

VISUALS IN OPEN STRATEGY

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Forthcoming at: The Cambridge Handbook of Open Strategy, eds D. Seidl, G von Krogh, R. Whittington, Cambridge University Press, 2019.

Reference: Paroutis S., Knight E. 2019. Visuals in Open Strategy. In The Cambridge Handbook of Open Strategy, Seidl D., Von Krogh G., Whittington R. (eds), Cambridge University Press, forthcoming.

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Abstract

Visuals are increasingly central to what organizational actors *do* inside and outside their firms, for example with the growing use of visualization tools, big data analytics, presentations, visuals in social media and video conferencing dominating modern strategy analysis. In this chapter we argue that investigating the role of such visuals can enrich our understanding of strategizing and open strategy in particular. We show how the use of visuals relates to the two key dimensions of *transparency* and *inclusion* in Open Strategy. The chapter is structured in three sections. The first covers the way visuals are used in management research. The second provides illustrative examples of the way visuals can relate to Open Strategy research. The third provides a set of guiding principles for future research at the intersections of visibility and Open Strategy, namely: *capturing*, *comparing and contrasting*, and *creating*. Our aim is to showcase how visuals can be associated, theoretically, methodologically and empirically with Open Strategy research and motivate future studies in related topics.

Keywords: Powerpoint; slides; visual tools; visuals; visibility.

1. Introduction

Examining Open Strategy through the role of visuals holds great promise. Visual artefacts are increasingly central to what organizational actors *do* inside and outside their firms, for example with the growing use of visualization tools, big data analytics, presentations (e.g. PowerPoint), user-centred design approaches, visuals in social media and video conferencing dominating modern strategy analysis (Berinato, 2016; Boxenbaum, Jones, Meyer, Svejenova, 2018; Kim and Mauborgne, 2002). Through the use of these visuals in their strategy process, firms can communicate their strategic direction to internal and external audiences and actively *engage* these audiences in particular aspects of their decision making, which could in turn open, new, yet unexplored, avenues for their strategy. As such, visuals open up the opportunity to communicate and engage with a much less strategically-informed set of actors than is the norm in strategy, for example shopfloor

workers or stakeholders such as citizens in local communities. This is possible since visuals can reduce cognitive challenges (Täuscher and Abdelkafi, 2017; Hegarty, 2011) and make them more widely accessible compared to more traditional strategy formats (such as memos or reports that often require familiarity with strategy terminology to be understood).

In this chapter we show how the use of visuals relates to the two key dimensions of *transparency* and *inclusion* in Open Strategy (Hautz, Seidl and Whittington, 2017; Whittington, Cailluet and Yakis-Douglas, 2011). For example, the ability that readers of visuals have to modify contents of a visual instantaneously allows knowledge integration efforts to be easily reflected visually in the visual artefact's content (transparency). It also allows disagreement and debate about what should be included or not visually in the artefact to occur (inclusion). Furthermore, by translating their strategy into a visually accessible format, firms are also able to show to a wider audience (for example shop-floor employees who don't normally form part of the firm's strategy process) how a particular initiative or process at the business unit level is important for the overall corporate strategy, thus providing *transparency* to time-poor internal and external audiences, and *inclusion*, especially to middle and lower-level managers and employees who are not experts in strategy. A firm, for example, could allow strategy visuals in their social media communications (Baptista et al. 2017) to be co-created by a wider audience of internal and external stakeholders by adjusting the editing rights and access to these visuals. Later in this chapter, we will explore in detail a visual study of PowerPoint slides, to demonstrate that slides are not an end product, but a visual tool that can stimulate engagement and wider discussion, and, as such, allowing for both transparency and inclusion (Knight, Paroutis and Heracleous, 2018).

Accordingly, in this chapter we argue that investigating the role of visuals can enrich our understanding of strategy and open strategy in particular, for example, around the interconnections strategy enables and the richness of reasons behind strategizing success and failure. The importance of visuals and the failure of strategic narratives, for instance, is highlighted by Barry and Elmes when they note: "Projected onto the screen, strategic titles and directions assume a larger-than-life presence, becoming unavoidably fixed in our gaze...[There] may be an unrecognized reason why strategic narratives sometimes fail: they

have been unwittingly tailored in the wrong cloth.” (1997: 435–436). Yet, in scholarly strategy research much of our research efforts tend to dissect organizational reality into researchable chunks where theoretical interpretations can then take place and focuses on what actors say or read, with relatively scattered attention to the what, how and why actors see (Bell and Davison, Bourgoin and Muniesa, 2016; Ray and Smith, 2012). This disjoint appreciation of visuals in management research is at odds with the integral role these elements play in shaping the empirical reality that actors shape and experience within and across firms.

Unpacking how strategy is visually made and executed is an exciting new frontier in strategic management research. A number of recent studies showcase the efforts of scholars to capture the complex processes and outcomes enabled through the intersection of visibility with talk and text (Jarratt and Stiles, 2010; Gylfe *et al.*, 2016; Kaplan, 2011; Knight and Paroutis, 2018; Liu and Maitlis, 2014). In viewing strategic decisions and actions as embedded in particular discourses, the discursive lens has yielded useful insights into organizational functioning and strategic practice (Heracleous and Barrett, 2001; Paroutis and Heracleous, 2013). In addition, studying the role of visuals in strategy can provide additional insights for scholars, including those interested in Open Strategy, for two reasons, one theoretical and one empirical. First, visuals are a type of discourse, a semiotic system that deserves at least as careful study as text-based systems. Second, visuals (e.g., PowerPoint presentations) are ubiquitous in strategy processes, and thus form a key area of interaction with talk. Given that the meaning of talk is shaped by its context, it seems that an important dimension could be lost if visual-based discourse is not considered. Visual images have the potential to be more effective for communication, comprehension, recall and motivation compared to text or discourse alone, especially when text and visuals are presented in close connection (contiguity principle) and are aimed for audiences who have sufficient prior experience of such visuals (Avgerinou and Pettersson, 2016; Barry, 1997; Berger, 1998; Dondis, 1973; Moriarty, 1997; Moriarty and Kenney, 1995).

Condensing the above arguments together, our aim in this chapter is to demonstrate that visibility holds the potential to further enrich our understanding of Open Strategy processes and practices in organizational life. In other words, visuals are not merely aids to communicate the strategic direction of the firm to a wider audience, but rather they have

an important influence in shaping the direction, and success or failure, of the Open Strategy process.

This chapter is structured in three sections, the first covering the ways visuals are used in management research, the second providing illustrative examples of the way visuals can relate to Open Strategy research and the third provides a set of guiding principles for future research at the intersections of visibility and Open Strategy, namely: *capturing, comparing and contrasting*, and *creating*. Our aim is to showcase how visuals can be associated, theoretically, methodologically and empirically with Open Strategy. The first section outlines three areas of focus of current studies of visuals and how these can inform a visual view on open strategy and explains their core concepts. The chapter goes on to consider the application of visual-based approaches to Open Strategy research. The aim of this section is to demonstrate how particular concepts and models developed from visual studies can help us advance future studies on Open Strategy. The second section focuses on the methodological and empirical hurdles related to the study of Open Strategy through two illustrative examples: one from the study of the visuals in PowerPoint slides and one from a study of the visual affordances associated with the use of a strategy map in a workshop. The aim of this section is to motivate the reader to consider alternative methodological approaches to the study of visibility in strategy making that future Open Strategy research projects could employ. Finally, in the third section, we outline a set of guiding principles for future research that focuses on the role of visuals when studying Open Strategy phenomena.

2. Visual Focus in Strategy Research

The study of visibility in strategic management studies builds on the “linguistic turn” in strategy, which treats strategy making as a process of interconnecting communication acts among strategy participants (Gylfe et al. 2016; Liu and Maitlis, 2014). Accordingly, we conceptualise “the visual as equivalent to linguistic structures of organizational life” (Bell and Davison, 2012: 180). In this section, we examine how strategic management scholars have studied visibility by way of three discrete conceptual approaches for conceptualising, analysing and examining visual data. We define ‘visuals’ broadly as the sensory information,

objects and artefacts accessible to organizational actors based on what they *see*, that is their visual senses, as opposed to via other senses such as what they hear, feel, or taste; and the associated 'visual mode' is the specific way of creating, transferring and expressing meaning through the use of visual objects and artefacts (Meyer et al. 2013). In humanities and social sciences, for example, anthropology, sociology, art history, social semiotics, communication and media studies, and psychology there is an established and historically long tradition of studying the visual aspect of particular phenomena. In comparison, in organization and management research the study of visuals and their meanings is a recent, yet growing, phenomenon (Warren, 2009). Visual research in management studies is broadly defined as taking a variety of forms (pictures, graphs, film, web pages and architecture), involving several sub-disciplines (organization studies, marketing, accounting, human resources, tourism and IT), and entails studies using either pre-existing visual material or researcher-generated visual data (Bell and Davison, 2013).

In their review of visual organization studies, Meyer et al. (2013) identify five ideal-typical approaches to the study of visuals: archeological, practice, strategic, dialogical and documenting. In the practice-oriented approach the visuals are "socially meaningful material objects that are created employed, and manipulated in organizational contexts, making them a constitutive part of social practices" (ibid. p. 505). Within this approach, the emerging number of empirical studies that have been conducted show that visuals can enable organizational actors to: challenge dominant organizational narratives (Bell, 2012), create conditions of sense-making (Heracleous and Jacobs, 2008), support the creation and sharing of strategic knowledge (Paroutis et al. 2015; Kaplan, 2011) and deal with the social and emotional aspects related to strategy making (Eppler and Platts, 2009). Crucially each of these findings can be associated with the two key dimensions of *transparency* and *inclusion* in open strategy (Hautz et al. 2017; Whittington et al. 2011). In more detail, challenging dominant organizational narratives can be associated with *transparency*; creating conditions of sense-making can be associated with *transparency* and *inclusion*, supporting the creation and sharing of strategic knowledge can be associated with both *transparency* and *inclusion*, while dealing with the social and emotional aspects related to strategy making relates to transparency.

Despite the potential of visuals-based studies, studies in strategic management have mostly

focused on the role of discourse in the strategy process (Balogun *et al.*, 2014; Heracleous and Barrett, 2001; Mantere, 2013; Mantere and Vaara, 2008; Vaara, 2010) with awareness of, but limited attention to, the precise mechanisms through which visual modes of communication could result in varying strategic outcomes. These outcomes are of growing importance to strategic management scholarship due to growing sophistication in the use of tools (Jarratt and Stiles, 2010; Jarzabkowski and Kaplan, 2015), body language (Gylfe *et al.*, 2016; Liu and Maitlis, 2014; Wenzel and Koch, 2018) and other visual artefacts, such as the cube employed by RetailCo to support their new strategy process (Whittington, Molloy, Mayer and Smith, 2016), as well as the recognition that interactions between different modes can have important effects that help determine which strategies are ultimately implemented (Spee and Jarzabkowski, 2011; Stigliani and Ravasi, 2012). Following the aim of our chapter to offer insight for Open Strategy debates, we have developed a broad categorisation of this emerging group of visual strategy studies to then relate them to Open Strategy in the section that follows. More specifically, we identify three areas of focus in visual strategy studies. While we do recognise that there is some overlaps between particularly the multi-modal and cognitive focus (particularly in studies examining embodied cognition), our aim here is to demonstrate the topic that is at the foreground in particular studies and recognise that the multi-modal focus has now become more prominent in volume and identity amongst published work.

Material focus: One way of treating visual data is as material artefacts, which are used by organizational actors as supportive props for their everyday activities. Giraeudeau (2008), for example, examined the planning documents/slides used in Renault's investment strategy in Brazil in the mid-1990s to show how plans can enhance strategic imagination. Related examinations tend to focus on the discursive practices that arise from the use of visuals. Kaplan's (2011) work, for example, showed that PowerPoint served as an 'epistemic object' around which the discursive practices of collaboration and cartography were organized. This is consistent with examination of meaning through the talk accompanying visual materials (Samra-Fredericks, 2003; Vaara Sorsa and Pälli, 2010). Previous studies that focus on visuals as objects have also examined the links between visual objects and knowledge work by showing how such objects evolve during projects and are constantly in flux (Ewestein and Whyte, 2009) and how they can help project teams step between exploration and

exploitation within a project (Whyte, Ewestein, Hales and Tidd, 2009).

Cognitive focus: A second way to analyse visual materials is to focus on their role as cognitive stimulus (Hodgkinson et al. 1999; Hegarty, 2011). Here, the research focus is on the interpretations and sense-making that are enabled through perceptions of visuals. Stigliani and Ravasi (2012) have shown how the configuration of objects, such as Post-it notes, thumbnail sketches, and brainstorming notes, can enable the transition between individual and collective sense-making. The interpretation of these visuals may be steered by cognitive heuristics that enable individuals to select, process, and retain certain types of information (Bingham and Eisenhardt, 2007; Foss, Frederiksen and Rullani, 2015). For example, the clarity or simplicity of a visual representation may activate an availability heuristic, which makes certain artefacts easier to absorb and remember (e.g. Jarzabkowski and Kaplan, 2015). Other artefacts might be utilised to achieve particular goals or achieve specific functions in the strategy process. Comi and Whyte (2017) recently analysed ethnographic data from an architectural studio designing a development strategy for their client and show how visual artefacts become enrolled in practices of imagining, testing, stabilizing and reifying, through which abstract imaginings of the future are turned into a realizable course of action.

Related studies have focused on the cognitive meanings embodied in the visual stimulus itself. Liu and Maitlis (2011) conducted a study of facial expressions using video data. They showed how facial expressions embodied emotions which, in turn, had different effects on the strategy process. Paroutis, Franco and Papadopoulos (2015) extended this work using video data of workshops to identify three distinct patterns of visual interactions (shift, inertia, and assembly) in the use of artefacts, and the expectations these established for those interpreting the movements.

Multi-modal focus: In a third set of studies, scholars have treated visibility as a semiotic mode that is co-constituted through other communication modes such as talk and text (Spee and Jarzabkowski, 2009). Unlike studies that treat visuals as materials, a multi-modal approach treats the visuals as an equal partner to talk and text (Meyer et al., 2013). In this respect, this extends strategy beyond its “linguistic turn” (Rorty, 1979) to a more engaged interest in visual semiotics. Early work here has considered the meaning of particular visual features. For example, studying prototypes and models used in strategy workshops,

Heracleous and Jacobs (2008) showed how visual characteristics (e.g. proximity, elevation, centrality, connectedness) had particular meanings that complemented words in order to give rise to new strategic interpretations. More recently, Gylfe, Franck, LeBaron and Mantere (2016) have shown how the body acts as a type of “embodied cognition”. Thus, interpretation arises as actors make sense of the gestures conveyed, for example which draw links between concepts or materials through become connected through body language that would otherwise be treated independently. As such, gestures serve as “linking pins” to ensure alignment or conformance, but also enable inclusion and participation. Furthermore, as video ethnographers have demonstrated (LeBaron and Streeck, 1997), the embodied interactions can be captured in visual form and analysed (Wenzel and Koch, 2018). Indicative of this is the study by Werle and Seidl (2015) who examined strategy workshops and showed how discursive practices were provoked as participants compared differences between partially completed documents. In their study, these differences emerged when representations of the overall strategy were placed next to more concrete, though provisional, representations of specific aspects of the strategy. Thus, the strategy discussion was guided through the side-by-side comparison of these artefacts, helping to explain how the constellation of material artefacts can lead to a shift of the strategic topic. Taken together, the above studies show how, based on the treatment of visibility in strategy to date, researchers have acknowledged that strategy making and execution takes place in a distributed and ongoing way as individuals interact with a constellation of objects endowed with meaning, such as bodies, artefacts, images and texts (Balogun et al. 2014; Burgelman et al. 2017; Eppler and Platts, 2009). Table 1 below summarizes the three areas of focus in visual research on strategy. We use these in the next section to make links with Open Strategy debates.

 Insert Table 1 about here

3. Visuality and Open Strategy: Connections and Illustration

In this section, we examine in more detail the kinds of benefits visual-based examinations can offer to Open Strategy researchers. In a related discussion on the role of theory when studying organizational phenomena, Tsoukas notes that theories “should become more

complex to better cope with organizational complexity” (2017, p. 8). Following this approach, we argue that an understanding of the visuals in Open Strategy could be of significance because it enables scholars to understand in greater detail the direction, pace and effects of the organizational changes stemming from Open Strategy initiatives (Knight, Cutcher-Gershenfeld, and Mittleman, 2015). Organizational change is enabled as change agents and recipients wrestle over the meaning of change events (Balogun, Bartunek and Do, 2015). Yet the speed and efficiency with which meaning is conveyed often depends on *how* it is communicated. In visual terms, this can include the ability to replicate identical slides to multiple levels of the firm (Mirabeau and Maguire, 2014), construction of visual representations that are particularly catchy and compelling (for example, changes in colour etc., see Jarzabkowski and Kaplan, 2015), or draw organizational actors attention to particular sense-making cues that might otherwise appear invisible (Dutton and Dukerich, 1991; Knight and Paroutis, 2017).

Following from the above, we pose the question: what are the insights to Open Strategy that visuals can offer? To address this question, we next examine how the two key dimensions of transparency and inclusion in Whittington et al.'s (2011) conceptualization of Open Strategy relate to the three areas of focus of visual strategy studies we outlined in the previous section. The dimension of transparency, refers to the internal or external visibility of information about an organization's strategy, while the dimension of inclusion, to the involvement of internal and external stakeholders in the strategy process (Hautz's et al. 2017). Table 2 below summarises our key arguments and insights offered for the two dimensions of transparency and inclusion.

Insert Table 2 about here

As Table 2 demonstrates, visuals are a more ‘open’ way to communicate because, unlike grammar and words, the meaning of language is not as formulaically prescribed. This then ‘opens’ the way for more nascent ideas, less developed strategies, as those found in brainstorming, white-boarding, ‘PowerPointing’ etc. By taking a visual form, strategy information becomes more readily and widely available than for example if it was solely based on a textual form. For example, the use of an infographic about the principal market

positions and market shares a firm allows even non-strategy experts to appreciate the position of the firm in these markets.

We also argue that visual features are an indispensable part of the Open Strategy process, as they are one component of a multimodal gestalt that includes visuals and conversations. As such, visual perspectives can expand on views of strategy as discourse and offer complementary vantage points for the study of Open Strategy. Visuals are not merely aids to what has been framed as the dominant modality of strategic conversations, but rather are equal participants in performative debates that have an important influence in shaping the direction, and success or failure, of the Open Strategy process. This insight assigns further specificity to the role of visuals in Open Strategy, serving not only as a resource in interpersonal framing contests between strategists (Gylfe et al. 2016), but also as a way for strategists to project and scale their organizational influence by controlling what internal and external stakeholders people see in the pursuit of a particular strategy and how then they subsequently engage with these visuals. For example, the use of infographics about the principal market positions and market shares a firm has in relation to its key competitors could serve as a trigger for further discussions with external stakeholders, especially if used in the context of social media initiatives (Baptista et al. 2017).

Another dimension where visuals connect with open strategy is their ability to enable the *exploration* of alternative relationships, thus creating emotional engagement and persuasiveness with an audience. An example of this comes from infographics - the graphic representations of information, data or knowledge that aim to present information quickly. Infographics are found to be effective and emotionally powerful as the reader can very quickly see the main relationship and then do some further exploring on their own which creates a sense of engagement, surprise and ownership (Meyer, 1997; Ovans, 2014). Similarly, an infographic summarising the performance of particular strategic initiatives can enable employees, that do not normally engage in the strategic process or discourse in their firm, to respond and explore particular dimensions of this infographic and how these relate to their own daily activities. These infographics can be utilised either in communication mediums, such as newsletters or intranets, or face to face engagements, for example workshops (Jarzabkowski and Seidl, 2008; Paroutis, Franco and Papadopoulos, 2015). Cummings and Angwin (2011) also argued that individualized drawings of strategy, which

they term 'stratography,' can enable the more effective conceptualization and communication of strategy. Employing a similar visual focus, Osterwalder and Pigneur (2010) also propose a wide array of models that can be used in the strategy process.

An additional way of how studying the role of visuals in strategy can unveil new avenues for Open Strategy research is available in Paroutis, Franco and Papadopoulos (2015). They examined the ways managers visually interact with strategy tools (a strategy map) to produce knowledge about strategic issues in workshops. Their study focuses attention on the importance of examining the affordances of strategy tools and the potential this has for Open Strategy debates. Affordances refer to the possibilities objects and artefacts offer for action to individuals and groups working within and across organizations (Gaver, 1996; Gibson, 1986; Hutchby, 2001). For example, a strategic visual, like a SWOT matrix developed for a particular business unit in a multi-business firm can make specialised knowledge tangible and offer opportunities for discussing strategic issues between representatives of different groups, departments, divisions or organisations. Related to Open Strategy there is then the potential to link particular affordances of strategic tools to the two key dimensions of transparency and inclusion (Hautz et al. 2017; Whittington et al. 2011). For example, the ability that actors have to modify contents of a visual artefact instantaneously (editability), allows knowledge integration efforts to be easily reflected visually in the artefact's content (transparency) and also allows disagreement and debate about what should be included or not visually in the artefact to occur (inclusion). For future studies it would be interesting to gauge the impact from strategy-related visuals with particular affordances on the levels of transparency and inclusion in Open Strategy. We next provide a more detailed illustration to showcase further ways visuals can generate Open Strategy insight.

Illustration - Visuals in PowerPoint Slides: In extant strategy studies on PowerPoint, the heavy work of meaning making in strategy falls largely to discourse (Kaplan, 2011; Mirabeau and Maguire, 2014), where we find that visual features play an auxiliary role to the meaning making arising from discourse and practice. Knight et al. (2018) recently examined the visual features of PowerPoint slides across two consulting engagements and the ways in which these opened up and stimulated engagement and discussion across disparate teams. The study reviewed PowerPoint presentations arising from consulting interventions of a strategy consulting firm at varying stages of their development. As the study progressed, we realized

that this was also an appropriate Open Strategy research setting, with the visuals playing a role in engaging a wider set of actors and allowing for wider sharing of key strategic messages than was initially planned for the particular consulting interventions. Visual semiotic analysis, based on the theory that defines the relationship between signs and interpretations and the meanings arising out of this interaction, was used to understand the interplay between visuals used in slides and subsequent dialogues that ensued, and how issues were framed in these dialogues. A key finding is that *visuality* may provide the conceptual glue that creates meaningful intersections between strategy process and practice. The authors identified three visual mechanisms:

- i. *Depiction* visuals refer to pictorial representations of strategy
- ii. *Juxtaposition* visuals provide new logical linkages between previously disconnected aspects of strategy.
- iii. *Salience* visuals offer nuanced ways to prioritize strategic agendas by adding weight to key pieces of information.

Each visual mechanism influences the visibility of particular strategic ideas by prompting and framing these ideas through the conversations visuals simulate. As participants react to visuals they exhibit interpretations of the strategy that both crystallises what was shown on the slides and also uncovers important aspects that are not explicit in the visuals. This enables a better understanding of the emergent strategy, termed by the authors as *strategic resonance*. Strategists' use of multiple visual mechanisms evolved with the successive development and design of slides over time, and shifting the emphasis of visual mechanisms influenced the evolving strategy formation (refer to figure 1 below).

Insert Figure 1 about here

These findings show how visual features are a *mutually constitutive aspect* of the strategy process rather than an *elaboration* of or addendum to the verbal text and talk. In their words, the visual features are connected with conversations but are in no way dependent on them, and vice versa. This relationship of mutual constitution is important, because focusing predominantly on discourse in strategy may overstate the consequentiality of talk to the overall strategy process. Much of what changes the conversation in strategy can

come down to what is presented and how visually compelling it is. Visuals “speak” to participants differently than words (Nöth, 2011). They communicate by way of what is immediately accessible and holistically appreciated (Meyer et al. 2013), drawing out connections and relationships between visually displayed components that are only partially understood until they are laid out on the page or slide. If strategy is just about talk, then it might as well be conducted in the dark. Thus, even though visuals have been acknowledged, they have rarely been fully appreciated and studied in their minutiae.

Related to Open Strategy debates, we argue that by using visuals such as PowerPoint slides their producers are able to *engage* and *include* (Hautz et al. 2017; Whittington et al. 2011) a wider set of managers, employees, consumers and other industry or society-level actors or institutions in the strategy process. As we argued earlier, this engagement of the wider audience is not only communications-based but can also trigger the *exploration* of alternative relationships, thus creating emotional engagement and persuasiveness with managers, employees, consumers and actors outside the firm. As we saw in the introduction of this chapter, Barry and Elmes (1997) recognised that strategy narratives depend on the “cloth” from which they are tailored, but went on to anchor their theorizing in what is read, spoken or heard. The purpose of the PowerPoint study by Knight et al. (2018) was to examine the visual components of this ‘cloth’, by examining how strategists use visual information (specifically in PowerPoint slides), and its effects on the strategy process. The findings show that strategy conversations are influenced by the techniques strategists use to create slides, which in turn shape the kinds of follow-up actions taken. As such, PowerPoint slides can be designed to help tackle complex issues, for instance, when participants have divergent opinions or in politically sensitive situations, meaning they can also provide the basis to ‘open’ particular strategic topics to a wider audience. Within the language-based perspective, organizations and their actors can be found to adopt a shared language (Knights and Morgan, 1991; Mantere, 2013). Similarly, when visuals are studied, actors can be found to agree on a shared set of visual features or visual objects.

Understanding the visual presentation of strategy is particularly important for the study of Open Strategy initiatives, as PowerPoint slides are often utilised in results and strategy presentations (Whittington et al. 2016), so their masterful employment can enable or hinder the exchange of ideas and knowledge about a firm’s strategy. PowerPoint slides can also

trigger reactions from a wider set of internal and external stakeholders (refer to Table 2 above). As such, the 'power' in PowerPoint is not about the bullet points or other visuals managers use in their slides but about the strategic insights and discussions their slides generate with internal and external audiences. The Knight et al. (2018) study highlights how PowerPoint slides, as a critical strategic tool, are used and employed to create strategy. Slides are not an end product, but a tool to stimulate engagement and wider discussion; as such allowing for both transparency and inclusion dimensions in Open Strategy. Since the power is in the eye of the slide creator, practitioners should consider: by whom, for whom and how these slides are created. Starting with a draft pack of slides and using a wider group of managers to co-produce and develop these would be a good approach for strategists designing a more open strategy process in their firms. Opening up discussions from the visuals in the slides is as important as the design of the visuals itself.

3. Visuality and Open Strategy: Three Guiding Principles

This chapter aims to inform our understanding of the potential the study of visuals has to inform current Open Strategy debates and inspire promising novel future research efforts. We will use this final section to offer three principles that may help inform and shape future studies of visuality within Open Strategy. From what we have highlighted so-far, we can consider firms as consisting of organizational actors to interact with themselves, other actors and material objects (Tsoukas and Chia, 2002), in an effort to cope with the complexity they operate in. An appreciation of the visuals and their effects these actors employ provides much needed detail in our understanding of the episodic interactive encounters, and has the potential to help us appreciate the unfolding nature of organizational reality (Bechky, 2011). The key question here is how to actually capture these visuals and their effect on organizational reality, and Open Strategy in particular.

1. Capturing: In order to address this key question and for those integrating visual approaches to their study of Open Strategy we offer the first principle: which is about choosing research designs that allow them to 'capture' in an efficient and effective way the situations and moments when these visuals are employed in the Open Strategy process. For example, when strategy visuals are used in annual reports or social media, one of the choices researchers have are to consider how much of these visuals need to be collected and how these relate to the Open Strategy process. One way to narrow down the scope of

such investigation and make it more efficient in terms of the time and effort required for data collection and analysis would be to conduct a pilot study of the use of visuals within a single Open Strategy initiative or a particular chronological period. Insights generated from this pilot can then be developed into the main study of visuals across multiple Open Strategy initiatives or more extensive chronologies which could then also enable for comparisons of visuals development and use across initiatives and time periods.

For researchers examining such issues, alongside the emerging perspectives in visual strategy studies we illustrated in Table 1, it is notable that the use of photography and videos to capture daily and business life is currently more widely established, accepted and enabled through technologies like mobile phones and media like YouTube, Twitter and Facebook. At the same time, there are a number of approaches scholars could consider when trying to study the role of visuals in Open Strategy, for instance, critical visual analysis of organizationally produced visuals, or drawings and participant-led photography (Warren, 2008, 2009). Another approach, visual semiotics, could be employed to collect data and study the visual features of artefacts employed in Open Strategy. Knight et al. (2018) used a semiotics approach for their study of PowerPoint slides. Visual semiotics is a branch of applied semiotics that provides a vocabulary and framework through which to analyse the “grammar” of visual features, drawing on formal concepts such as composition, vectors and visual axes, just as linguistics draws on formal concepts of verbal tense, nouns and articles. Images have their own syntax that draws from the iconic and aesthetic domains, and is expressed in terms of how signs are spatially arranged and interrelated in an image (Nöth, 2011). Emerging studies are now beginning to show the potential of semiotic analysis of static PowerPoint slides, for example, in educational settings (Zhao and Van Leeuwen, 2014). The visual semiotic tradition views semiotics as a social process in which meaning is created in the context of culture, rather than generated by a specific semiotic mode divorced from its context (Halliday, 1978; Van Leeuwen, Djonov and O’Halloran, 2013). This enables the researcher to shift away from focusing solely on either the verbal or visual text to examining both dimensions together in a multi-modal context. As Nöth (2011: 300) noted: “language and pictures are complementary in their semiotic potential,” each having different and interacting potentialities. Studying Open Strategy projects through a visual semiotic approach could then involve the ongoing interrelation between these two modes,

as actors shift between one and the other to create and enhance the meaning communicated (Kress and Van Leeuwen, 1996). Returning to the Knight et al. (2018) study, the 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.

2. Comparing and Contrasting: Another principle to enhance understanding of visuals in Open Strategy relates to comparing and contrasting the effect of visuals in Open Strategy initiatives, to allow for more detailed understanding of why particular visuals are more appropriate and effective at conveying strategy information in particular Open Strategy initiatives compared to other Open Strategy situations. Using a related approach, future studies could examine the impact of using particular visuals in Open Strategy settings and contrast it with instances when no visuals are used. For instance, a study could gauge how particular visuals in PowerPoint slides are perceived by an audience compared to slides where few or no visuals are used. Another approach here could be to investigate which visuals are more effective at conveying particular strategic information (for example about competitive position of the firm, market share or key strategic priorities the firm has for the future). Contrasting such visuals can also take a historical dimension, by examining, for example, how the visuals a firm is employing in their annual reports or strategic presentations has evolved over time in relation to industry and social changes, or as a result of an acquisition. Advancements in the domain of marketing can also assist researchers interested in exploring such avenues in strategic management research. For example, Wedel and Pieters (2007) provide a review of eye-tracking research in marketing that provides useful theoretically, and most importantly, methodological solutions for those seeking to explore the historical evolution of visuals in strategy related contexts.

3. Creating: Our final principle motivates readers of this chapter who are interested in the role of visuals in Open Strategy is to consider creating the research settings conditions where such visual-oriented examination can take place. For example, in the business school classroom or the executive audience, the researcher could pose related questions and

trigger the interest of participants on the impact of visuals in Open Strategy. In addition, data could be generated by asking participants to capture visually, either by taking photos in their smartphones or drawing on a piece of paper, particular instances of Open Strategy in their firm, industry or society in an ethnographic manner (Hassard, Burns, Hyde, Burns, 2018). Alternatively, business simulations could be developed using visuals from historical archives of firms and business school participants could be asked to be immersed in the particular case study situations and give their reactions on these visuals. These reactions could then be associated with the backgrounds of participants to develop a deeper appreciation of how particular visuals are perceived from managers with specific backgrounds (for example, long versus short experience). Another set of studies could focus on trying to understand the visual construction of organizations by external audiences and the impact of such visuals over time. For example, in a recent study, Halgin, Glynn and Rochwell (2018) examined how external attributions of actorhood are made by the business media and how these attributions are associated with heightened environmental paradoxes confronting organizations by analysing the visual depictions of organizations on 530 covers of the Business Week magazine over a 30-year period (1978-2007). They found that visual depiction of actorhood increased over time and that such visuals were more frequent in periods characterized by heightened paradoxical tensions in the business environment.

Visuals are an integral part of the way strategies in organizations are created, communicated and consumed. Visual strategy content can be found in a variety of mediums from photos, videos, logos, newsletters, graphs, figures, infographics, visualization tools, big data analytics, user-centred design approaches, visuals in social media, video conferencing to PowerPoint presentations. In this chapter we have argued that by using visuals, firms have the potential to *engage* internal and external audiences in particular aspects of their decision making and their strategy making process. Visuals also enable employees and external audiences to *explore* alternative relationships, thus creating emotional engagement and persuasiveness of particular aspects of the strategy process. by translating their strategy into a visually accessible format, for example through the use of infographics, firms are also able to show to a wider audience the relevance and importance of a particular initiative, thus providing *transparency* to time-poor internal and external audiences, and *inclusion*, especially to middle and lower-level managers and employees who are not experts in

strategy. Advances in methodological designs and new technologies, such as eye tracking technology, enable researchers some exciting avenues for future research trying to understand how visuals relate to open strategy. Through this knowledge, we will then be better equipped to answer how visuals can assist firms in developing more agile open strategy initiatives.

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Table 1: Three Areas of Focus on Visual Strategy Research

	Issue of Interest	Research Focus	Related Studies
Material (Visuals as material artefacts)	<ul style="list-style-type: none"> • Visuals are used by organizational actors as supportive instruments in their daily strategic activities. 	<ul style="list-style-type: none"> • Focusing on the kinds of strategic information visual artefacts hold. 	<ul style="list-style-type: none"> • Kaplan (2011), Eppler & Platts (2009)
Cognitive (Visuals as cognitive stimulus)	<ul style="list-style-type: none"> • Visuals spark cognitive and sense-making reactions during strategy making and execution. 	<ul style="list-style-type: none"> • Exposing the richness of cognitive and sense-marking practices and processes enabled by the use of visuals in the strategy process. 	<ul style="list-style-type: none"> • Stigliani and Ravasi (2012); Liu & Maitlis (2011); Paroutis, Franco & Papadopoulos (2015)
Multi-modal (Visuals as multi-modal carriers)	<ul style="list-style-type: none"> • Visuals have multi-modal and semiotic properties that allow them to be co-constituted together with other communication modes such as talk and text. 	<ul style="list-style-type: none"> • Exploring the complexity in the semiotic and multi-modal processes when visuals are involved in the strategy process. 	<ul style="list-style-type: none"> • Gylfe, Franck, LeBaron & Mantere (2016); Knight, Paroutis & Heracleous, (2018); Wenzel & Koch, (2018).

Table 2: Focus on Visuals and their Relation to Dimensions of Transparency and Inclusion in Open Strategy

	Primary Research Question for Open Strategy	Relation to Transparency in Open Strategy	Relation to Inclusion in Open Strategy
Material	<ul style="list-style-type: none"> Examining how visuals are used by organizational actors as material artefacts in Open Strategy. 	<ul style="list-style-type: none"> Visuals allow access of strategic content and information to internal and external audiences. Strategy information becomes more readily available and visible than before. 	<ul style="list-style-type: none"> Visuals enable internal and external audiences to engage in consultations related to a firm's strategy. Strategy participation is enabled by engaging a community of stakeholders
Cognitive	<ul style="list-style-type: none"> Examining how visuals enable cognitive and sense-making activities in Open Strategy. 	<ul style="list-style-type: none"> Visuals allow for a more seamless and rich exchange of ideas and knowledge about a firm's strategy. 	<ul style="list-style-type: none"> Using visuals, internal complex strategic issues are simplified and communicated widely, allowing multiple stakeholders to engage with them.
Multi-modal	<ul style="list-style-type: none"> Examining how the multi-modal and semiotic properties of visuals enable Open Strategy. 	<ul style="list-style-type: none"> Visuals allow access to a wider array of strategy information and processes to outsiders. Visuals also allow for the wider internal and external broadcasting of a firm's strategy. 	<ul style="list-style-type: none"> Internal conversations become visible to external audiences who become empowered to engage with them. Collaborative processes involving visuals allow the inclusion of multiple stakeholders in the strategy process.

Figure 1. The visual semiotic process applied to the construction of PowerPoint slides (Source: Knight et al. 2018).

