composed and what is seen. However, visuals also enable new meanings about underlying strategies to emerge through the ensuing conversations they provoke that move beyond what is literally depicted on a slide. As strategy audiences view slides, they either challenge or approve the depicted visual representations of the strategy verbally. This is only possible because the visuality of PowerPoint is highly malleable, and therefore the underlying strategies (i.e., semiotic objects) can be represented in many ways (i.e., representamen) to adjust to participants' nuanced strategy interpretations (i.e., interpretants).

These findings not only refresh strategy discourse scholarship by establishing tighter links with current discussions about materials (Dameron et al., 2015), but also show why visuals matter—by helping strategists tackle particular types of thorny issues that are difficult to address through words alone. The depersonalization enabled by visual *depiction*, for example, helps to distance the author from the message, which is not possible in the tone and articulation of talk, which are inherently personalized to the speaker. This allows for sensitive issues to be more easily addressed visually. Additionally, visual *juxtaposition* allows for greater relational links between concepts than talk, which is inherently sequential and structured by nature. This empowers authors to communicate more complex conceptualizations to slide audiences. Finally, *salience* offers new and more nuanced ways to prioritize strategic agendas than speech emphasis alone. By honing in on the distinctive "work" of visuals, our study also aligns emerging studies on strategy materials with work on performativity in organization theory (e.g., Cooren, Kuhn, Cornelissen, & Clark, 2011; Orlikowski & Scott, 2008). Complementing the treatment of PowerPoint as an "epistemic object" around which discursive work takes place (Kaplan, 2011), we go further by showing how each visual mechanism that strategists draw on a slide empowers them to play a distinctive role by virtue of the spatial relationships connoted on the slide.

Our findings reveal that the visual mechanisms triggered around the creation of PowerPoint slides do not "stand alone" (e.g., Schoeneborn, 2013), but form part of a wider set of semiotic subprocesses that can take strategy meaning making in unexpected directions. Visuals not only reflect or anchor what has been said or done thus far in the strategy process (i.e., visual mechanisms, represented by arrow 1 in Figure 3), but also enable new meanings to be generated by allowing strategy actors to discursively explore areas beyond what has been said or seen previously (i.e., strategic visibility, represented by arrow 2 in Figure 3). As such, visuals prompt conversations about new meanings via an abductive logic (Mantere & Ketokivi, 2013; Moriarty, 1996) that subsequently enriches the strategy process as participants enact these new meanings (i.e., strategic resonance, represented by arrow 3 in Figure 3). Thus, strategy meaning making is an evolving and iterative process of visual semiosis, where the "openness" of visuality enables and empowers diverse actors to participate in and influence the direction of the strategy process along particular trajectories. This finding extends prior research by conceptualizing the strategy meaning-making process beyond a linear trajectory or a narrow time period such as a workshop (Paroutis et al., 2015; Werle & Seidl, 2015). Rather, through an ongoing cycle of semiotic subprocesses, our theoretical model has the potential to explain an infinite set of strategic talk–visual interactions and variations that unfold between

participants and across an organization. Our model, and semiotics-based analysis of visuals more broadly, addresses calls for the systematic study of historical embedded agency (Burgelman, 2011; Floyd, Cornelissen, Wright, & Delios, 2011; Vaara & Lamberg, 2016), by explaining how strategic agents such as consultants or CEOs (see, for example, Burgelman et al., 2016; Paroutis, Mckeown, & Collinson, 2013) use visuals to influence operational contexts (Knight & Paroutis, 2017; Pettigrew, 1992).

Our findings also highlight the role of visuality in productively mobilizing dissonance and contradiction in strategy meaning making and communication. Prior strategy studies have revealed that dissonance can play an important role in strategy meaning making (Burgelman & Grove, 1996; Eisenberg, 1984). Top managers face an ongoing need to identify divergence between their strategic intentions and participants' actions, and are called upon to "discern the newly emerging strategic picture" (Burgelman & Grove, 1996, p. 12) before preparing a response. Precisely how dissonance is recognized has remained elusive; largely, it has been assumed to be triggered by discursive activity (Abdallah & Langley, 2014; Sillince, Jarzabkowski, & Shaw, 2012). Our findings suggest that this is not the complete picture. Importantly, visual mechanisms play a generative role in mobilizing and making use of dissonance: they facilitate the voicing of differences of opinion based on what is seen, what is said, and what is understood about the strategy. This has the potential to enhance strategy participation and foster creativity in the strategy process. Scholars recognize that visual materials can be used to enlist diverse and disengaged participants in an agenda (Kaplan, 2011; Mirabeau & Maguire, 2014), or bring creative new ideas to life (Jarzabkowski & Kaplan, 2015). However, our findings show *how* this happens through a process of abduction, triangulation, and gradual discovery. This explains why strategy process may take nonlinear and seemingly disconnected paths based on who joins the visual–discursive interactions. This presents an opportunity to unpack a range of activities that use dissonance in strategy meaning making (e.g., creative brainstorming, strategic change, crisis response) in future work.

6.1 | Implications for strategy practitioners, limitations, and future research

Our findings yield a number of insights for practitioners. In particular, our findings suggest that those who craft the visuals in PowerPoint slides have the power to influence a strategy's direction. PowerPoint's visual features are intimately connected to the direction strategy conversations take and subsequent activities. This means that strategy practitioners must be highly proficient in controlling and sequencing the flow of visual mechanisms to drive a project forward or communicate key ideas throughout an organization. PowerPoint has been criticized as a source of banality (Tufte, 2003), but we offer an alternative, opposing view. Moreover, our findings are not limited to PowerPoint or consultants. A range of visual stimuli can be used by skillful strategists to command attention around contentious issues (Burgelman et al., 2016) and steer attention away from issues that are stagnant or being pursued unproductively.

Our study has a few limitations. First, since we focused on one strategy consultancy and two projects, we have limited ability to generalize our findings across the consulting industry. While collecting additional data from more firms and engagements might have strengthened the population validity of our findings, our longitudinal engagement with the particular industry was aimed toward gaining insights that are generalizable to theory (Payne & Williams, 2005). Second, we realize that some of the differences across the two projects might be due to the particular mix of consultants involved and the distinctive nature of each project. However, since consulting firms create new teams for each project and project specifications differ markedly across organizations, it would have been difficult to study the same consultants across multiple engagements with similar project

settings. Ultimately, our primary focus was not on the consulting process, but on understanding the patterned interconnections between visuals and conversations in the strategy process that form conceptual positions relevant beyond the processual features of consulting engagements. In this regard, our ethnographic research design was appropriate.

In terms of future research, we invite scholars to treat visuality as a more central research component, from both a methodological and a conceptual perspective. We see visuality as particularly relevant in cases where participants must overcome ambiguity and misunderstanding, especially when that misunderstanding arises across space and time. Here, the physicality of visual materials may serve as a bridge to prevent meanings from being "lost in translation." For instance, it may be possible to study visuality in the context of internationalization strategies, especially when participants must align understanding across cultural and geographical divides (Brannen, 2004; Knight & Wójcik, 2016). Another example might be in the emerging field of paradox, where visuality may enable participants to appreciate concepts that are otherwise latent (e.g., the yin-yang symbol) (Knight & Paroutis, 2017). Scholars have already begun to explore cognitive and emotional responses to visual stimuli, including facial expressions (Liu & Maitlis, 2014) and gestures (Gylfe et al., 2016). In both cases, a visual semiotic approach can enable scholars to go beyond instantiations of visuality to show how visuals influence the emergence of particular understandings and subsequent actions over time.

In this study, we examined the role strategy visuals play alongside conversations in shaping the direction of strategic action. As technology advances, the ubiquity and sophistication of visuality and data visualization in organizations is increasing; thus, a visual view of strategy is becoming increasingly important to help strategy scholars and practitioners explain *how* and *why* strategies are adopted and changed over time. By applying a semiotic lens to this phenomenon, our aim has been to generate new insights into the role of visuals at the intersection of strategy process and practice.

ACKNOWLEDGEMENTS

We would like to thank the special issue editors, particularly Saku Mantere, and our three anonymous reviewers for their advice, guidance, and constructive feedback during the review process. We would also like to thank participants of the Strategic Management Society and Academy of Management Society conferences for their comments on past versions of our work. An earlier version of this work has also received a best paper award at the 2016 Australia and New Zealand Academy of Management (ANZAM) conference.

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How to cite this article: Knight E, Paroutis S, Heracleous L. The power of PowerPoint: A visual perspective on meaning making in strategy. *Strat Mgmt J*. 2018;39:894–921. https://doi.org/10.1002/smj.2727